Which elementary school subjects are the most likeable, most important, and the easiest? Why?: A study of science and technology, mathematics, social studies, and Turkish

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The present study was conducted first to identify which school subjects were most liked, most important, and most difficult, as well as least liked, least important and easiest as perceived by elementary school students and second to explore the reasons why students most/least liked, considered as most/least important, and considered as most difficult/easiest the school subjects identified. The data were collected from 789 fourth through seventh grade students from eight public elementary schools in Edirne, Turkey using three rank-order and six open-ended questions. The study showed that the most-liked subject was science and technology, the most important and also difficult subject was mathematics. Whether classes were amusing, boring and/or linked to daily life experiences was found to be among the most frequently mentioned reasons.

Key words: Attitudes towards school subjects, comparison among school subjects, elementary education, scaling.

INTRODUCTION

The elementary education years are, without a doubt, of great importance in a child’s social and academic life. In these years children gain much basic academic knowledge and social skills directly from schools (Sylva, 1994). In that period of time, children begin to develop positive or negative perceptions about schools, school subjects, and other academic agents. As seen from studies regarding school subjects, attitudes towards school in general and particular school subjects impact many aspects of academic life such as achievement (Haladyna et al.,1979; Haladyna et al., 1982; Haladyna et al., 1983; İş, 2003; Ma and Kishor, 1997; Oliver and Simpson, 1988; Papanastasiou and Zembylas, 2002, 2004; Wasike, 2013; Yücel and Koç, 2011), effort put forward to learn subject matters (Li, 2012; Shrigley, 1990), test anxiety (Akman et al., 2007), career preferences related to the subject (Haladyna et al., 1979, 1983, Haladyna et al., 1982), academic self-concept (Çağlar, 2010), and
resource allocation (Haladyna et al., 1979, Haladyna et al., 1982). As understood from the research above, examining students’ attitudes towards school subjects and the factors that determine those attitudes is crucial.

**Research on comparison of students’ attitudes towards school subjects**

Some studies (Chapin, 2006; Dundar and Rapoport, 2012; Goodlad, 1984; Greenblatt, 1962; Haladyna and Thomas, 1979; Herman, 1963; Inskeep and Rowland, 1965; Kılıç Çakmak et al., 2008; McGowan, 1983; Wolters and Pintrich, 1998; Yılmaz and Şeker, 2011) have compared the subjects in terms of attitudes that students hold. Briefly, when social studies, science, mathematics, and language (example English, Turkish, reading, etc.), are taken into consideration (as they are in the present study), with the exception of Yılmaz and Şeker (2011)’s study, math or science were found to be among the most liked, preferred, important, valued and easiest subjects. In contrast, social studies were found to be the least liked, the least preferred, the least important, the least valued, and the most difficult subject by students compared to other core subjects.

In addition to comparing the subjects in terms of students’ attitudes, some studies were performed to understand the reasons lying behind students’ attitudes. For instance, Schug et al. (1982) interviewed 46 students from 6 and 12 grades. Their research found English to be the most important subject, followed by mathematics, reading, social studies and science, respectively. Moreover, mathematics was the most favored subject, followed by English, social studies, science, art, industrial arts, and reading. As reasons for their favorite, least favorite, and important subject perceptions, students mentioned that social studies was less important because of career concerns; to them, English, mathematics, and reading were providing them with the skills that they would be using in their future careers. Students commented that social studies was boring because of teaching methods and content repetition. Furthermore, students thought mathematics to be important because it effectively develops “life skills”.

In a similar study, Stodolsky et al., (1991) interviewed 37 fifth grades. According to the results, when students ranked 10 school subjects in terms of likeability, importance and difficulty results were in line with similar studies. Students liked physical Education (PE) the most, followed by computers, music, math, reading, science, social studies, art, spelling, and foreign languages, respectively. In terms of importance, students put math in the first rank, followed by spelling, social studies, reading, science, foreign languages, computers, music, PE, and arts. As for difficulty, PE was in the first rank as the easiest subject. Music, spelling, reading, foreign language, art, computers, math, social studies, and science came later in order of increasing difficulty. They also found that students liked mathematics and social studies when they were interesting and easy, had fun activities, and when students were successful in the courses; whereas, students did not like mathematics and social studies when they had boring content and activities, they were hard, and students were unsuccessful. In Chiodo and Byford’s (2004) phenomenological study with 48 students, students’ favorite subjects were math, science or English because of their value in future careers; social studies came after them in rank order.

