Perceptions of pre-service social sciences teachers regarding the concept of “Geography” by mind mapping technique

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The objective of this study is to present the perceptions of preservice social sciences teachers regarding the concept of geography. In the study, the study group consists of 46 preservice social sciences teachers, who receive education at Ahi Evran University. The data were collected in December, 2010. Mind maps were used as data collection tools and the preservice teachers were presumed to use the concept of geography as the main idea. The study is a qualitative research design. The collected data were analysed with the content analysis technique. According to the findings, preservice social sciences teachers used 245 concepts on their mind maps, regarding the concept of geography. These concepts were examined in terms of their common traits and put into six different conceptual categories. It was determined that preservice social sciences teachers placed the concept of geography into 18 different visual elements on their mind maps. Usually, it was observed that preservice teachers highly associate the concept of geography with the concepts of physical geography.

Key words: Geography education, perception of geography, mind maps, social studies teacher.

INTRODUCTION

Geography is a science that tries to present the relation of human and space by examining it within the scope of the principles of distribution, concern and causality (Atalay, 2007). Humans (society) have brought common viewpoints to their new learnings by inquisitively describing the geography, on which they live, with the help of maps. However, humans perceive the space, in which they live, and the world with different dimensions on a large scale. This perceptual difference is mentioned in the behavioural geography, which examines how humans give meaning to the environment and how this meaning is reflected on their behaviours.

Behavioural geography examines how we perceive the environment and how these perceptions affect our behaviours. In other words, our reactions against the environment are related with how we perceive it (Özgüç and Tümer tekin, 2000). Hence, every individual has a special geography created and perceived in her/his mind. This special geography is shaped under the influence of various factors, such as the needs, desires, experiences, age and gender of individuals etc (Aliagaǒğlu, 2007).

Some studies were performed at the end of the 1960s and beginning of the 1970s, in an attempt to reveal and measure how geography is perceived behaviorally. Mind mapping is a way of measuring spatial perception (Özgüç and Tümer tekin, 2000). According to Saban (2005), mind maps enable us to see the relations, interactions and connections between the concepts with the approach of an aerial viewpoint. While the geographical maps present the physical and human model of the space, mind maps...
visualise the cognitive models of a subject, case, problem or concept are created by persons.

In the study, which examined the Islamic World perception of students with the help of the mind maps, they drew, Tunçel (2002) determined that with the help of the examination of mind maps, geography education has a great impact on the countries students know and majority of students are acquainted with less than 20 countries. As a result of the data collected by the mind mapping technique, Alağaçoğlu (2007), who tried to present the provincial image of Balıkesir from the viewpoint of students, determined that while the triangulation points come into prominence on mind maps, spatial perception develops depending on time.

In the study that was performed in an attempt to determine the thoughts of preservice teachers receiving education in the Department of Computer and Instructional Technologies Education regarding their jobs, Karataş (2010) collected the mind maps of preservice teachers, in which they used the statement of "CITE teacher” as the main idea. As a result of her analysis, the thoughts of preservice teachers regarding the “CITE teacher” were collected under 8 topics as teaching specification; personal characteristics; fields/duties of interest; technology; computer; thoughts about the department; thoughts about health and future.

Regarding how the concept of geography is perceived, Öztürk (2007) examined the metaphorical conditions of preservice social sciences, science and class teachers and revealed that 56% of preservice teachers perceive geography as the source of life and the life itself. In a similar study, Aydın and Ünalı (2010) determined the “geography” perceptions of preservice geography teachers through metaphors and revealed that 45% of them perceive geography as the expression of life. In his study that examined how the concept of “climate” is perceived, Coşkun (2010a) determined that 42.84% of female students perceive it as the expression of change and 14.28% perceive it as the expression of life; 44.27% of male students perceive it as change and 16.31% perceive it as obscurity. Since perceptions are determined via metaphor in these studies, while it is possible to reveal through which metaphor the concept is placed into the mind, it may not precisely be revealed how and to what extent the concept is associated with related concepts. The relation of the main concept with other associated concepts could be depicted more clearly with the help of mind maps.

While there are examples to the usage of mind maps regarding the determination of spatial perception in literature (Tunçel, 2002; Saban, 2005), there is no study regarding the determination of the image of the “geography” concept by students with the help of mind mapping method. In this study, mind map as a data collection tool was used based on Karataş (2010)’s study. The preservice teachers’ perceptions about the concept of “geography”; social environment, experiences, specifications of the environment in which they live, life-long education, attitudes towards the lesson vary according to the teachers they meet and so forth. The perceptions of preservice teachers about the concept will influence both their attitudes towards geography subjects in their future professional lives and their occupational viewpoints. In that context, the revelation of the perceptions of preservice social sciences teachers about the concept of “geography” will provide an important perspective for the relevant academical staff in their undergraduate education, those who prepare the social sciences program in primary education, educators, as well as researchers and trainers who conduct studies in the field of geography education.

The study presents the perceptions and thoughts of preservice social sciences teachers, regarding the concept of “geography” which is obtained through mind maps. Predetermination of the perception regarding the concept of geography will enable us to have an idea about how the concept is structured by preservice teachers in general. By this way, the study will lead one to have an idea about the thoughts, perceptions and extents that will be used by preservice teachers to teach the concept of geography in the future. New suggestions will be made in an attempt to decide on the mind map aimed at the concept of geography. Learning the perceptions of preservice social sciences teachers regarding the concept of “geography” constitutes the problem of this study. Within the scope of this general purpose, answers were sought for the following questions:

1. Through which concepts do the preservice social sciences teachers explain their perceptions, regarding the concept of “geography”?
2. Under which categories are the perceptions, which are asserted by preservice social sciences teachers regarding the concept of “geography”; collected in terms of their common specialities?
3. Is there a relation between the visual elements, where the concept of “geography” is placed by preservice social sciences teachers on mind maps?

**METHOD**

**The study design**

This study used qualitative research design. Qualitative research comprises researches that use qualitative data collection methods such as observation, interview and document analysis, and follow a qualitative process that is based on revealing the perceptions and incidents in their actual environments in a natural and integrated way (Yıldırım and Şimşek, 2008: 39). The data that were obtained qualitatively within the scope of the study were subjected to content analysis. Content analysis could be used in definitive, explanatory
Table 1. Frequency and percentage distributions of participants, according to gender.

<table>
<thead>
<tr>
<th>Gender</th>
<th>Frequency (f)</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>27</td>
<td>59</td>
</tr>
<tr>
<td>Male</td>
<td>19</td>
<td>41</td>
</tr>
<tr>
<td>Total</td>
<td>46</td>
<td>100</td>
</tr>
</tbody>
</table>

...or estimation-based studies in qualitative researches (Buğükoztürk et al., 2008). In this context, since the study aims to document the thoughts of preservice social sciences teachers regarding the concept of ‘geography’, it is descriptive.

Participants

The study group of the research consists of 46 students, who received final-year education at Ahi University, Department of Social Sciences Teaching in the school year of 2010-2011. The frequency and percentage distributions of students, who participated in the study, are depicted in Table 1 according to gender.

As is seen in the table, out of 46 preservice social sciences teachers, 27 are girls and 19 are boys. While 59% of these students are girls, 41% are boys.

Data collection and analysis

Preservice social sciences teachers were required to draw mind maps, on which the concept of “geography” is used as the main idea, in order to reveal their perceptions about the concept of “geography”. An approximate of 20 min were given to preservice social sciences teachers, in order to create their own mind maps regarding the concept of “geography”. Consisting of preservice social sciences teachers, these mind maps form the basic data source of this study as a “document”.

Mind mapping technique was developed by Tony Buzan during the 1960s. Examining students’ style of taking notes, Buzan formed a model of taking notes that presented the function of mind. Mind mapping is a recall technique, which is used in an attempt to record a model of taking notes that presented the function of mind. Mind maps are started by writing a basic subject or concept at the center of a paper that is rotated sideways and by drawing a symbol related with this concept or subject (Çamlı, 2009). Mind maps generally comprise the arranged form of images and keywords, which are derived from the central idea (Brightman, 2003). Considering the usage areas of mind maps, this technique was thought to be used as an instrument that would reflect the perceptions of preservice teachers (Karataş, 2010). In that context, a content analysis was performed for the mind maps of preservice social sciences teachers regarding the concept of “geography”, in an attempt to seek an answer for the question, “What are the perceptions of preservice social sciences teachers regarding the concept of ‘geography’?, which forms the problem of the study. Attainment of concepts and relations that could explain the collected data is the basic objective of the content analysis. The process of the content analysis includes presenting the relations of similar data, assembling them within the scope of certain concepts and themes, organizing and interpreting them in such a way that they could be understood by the reader (Yıldırım and Şimşek, 2008). In other words, content analysis could be defined as the entire methodological instruments and techniques that are applied to various expressions. Being grouped under the title of content analysis, these instruments and techniques could primarily be described as a controlled effort of interpretation and as a deduction-based reading instrument in general (Bilgin, 2006).