**Factors associated with attitudes towards school subjects**

In addition to comparing school subjects in terms of attitudes, numerous studies have examined students’ attitudes towards one particular school subject to shed light on the factors that influence pupils’ attitudes, as measured through qualitative and/or quantitative designs. For example, experimental studies have tested a variety of student-centered learning methods on attitudes towards science (Bilgin and Karaduman, 2005; Çibik, 2009; Gültekin, 2007; Hong et al., 2013; Lou et al., 2011; Ornstein, 2006), mathematics (Gelici, 2011; Şengül and Öz, 2008; Yıldırım and Tarım, 2008), social studies (Ada et al., 2009; Güler, 2011; McGowan, 1983; Yaşar and Ünlüer, 2011), and Turkish (Çörek, 2006; Kara, 2011; Kayranci, 2007). These studies revealed that student-centered teaching methods have a positive effect on students’ beliefs about or attitudes towards school subjects. There are also descriptive studies supporting the positive effects of student-centered teaching methods on opinions about school subjects. For instance, McTeer (1976) found that students favored social studies classes that were not lecture-based, but rather were active and utilized technology.

In the same way, in Goodlad’s (1984) study, “regardless of subject, students reported that they liked to do activities that involved them actively or in which they worked with others” (p.114); it was also found that most-liked subjects were the subjects that students were active in, and in which there was “a little less lecture-and textbook-oriented” instruction (Goodlad, 1984, p.115). Similarly, in the study conducted by Russell and Waters (2010) with sixth-eight grades, students stated that they did not like social studies when they were learning through “lecture”, “rote memorization and note-taking”, “worksheets”, “busy work” and “assignments from the textbook”, while they stated that they liked social studies when they learned by “cooperative learning activities”, “study guides, reviews, and review games to help prepare for exams and tests”, “using graphic organizers and foldables”, “technology (internet, film, video, etc...)”, “hands-on/active learning”, “field trips”, “student presentations” and “class discussions” (p. 10-11).
In addition to the teaching methods, some other factors such as student, parent, and teacher characteristics, students’ subject-matter interest, self-efficacy, self-concept, motivation, and achievement were suggested to be predictors of attitudes towards school subjects (Mohamed and Waheed, 2011). For example, Bayturan (2004) found that high achievers in mathematics held more positive attitudes towards mathematics than lower achievers. In their study examining students’ views on social studies, Alkis and Gülce (2006) found that teachers’ personal characteristics, history-related subject matter, active learning methods, and technology use positively affected students’ attitudes. Further, students stated that memorization and geography-related subject matter were important factors on their negative attitudes. The studies related to science attitudes (Fraser and Kahle, 2007; Papanastasiou and Zemballas, 2002, 2004; Rice et al., 2013; Simpson and Troost, 1982; Talton and Simpson, 1986), mathematics attitudes (Fraser and Kahle, 2007; İş, 2003; Rice et al., 2013), Turkish attitudes (Bölükbaş, 2010) and social studies attitudes (Corbin, 1997; Haladyna et al., 1979) showed that parents have an impact on students’ attitudinal outcomes.

Teachers are another important factor that shape students’ attitudes toward school subjects, both as curriculum practitioners and as role models. For instance, Mordi (1991) found that home characteristics, student characteristics, teaching and learning variables and school factors predicted students’ positive attitudes towards science. However, the teaching methods used by the teacher were the most important factor in the attitudes student expressed towards science (as cited in Akman et al., 2007). Teachers’ personal interest in the subject matter and teaching, their attitudes towards the subject matter and students, and their abilities in teaching and designing learning environments are also among many other important teacher characteristics to shape students’ perceptions about or attitudes towards school subjects (Haladyna et al., 1982; Hassan et al., 2012; Simpson and Troost, 1982; Talton and Simpson, 1986).

Insepke and Rowland (1965) found a correlation between students’ preferences and students’ perceived preferences of the teachers for subjects, suggesting students’ preferences might be affected by teachers’ preferences. Wentzel (1998) found perceived teacher support to be a predictor of class interest and school interest in the sixth grade. Similarly, positive correlations between student attitudes towards social studies and teacher enthusiasm, reinforcement of students, teacher support (Haladyna et al., 1979), and perceived teacher quality (Haladyna et al., 1982) were reported. İş (2003) found that student-teacher relations influenced student attitudes towards mathematics, suggesting that the more teachers were interested in students, fair to them, gave extra help, etc., the more positive attitude students held towards mathematics. Mata et al., (2012) also found positive correlations between teacher support and mathematics attitudes. Similar results were found in very recent research by Rice et al. (2013), revealing that the more social support students receive from teachers as well as from parents and friends, the more positive their attitudes towards math and science become; additionally, their sense of competence in math and science increases.

As seen from the literature review above, there is an abundance of studies examining the students’ attitudes towards school subjects. However, in Turkey, research on attitudes has mostly focused on either the effect of a particular instructional method or students’ attitudes towards one particular school subject. That is, there is a dearth of studies attempting to understand students’ attitudes towards school subjects holistically. Thus, the first aim of the present study was to identify which school subjects were most liked, most important, and most difficult, as well as least liked, least important and easiest as perceived by elementary school students; the second aim was to explore the reasons for why students most/least liked, considered as most/least important, and considered as most difficult/easiest the school subjects identified.

METHODOLOGY

The present study used mixed model that included both quantitative and qualitative research methods. Mixed method is defined as a research method that requires a researcher to collect data for the same study by using qualitative and quantitative methods. Then, the researcher is expected to analyze, unify and make future predictions (Tashakkori and Creswell, 2007).

Participants

Seven hundred and eighty-nine fourth through seventh grade students from eight public elementary schools in Edirne, Turkey participated in the study. Out of 789 participants, 215 (27.2%) were fourth grade students, 221 (28.0%) were fifth grade students, 187 (23.7%) were sixth grade students, and 166 (21.0%) were seventh grade students. As for gender, 386 (48.9%) were females and 403 (51.1%) were males.

Data collection

In the study, the data was collected by “Students’ Opinions on the School Subjects Questionnaire”, which was created from previous studies (Goodlad, 1984; Schug et al., 1982). The questionnaire included three rank-order and six open-ended questions. With the rank order questions, students were asked to rank science and technology, mathematics, social studies, and Turkish subjects in terms of liking, from the most liked (1) to the least liked (4), importance, from the most important (1) to the least important (4), and difficulty, from the most difficult (1) to the easiest (4). With the open-ended questions, students were asked to give reasons for their rankings, but only for the subjects that they ranked first and last.

Analysis of data

During the analysis of the data based on student ranking, the rank
order judgment scaling was used. The rank order judgment scaling method can be applied for all stimuli that can be assigned to a rank (Guilford, 1954; Turgut and Baykul, 1992), and the internal consistency of the scale values can be calculated (Torgerson, 1958; Turgut and Baykul, 1992). As for the analysis of open-ended questions, content analysis was used. First of all, to create the categories, the answers of the students (about 63% out of 789) were read through for each six question. Then, all answers were coded into these categories by two of the researchers. When a new category came up, it was added to the initially created category list. Finally, results were calculated and presented in tables. To check the reliability of coding, 100 randomly selected questionnaires were coded by an independent coder, and reliability statistics between coders were calculated for each question using the formula (Reliability = number of agreements / total number of agreements + disagreements) presented by Miles and Huberman (1994, p. 64). Inter-coder reliability statistics ranged from 0.82 to 0.88, yielding good results.