Preservice teachers, who participated in the study, received trainings and performed practices on how to prepare mind maps within the scope of the curriculum. Nevertheless, a short explanation was made on the formation of mind maps before the study and they wrote the statement of “geography” within a visual element they chose as the main concept. They were reminded to add what this main concept evoked in them with the help of arrows and express their thoughts with just one word, if possible. Examples of the mind maps, which are developed by preservice social sciences teachers, are given in Figures 1 and 2.

Mind maps of preservice social sciences teachers were examined by the researcher and another geography instructor, and the perceptions that were formed in the mind of preservice teachers were categorized. The following process steps were followed during the content analysis (Saban et al., 2006; Öztürk, 2007; Yıldırım and Şimşek, 2008; Saban, 2009; Aydin and Eser Unalda, 2010).

1) Denomination: The concepts, which were associated with the concept of “geography” by examining the mind maps of preservice teachers, were primarily written separately for each preservice teacher in alphabetical order and a temporary personal list was formed. During the formation of this list, the concepts were coded according to genders of preservice teachers; red statement for female preservice teachers and black statement for male preservice teachers. In addition to this, the images placed by preservice teachers into the main concept were also coded during this denomination process.

2) Classification: The statements of preservice teachers were listed alphabetically in one list and then the frequency and gender statements were added. This list was formed to be used as a reference source for validating the analysis and interpretation process, and collecting the statements under a certain category.

3) Categories development: In this phase, the statements that were placed into mind maps by preservice social sciences teachers were examined, in terms of their common traits about the concept of “geography”. Considering the final list in the classification phase of 245 statements of 27 female and 19 male preservice social sciences teachers, an assessment was made on how the phenomenon of “geography” was conceptualized. The statements were separated into six different conceptual categories, in line with the view points of preservice teachers and the statements they correlated.

4) Validity and reliability: Experts’ opinion was used to enable the reliability of the study, in terms of its persuasiveness and accuracy. As well as the list, which was formed during the classification phase, a category list was presented to a geography instructor other than the researcher as the expert’s opinion, and the expert was required to place the statements in the list in such a way that none of the categories would be excluded. The matchings of the
Figure 1. Examples of the mind map.

In this section, the obtained findings that are related with the perceptions of preservice social sciences teachers regarding the concept of “geography” were tabulated, analysed and interpreted under sub-headings, according to the study questions.

Findings concerning the concepts through which the preservice social sciences teachers explain their perceptions about the concept of “geography”

The preservice social sciences teachers, who participated in the study, explained their perceptions about the concept of “geography” through 245 concepts. Table 2 presents the concepts with more than one frequency among the concepts used by preservice teachers.

Examing Table 2, it is observed that preservice social sciences teachers use 92 concepts with a frequency that is greater than one on their mind maps, about “geography”. Among 245 concepts, this comprises a segment of 37.6%. However, when a comparison is required in terms of frequencies, concepts with a frequency that is greater than one comprise 76.6% of the total concept frequency.

Preservice social sciences teachers mostly used the concept of “climate” on their mind maps about the concept of “geography” (f=29, 4.4%). Secondly, they placed the concept of “mountains” on their mind maps. Examining the first ten concepts that are mostly repeated by preservice teachers on the mind maps, it is observed that while nine of the concepts of climate (f=29); mountains (f=21); seas (f=17); geographical formations (f=17); plains (f=16); flora (f=16); streams (f=14); agriculture (f=14); maps (f=13); earth (f=12) are directly related with physical geography, only the concept of “agriculture” that is ranked 8th is associated with human geography. Considering the third sub-problem that is seen more clearly, it is observed that preservice social sciences teachers highly use the concepts of physical
geography on their mind maps for the concept of "geography". This shows that preservice teachers perceive geography highly from the aspect of physical geography.

**Categories formed by perceptions of preservice social sciences teachers about the concept of "geography"**

Examining the mind maps of preservice social sciences teachers, their perceptions about the concept of "geography" is collected under six categories. These categories are respectively as follows: Physical Geography (137), Human Geography (56), Reflective Thought (21), Local (16), Vacation (9) and Interdisciplinary (6). Table 3 shows the categorical distribution of concepts, which are included in mind maps of preservice teachers regarding the concept of "geography".

Examining Table 3, the category of physical geography is consisted of totally 137 concepts and the repetition frequency of concepts is 443. The number of concepts that are repeated more than once is 63. The most frequently repeated five concepts in the category of physical geography are respectively as follows; climate (29), mountains (21), seas (17), geographical formations (17) and plains (16). Considering the total concept frequency used by preservice social sciences teachers, 67.7% of the concepts are included in the category of physical geography. This shows that the concepts of physical geography are highly included in the geography perceptions of preservice teachers.

The category of human geography is consisted of 56 concepts and the repetition frequency of concepts is 144. The number of concepts that are repeated more than once is 17. The most frequently repeated five concepts in the category of human geography are respectively as follows; agriculture (14), population (11), settlement (9), human geography (9) and stockbreeding (8). Considering the total concept frequency used by preservice social sciences teachers, 21.9% of the concepts are included in the category of human geography.

Reflective thoughts are ranked third in the categorical distribution of concepts, which are included in the mind maps of preservice teachers regarding "geography".
Table 2. Distribution of concepts on the mind maps of preservice teachers about "geography".

<table>
<thead>
<tr>
<th>Sequence</th>
<th>f</th>
<th>%</th>
<th>Concept</th>
<th>Sequence</th>
<th>f</th>
<th>%</th>
<th>Concept</th>
<th>Sequence</th>
<th>f</th>
<th>%</th>
<th>Concept</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>29</td>
<td>4.4</td>
<td>Climate</td>
<td>32</td>
<td>5</td>
<td>0.8</td>
<td>Volcanism</td>
<td>63</td>
<td>2</td>
<td>0.3</td>
<td>Autumn</td>
</tr>
<tr>
<td>2</td>
<td>21</td>
<td>3.2</td>
<td>Mount</td>
<td>33</td>
<td>5</td>
<td>0.8</td>
<td>Atmosphere</td>
<td>64</td>
<td>2</td>
<td>0.3</td>
<td>Summer</td>
</tr>
<tr>
<td>3</td>
<td>17</td>
<td>2.6</td>
<td>Sea</td>
<td>34</td>
<td>5</td>
<td>0.8</td>
<td>Forest</td>
<td>65</td>
<td>2</td>
<td>0.3</td>
<td>Winter</td>
</tr>
<tr>
<td>4</td>
<td>17</td>
<td>2.6</td>
<td>Geographical formations</td>
<td>35</td>
<td>5</td>
<td>0.8</td>
<td>Turkey</td>
<td>66</td>
<td>2</td>
<td>0.3</td>
<td>Examination</td>
</tr>
<tr>
<td>5</td>
<td>16</td>
<td>2.4</td>
<td>Plains</td>
<td>36</td>
<td>5</td>
<td>0.8</td>
<td>Shape of the world</td>
<td>67</td>
<td>2</td>
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<td>Black Sea</td>
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<td>6</td>
<td>16</td>
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<td>Flora</td>
<td>37</td>
<td>5</td>
<td>0.8</td>
<td>Country</td>
<td>68</td>
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<td>Plant</td>
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<tr>
<td>7</td>
<td>14</td>
<td>2.1</td>
<td>Streams</td>
<td>38</td>
<td>4</td>
<td>0.6</td>
<td>Industry</td>
<td>69</td>
<td>2</td>
<td>0.3</td>
<td>Tree</td>
</tr>
<tr>
<td>8</td>
<td>14</td>
<td>2.1</td>
<td>agriculture</td>
<td>39</td>
<td>4</td>
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<td>Ocean</td>
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<td>9</td>
<td>13</td>
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<td>Maps</td>
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<td>Geographical Position</td>
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<td>0.3</td>
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<td>10</td>
<td>12</td>
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<td>Earth</td>
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<td>Sun</td>
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<td>12</td>
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<td>Glaciers</td>
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<td>England</td>
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<td>47</td>
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<td>0.5</td>
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<td>0.3</td>
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<td>9</td>
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<td>Elevation</td>
<td>48</td>
<td>3</td>
<td>0.5</td>
<td>Wind</td>
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<td>0.3</td>
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<td>Rain</td>
<td>52</td>
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<td>8</td>
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<td>Countries' Geography</td>
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<td>0.3</td>
<td></td>
</tr>
</tbody>
</table>