RESULTS

The first aim of the present study was to identify which school subjects were most liked, most important, and most difficult, as well as least liked, least important and easiest as perceived by elementary school students. For this aim, students' ranking of science and technology, mathematics, social studies, and Turkish courses by liking, importance, and difficulty were scaled according to rank-order judgments. Based on these ranking the frequency matrix was formed. Table 1 shows the frequency matrix.

In Table 1 students' rankings based on liking, importance, and difficulty of the subjects are presented. For example, while the number of students assigning the science and technology course to the first rank is 290, the number of students assigning the same course to the fourth rank is 84 in terms of liking. With the help of the frequency matrix, the unified standard was formed in order to compare each stimulus. The finding rates of each stimulus on the unified standard were calculated. The next step was to find the z values that correspond to the rates matrix and find the Z matrix. Finally, Sj values were found. Table 2 shows the Sj values. As seen in Table 2, the most liked subject by the students is science and technology, followed by social studies, mathematics, and Turkish. Regarding importance of the subjects ranked mathematics as the most important school subject, followed by Turkish, science and technology, and social studies. Lastly, students ranked mathematics as the most difficult subject, followed by science and technology, social studies, and Turkish.

When the proximity of the scale values in relation to the
When Table 3 is considered, it is evident that the mean error of the scale values for all the three situations is very low [Mean Error$_{Liking} = 0.00$; Mean Error$_{Importance} = 0.01$; Mean Error$_{Difficulty} = 0.00$]. This result displays that the scale values and the student judgments in relation to the three situations are reliable. Since the $\chi^2$ values that were calculated for each three situation is lower than the table values, the scale values have internal consistency. The second aim of the study was to explore the underlying reasons for students' subject ranking. Namely, why did students select the subjects they most/least liked, they considered as the most/least important, and that they considered most difficult or easiest relative to the other subjects. Findings regarding this aim are presented below in Table 4 to 9.

The results of student responses regarding reasons for why they most liked the subject that they ranked in the first order are presented in Table 4. As seen in Table 4, irrespective of the subject matter, “Topics of this subject are my area of interest (41.8%)”, “Classes are amusing (37.6%)”, “This subject is easy (24.6%)”, “We are active in this class (13.7%)”, and “I like the teacher’s teaching style (9.5%)” were mentioned more than other reasons. However, the proportions differ by subjects. For example, “Topics of this subject are my area of interest” was mentioned by the majority of students ranking math or social studies or Turkish in the first order. On the contrary, students liked science most because they thought science classes to be more fun. The results of student responses regarding reasons for why students least liked the subject that they ranked in the last order are given in Table 5.

As seen in Table 5, regardless of the subject matter,
Table 5. Reasons for the least liked subjects

<table>
<thead>
<tr>
<th>Reasons for the least liked subjects^</th>
<th>Science (N=84)</th>
<th>Math (N=307)</th>
<th>Soc. Stud. (N=186)</th>
<th>Turkish (N=212)</th>
<th>Total (N=789)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>f</td>
<td>%</td>
<td>f</td>
<td>%</td>
<td>f</td>
</tr>
<tr>
<td>This subject is difficult</td>
<td>29</td>
<td>34.5</td>
<td>196</td>
<td>63.8</td>
<td>62</td>
</tr>
<tr>
<td>This subject is boring</td>
<td>34</td>
<td>40.5</td>
<td>96</td>
<td>31.3</td>
<td>67</td>
</tr>
<tr>
<td>Topics of this subject are not my area of interest</td>
<td>9</td>
<td>10.7</td>
<td>40</td>
<td>13.0</td>
<td>39</td>
</tr>
<tr>
<td>I am not successful in this subject</td>
<td>3</td>
<td>3.6</td>
<td>38</td>
<td>12.4</td>
<td>12</td>
</tr>
<tr>
<td>There is memorization in this class</td>
<td>4</td>
<td>4.8</td>
<td>4</td>
<td>1.3</td>
<td>33</td>
</tr>
<tr>
<td>I don’t like the teacher’s teaching style</td>
<td>7</td>
<td>8.3</td>
<td>35</td>
<td>11.4</td>
<td>3</td>
</tr>
<tr>
<td>This subject is easy</td>
<td>1</td>
<td>1.2</td>
<td>2</td>
<td>0.7</td>
<td>13</td>
</tr>
<tr>
<td>The teacher acts nervously</td>
<td>2</td>
<td>2.4</td>
<td>5</td>
<td>1.6</td>
<td>2</td>
</tr>
<tr>
<td>There are discipline problems in this class</td>
<td>3</td>
<td>3.6</td>
<td>15</td>
<td>4.9</td>
<td>1</td>
</tr>
<tr>
<td>This subject is not related to our daily life</td>
<td>5</td>
<td>6.0</td>
<td>5</td>
<td>1.6</td>
<td>4</td>
</tr>
<tr>
<td>Other</td>
<td>9</td>
<td>10.7</td>
<td>19</td>
<td>6.2</td>
<td>5</td>
</tr>
</tbody>
</table>