Total 92  f= 502  %≈ 76.6

*Uses the concept of the total frequency (f=655) of the data calculated on the percentage of teacher candidates.
Reflective thought could be defined as a process of thought aimed at revealing the positive and negative perceptions of the individual, concerning the method and level of learning or teaching (Ünver, 2003). In conclusion, it is an opportunity process for assessing and re-organizing the learning and teaching process. Coşkun controlled the effects of the applications of project-based learning (Coşkun, 2010b) and geographical information systems (Coşkun, 2010c), aimed at the reflective thought regarding the geography lesson. In his studies, Coşkun determined that rather than critical reflective thoughts, students generally use definitive reflective thoughts. The category of reflective thought includes a total of 21 concepts. The repetition frequency of these concepts is 28. While 14 concepts in this category were definitive reflective concepts, 6 concepts were associated with geography as reflective concepts. While the most frequently repeated three definitive reflective concepts are Mr. Sencer (4), lesson (3) and life (2), critical reflective concepts are exam (2), loneliness (1) and unexpectedness (1).

Preservice social sciences teachers used the names of some of the cities, countries and regions on their mind maps. Since these proper names have a local quality, these concepts are associated under the category of local. Local category includes 16 concepts. Repetition frequency of these concepts is 22. The places that are repeated more than once in this category are Turkey (5), Black Sea (2) and England (2).

Examining the mind maps of preservice teachers, another category that attracts attention is vacation. All the concepts in this category, formed with the help of arrows of the central concept and the matched words, have a frequency and totally nine concepts were placed in this category. Interdisciplinary category includes totally six concepts and the repetition frequency of these concepts is nine. The disciplines that are repeated more than once in this category are; history (3) and archeology (2). Outside of geography, history and archeology, preservice social sciences teachers interrelated with the disciplines of anthropology, sociology and law.

**Relations between the visual elements where the preservice social sciences teachers placed the concept of “geography” on their mind maps**

During the formation of their mind maps, preservice social sciences teachers were required to place the concept of “geography” in the related visual element. Table 4 shows the distribution of visual elements on the mind maps of preservice social sciences teachers, regarding “geography”.

Examining Table 4, it is seen that 46 preservice social sciences teachers, who participated in the study, used 18 visual elements on their mind maps regarding the concept of “geography”. Among these visual elements, the most frequently repeated one was the rectangle (f:9; 19.6%). When five preservice teachers, who were selected randomly among the preservice social sciences teachers that selected this element, were asked why they selected this element, three of them asserted that they considered more than one visual elements but since they could not make a selection, they had to prefer a geometric figure; and two of them asserted that they could not find a visual element to associate with the concept of “geography”.

Concerning the preservice social sciences teachers who participated in the study, while the image of “globe” was used in the second place (f:6; 13%), the images of “cloud” and “Turkish Map” (f:5; 10.9%) were used in the third place on their mind maps regarding the concept of “geography”. While the images of “globe” and “Turkish Map” were only used by male preservice teachers, the image of “cloud” was used by female preservice teachers.

When three preservice teachers, who were selected randomly among the preservice teachers that used the image of “globe”, were asked why they preferred this element, all of them indicated that they basically

<table>
<thead>
<tr>
<th>Sequence</th>
<th>categories</th>
<th>Number of concept</th>
<th>f</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Physical Geography</td>
<td>137</td>
<td>443</td>
<td>67.7</td>
</tr>
<tr>
<td>2</td>
<td>Human Geography</td>
<td>56</td>
<td>144</td>
<td>21.9</td>
</tr>
<tr>
<td>3</td>
<td>Reflective thought</td>
<td>21</td>
<td>28</td>
<td>4.3</td>
</tr>
<tr>
<td>4</td>
<td>Local</td>
<td>16</td>
<td>22</td>
<td>3.3</td>
</tr>
<tr>
<td>5</td>
<td>Vacation</td>
<td>9</td>
<td>9</td>
<td>1.4</td>
</tr>
<tr>
<td>6</td>
<td>Interdisciplinary</td>
<td>6</td>
<td>9</td>
<td>1.4</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>245</td>
<td>655</td>
<td>100</td>
</tr>
</tbody>
</table>

*Uses the concept of the total frequency (f=655) of the data calculated on the percentage of teacher candidates.