Note. Percentages do not add up 100 percent since each student may write more than one reason in their response.
^ In total, 21 categories were created for the reasons for the least liked subjects; however, 11 categories were grouped as other here, and total percentages of reasons in other category are ranging from 0.1 to 1.5.

Table 6. Reasons for the most important subjects

<table>
<thead>
<tr>
<th>Reasons for the most important subjects^</th>
<th>Science (N=88)</th>
<th>Math (N=398)</th>
<th>Soc. Stud. (N=62)</th>
<th>Turkish (N=241)</th>
<th>Total (N=789)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>f</td>
<td>%</td>
<td>f</td>
<td>%</td>
<td>f</td>
</tr>
<tr>
<td>This subject is related to our daily life</td>
<td>36</td>
<td>40.9</td>
<td>259</td>
<td>65.1</td>
<td>21</td>
</tr>
<tr>
<td>We learn new things in this class</td>
<td>28</td>
<td>31.8</td>
<td>10</td>
<td>2.5</td>
<td>34</td>
</tr>
<tr>
<td>Its contribution to standardized exams and/or grade point average (GPA) is more than other subjects</td>
<td>1</td>
<td>1.1</td>
<td>42</td>
<td>10.6</td>
<td>1</td>
</tr>
<tr>
<td>This subject is difficult</td>
<td>4</td>
<td>4.5</td>
<td>44</td>
<td>11.1</td>
<td>2</td>
</tr>
<tr>
<td>This subject is related to my future career</td>
<td>9</td>
<td>10.2</td>
<td>32</td>
<td>8.0</td>
<td>4</td>
</tr>
<tr>
<td>This subject has an impact on other subjects as well</td>
<td>0</td>
<td>0.0</td>
<td>5</td>
<td>1.3</td>
<td>0</td>
</tr>
<tr>
<td>I like this subject very much</td>
<td>9</td>
<td>10.2</td>
<td>9</td>
<td>2.3</td>
<td>5</td>
</tr>
<tr>
<td>This subject helps my personal development</td>
<td>1</td>
<td>1.1</td>
<td>4</td>
<td>1.0</td>
<td>2</td>
</tr>
<tr>
<td>Classes are amusing</td>
<td>5</td>
<td>5.7</td>
<td>11</td>
<td>2.8</td>
<td>3</td>
</tr>
<tr>
<td>This subject is easy</td>
<td>1</td>
<td>1.1</td>
<td>5</td>
<td>1.3</td>
<td>3</td>
</tr>
<tr>
<td>Other</td>
<td>11</td>
<td>12.5</td>
<td>20</td>
<td>5.0</td>
<td>5</td>
</tr>
</tbody>
</table>

Note. Percentages do not add up 100 percent since each student may write more than one reason in their response.
^ In total, 17 categories were created for the reasons for the most important subjects; however, 7 categories were grouped as other here, and total percentages of reasons in other category are ranging from 0.1 to 1.5.