Table 3. Categorical distribution of concepts, which are included in mind maps of preservice teachers regarding the concept of “geography”.

Table 4 shows the distribution of visual elements on the mind maps of preservice social sciences teachers, regarding “geography”.
Table 4. Distribution of visual elements on the mind maps of preservice social sciences teachers regarding “geography”.

<table>
<thead>
<tr>
<th>Visual element</th>
<th>f</th>
<th>%</th>
<th>Female</th>
<th>%</th>
<th>Male</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Globe</td>
<td>9</td>
<td>19.6</td>
<td>4</td>
<td>21.1</td>
<td>5</td>
<td>18.5</td>
</tr>
<tr>
<td>Sphere</td>
<td>6</td>
<td>13</td>
<td>-</td>
<td>-</td>
<td>6</td>
<td>22.2</td>
</tr>
<tr>
<td>Cloud</td>
<td>5</td>
<td>10.9</td>
<td>5</td>
<td>26.3</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Turkish map</td>
<td>5</td>
<td>10.9</td>
<td>-</td>
<td>5</td>
<td>18.5</td>
<td></td>
</tr>
<tr>
<td>Round</td>
<td>3</td>
<td>6.5</td>
<td>1</td>
<td>5.3</td>
<td>2</td>
<td>7.4</td>
</tr>
<tr>
<td>Mountain</td>
<td>2</td>
<td>4.3</td>
<td>2</td>
<td>10.4</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Sun</td>
<td>2</td>
<td>4.3</td>
<td>-</td>
<td>-</td>
<td>2</td>
<td>7.4</td>
</tr>
<tr>
<td>Axis</td>
<td>2</td>
<td>4.3</td>
<td>2</td>
<td>10.4</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Square</td>
<td>2</td>
<td>4.3</td>
<td>1</td>
<td>5.3</td>
<td>1</td>
<td>3.7</td>
</tr>
<tr>
<td>Flower</td>
<td>2</td>
<td>4.3</td>
<td>1</td>
<td>5.3</td>
<td>1</td>
<td>3.7</td>
</tr>
<tr>
<td>House</td>
<td>1</td>
<td>2.2</td>
<td>1</td>
<td>5.3</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Ellipsis</td>
<td>1</td>
<td>2.2</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>3.7</td>
</tr>
<tr>
<td>World Map</td>
<td>1</td>
<td>2.2</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>3.7</td>
</tr>
<tr>
<td>Cell</td>
<td>1</td>
<td>2.2</td>
<td>1</td>
<td>5.3</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Landscape painting</td>
<td>1</td>
<td>2.2</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>3.7</td>
</tr>
<tr>
<td>Triangle</td>
<td>1</td>
<td>2.2</td>
<td>1</td>
<td>5.3</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Volcano</td>
<td>1</td>
<td>2.2</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>3.7</td>
</tr>
<tr>
<td>Star</td>
<td>1</td>
<td>2.2</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>3.7</td>
</tr>
<tr>
<td>Total</td>
<td>46</td>
<td>100</td>
<td>19</td>
<td>100</td>
<td>27</td>
<td>100</td>
</tr>
</tbody>
</table>

When three preservice teachers, who were selected randomly among the preservice teachers that used the image of “Turkish Map”, were asked why they preferred this element, while two of them indicated that “geography shall be perceived and learned very well in order to sustain the existence of our country”, one of them stated that “Since I live in Turkey, I look at the geography from here and therefore I preferred to draw the Turkish Map”. These preservice teachers might be claimed to have constituted a local viewpoint.

When three preservice teachers, who were selected randomly among the preservice teachers that used the image of “Cloud”, were asked why they preferred this element, while two of them indicated that “climatic subjects are highly taught in geography lessons and the first element that springs to mind is cloud”, one of them stated that “my favorite geography subject is the climate subject”.

Examsing the visual elements used by preservice social sciences teachers, who participated in the study, on their mind maps regarding the concept of “geography”, it was determined that while the images of “Turkish Map, Sun, Ellipsis, World Map, Landscape Painting, Volcano and Star” were only used by male preservice teachers, the images of “Cloud, Mountain, Axis, House, Cell, Triangle” were only used by female preservice teachers.