“This subject is difficult (43.5%)”, “This subject is boring (38.1%)”, “Topics of this subject are not my area of interest (15.3%)”, “I am not successful in this subject (8.4%)” were mentioned more than other reasons. However, the proportions differ by the subjects. For example, for science and technology, social studies, and Turkish the most mentioned reason was “This subject is difficult”, while it was “This subject is difficult” for math. The reasons why students considered subjects to be the most important are given in Table 6. As seen in Table 6, regardless of subject matter, “This subject is related to our daily life (50.4%)”, “We learn new things in this class (18.8%)”, “Its contribution to standardized exams and/or grade point average (GPA) is more than other subjects (10.6%)”, and “This subject is difficult (6.7%)” were mentioned more than other reasons. On the other hand, the proportions differ by the subjects. For example, most of the students considered science, mathematics, and Turkish to be related to their daily lives. However, for social studies the most mentioned reason was “We learn
new things in this class”. Furthermore, students also thought math to be important because of its contribution to standardized exams and/or GPA, which is also considered an important reason for Turkish but not for science and technology and social studies. The reasons why students considered subjects to be the least important are given in Table 7.

As seen in Table 7, regardless of the subject matter, “This subject is not related to our daily life (15.6%)”, “This subject is easy (13.4%)”, “We don’t learn new things in this class (11.4%)”, and “This subject is boring (11.3%)” are among the most mentioned reasons. When examined in detail there seems to be some differences by subjects. For science and technology, “This subject is not related to our daily life”, and “This subject is easy” were among the most-mentioned reasons for it to be the least important. As for mathematics, “This subject is difficult”, “This subject is boring”, and “This subject is not related to our daily life” were among the most-mentioned reasons, respectively. For social studies, “This subject is easy”, “This subject is not related to our daily life”, and “Its contribution to standardized exams and/or GPA is less than other subjects” were among the most-mentioned reasons, respectively. For Turkish, the most mentioned reasons were “We don’t learn new things in this class”, followed by “This subject is easy” and “This subject is boring”. The reasons why students considered subjects to be the most difficult are given in Table 8.

As seen in Table 8, the most mentioned reasons irrespective of the subjects were “Topics and activities of this subject are complex (65.5%)”, “There is memorization in this class (11.3%)”, “This subject is boring (8.2%)”, and “Topics of this subject are not my area of interest (6.0%)”. When examined in detail there seems to be some differences by subjects. For science and technology, math and Turkish, “Topics and activities of this subject are complex” and “This subject is boring” are the most mentioned reasons. However, for social studies, “There is memorization in this class” is the most mentioned reason, followed by “Topics and activities of this subject are complex”. The reasons why students considered subjects to be the easiest are given in Table 9.

As seen in Table 9, irrespective of the subjects “My grades are high (29.5%)”, “Topics of this subject are not complex (28.8%)”, “The classes are amusing (15.8%)”, “I like this subject very much (12.0%)”, and “Topics of this subject are my area of interest (7.6%)” were among the most mentioned reasons. When percentages were examined of the mostly mentioned reasons, it is important to note that none was more prominent than any others. For science and technology “My grades are high” was the most mentioned reason, which was followed in order by “The classes are amusing”, “I like this subject very much”, and “Topics of this subject are not complex”, among others. Similarly, the most mentioned reason was “My grades are high” for social studies. However, unlike science and technology, “The classes are amusing” came after “Topics of this subject are not complex”. For math, “Topics of this subject are not complex” was the most mentioned reason, followed by “My grades are high” and “I like this subject very much” as the top of the list. For Turkish, “Topics of this subject are not complex” and “My grades are high” were among the most mentioned