**RESULT, DISCUSSION AND CONCLUSION**

In this study, which was performed in an attempt to reveal the perceptions of preservice social sciences teachers regarding the concept of “geography”, it was determined that preservice teachers explain their perceptions regarding the concept of “geography” with the help of 245 concepts. Among these concepts, 92 concepts with a frequency being greater than one were used. Additionally, the concepts with a frequency greater than one consisted 76.6% of the total concept frequency.

The perceptions that were asserted by preservice social sciences teachers in relation with the concept of “geography” were collected under six categories as Physical Geography (137), Human Geography (56), Reflective Thought (21), Local (16), Vacation (9) and Interdisciplinary (6), in terms of their common traits. Assessing the total frequencies, while 67.7% of the concepts used by preservice social sciences teachers are in the category of physical geography, 21.9% of them are in the category of human geography. Assessing in terms of the total frequencies of other four concepts, it was
determined that they have a share of 10.4%. The fact that
the concepts being used by preservice teachers are
generally associated with physical geography could mean
that they usually perceive geography from the physical
aspect. Considering various studies (Catling, 2004; Alkış,
2009; Öztürk and Alkış, 2009), it is observed that physical
aspect is also in the forefront in these studies, in terms of
physical geography. The reason might be associated with
the fact that the relation between the environment and
human is approached by the highly environment-oriented
teachers. It could be asserted that the preservice
teachers who participated in the study encounter
teachers with environmentalist determinism throughout
their geography training, in terms of approaching the
subject, and that geography perceptions of these
teachers are highly physical.

In his study performed on preservice class teachers,
Catling (2004) collected their perceptions regarding
geography under five categories as the global view,
physical and human geography view, human-environ-
ment relation view, place and environmental view. In this
study, the most dominant view was the global view with a
rate of 36.2%. It was determined in this study that
regarding the English preservice class teachers, 30.3%
adopt physical and human geography view, 14.7% adopt
the human-environment relation view, 13.8% adopt place
view and 4.1% adopt the environmental view.

In their study on the perceptions of preservice class
teachers regarding geography and the objective of the
geography education at primary school, Öztürk and Alkış
(2009) determined that concerning the perceptions of
preservice teachers aimed at geography, 51.1% have
physical and human geography view, 32% have place
view, 25.4% have human-environment relation view,
2.9% have the global view and 1.5% have the environ-
mental view.

As a result of the data collected from 136 preservice
geography teachers at six different universities with the
help of two open-ended questions, Alkış (2009) deter-
mined that the perceptions of preservice geography
teachers regarding geography focus on human-
environment relation and physical and human geography
view. In addition to this, he indicated that majority of
preservice teachers have an environmental view.

Preservice social sciences teachers used 18 visual
images on their mind maps regarding the concept of
“geography”. Among these visual images, the most
frequently repeated one was the rectangle (f:9; 19.6%).
Preservice social sciences teachers used the image of
“globe” (f:6; 13%) in the second place and “cloud” and
“Turkish Map” (f:5; 10.9%) in the third place on their mind
maps regarding the concept of “geography”.

Within the scope of these data, majority of preservice
teachers perceive geography within the frame of the
concepts of physical and human geography. This result is
also observed in the studies of Öztürk and Alkış (2009),
which were performed on preservice class teachers.
The social sciences teachers, who will encounter a younger
age group due to the recent structuring of 4+4+4, will
have to introduce “geography” to the primary school
students. Thus, since the first impressions, attitudes and
perceptions of students will be influenced by the attitudes
and perceptions of teachers, it is important to reveal the
perceptions of teachers with the help of such studies. In
that context, it is thought that making new regulations in
the new structuring would cause more positive outcomes,
in terms of bringing values, attitudes, concerns and skills
in preservice teachers within the scope of the objectives of
the geography education. It is suggested for geography
instructors to perform studies on the perceptions of
geography in order to enable the functionality of
the geography curriculum and enable students to attain
a geographical consciousness about their own countries
and the world, within the scope of the vision of the
program (CDÖP, 2005). In that context, rather than
focusing on the physical environment, students should be
empowered to internalize the nature-human relation on a
local, national and global scale, within the scope of using
spatial elements.

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