### Table 7. Reasons for the least important subjects

<table>
<thead>
<tr>
<th>Reasons for the least important subjects</th>
<th>Science (N=159)</th>
<th>Math (N=90)</th>
<th>Soc. Stud. (N=331)</th>
<th>Turkish (N=209)</th>
<th>Total (N=789)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>f</td>
<td>%</td>
<td>f</td>
<td>%</td>
<td>f</td>
</tr>
<tr>
<td>This subject is not related to our daily life</td>
<td>38</td>
<td>23.9</td>
<td>16</td>
<td>17.8</td>
<td>38</td>
</tr>
<tr>
<td>This subject is easy</td>
<td>19</td>
<td>11.9</td>
<td>2</td>
<td>2.2</td>
<td>46</td>
</tr>
<tr>
<td>We don’t learn new things in this class</td>
<td>14</td>
<td>8.8</td>
<td>1</td>
<td>1.1</td>
<td>34</td>
</tr>
<tr>
<td>This subject is boring</td>
<td>11</td>
<td>6.9</td>
<td>18</td>
<td>20.0</td>
<td>28</td>
</tr>
<tr>
<td>This subject is difficult</td>
<td>6</td>
<td>3.8</td>
<td>30</td>
<td>33.3</td>
<td>19</td>
</tr>
<tr>
<td>There are useless topics covered in this class.</td>
<td>13</td>
<td>8.2</td>
<td>7</td>
<td>7.8</td>
<td>15</td>
</tr>
<tr>
<td>Its contribution to standardized exams and/or GPA is less than other subjects</td>
<td>3</td>
<td>1.9</td>
<td>2</td>
<td>2.2</td>
<td>35</td>
</tr>
<tr>
<td>Topics of this subject are not my area of interest</td>
<td>10</td>
<td>6.3</td>
<td>2</td>
<td>2.2</td>
<td>24</td>
</tr>
<tr>
<td>I don’t like this subject</td>
<td>13</td>
<td>8.2</td>
<td>5</td>
<td>5.6</td>
<td>10</td>
</tr>
<tr>
<td>This subject is not related to my future career</td>
<td>8</td>
<td>5.0</td>
<td>3</td>
<td>3.3</td>
<td>11</td>
</tr>
<tr>
<td>Other</td>
<td>14</td>
<td>8.8</td>
<td>7</td>
<td>7.8</td>
<td>27</td>
</tr>
</tbody>
</table>

**Note.** Percentages do not add up 100 percent since each student may write more than one reason in their response.

* In total, 19 categories were created for the reasons for the least important subjects; however, 9 categories were grouped as other here, and total percentages of reasons in other category are ranging from 0.1 to 2.2.
reasons as in math.

**DISCUSSION**

The primary purpose of the present study was to identify which school subjects that were most liked, most important, and considered as most difficult/easiest the school subjects identified. The study shows that the most-liked subject by the students is science and technology, followed by social studies, mathematics, and Turkish. However, the liking levels of social studies, mathematics, and Turkish are approximately the same. On the whole, the findings of the study display parallels with several studies that were conducted on the same topic. When all the four school subjects are considered, Herman (1963) and Haladyna and Thomas (1979) found that students liked science the most.
Similar to the current research, the students in McGowan’s (1983) study least liked language arts. However, when all the literature is considered, it can be seen that mathematics is the most liked subject (Chi, and Byford, 2004; Dundar and Rapoport, 2012; Goodlad, 1984; Greenblatt, 1962; Inskeep and Rowland, 1965; McGowan, 1983; Schug et al., 1982; Stodolsky et al., 1991). On the other hand, science and technology (that is, science), which is the most liked subject in the current study, is the least liked one in other studies (Greenblatt, 1962; Schug et al., 1982). Furthermore, the analysis of the open-ended questions show that the interest in the subject matter of the course, the amusement of the subject, and the easiness of the subject were the most pronounced factors irrespective of the school subject.

Likewise, if the students find the subject difficult or boring, or if they have no interest in the subject matter, their level of liking the subject decreases. When all the subjects are considered separately, it was found that students were interested in the subject matters of mathematics, social studies and Turkish. The most mentioned reason for liking science and technology was the amusement of the subject. However, interest in the subject matter was the most mentioned reason for mathematics, social studies and Turkish. The primary reason for not liking social studies and Turkish courses was that students considered it boring. Schug et al.’s (1982) study provides similar findings. They found that their participants liked school subjects when they found the course “enjoyable”, were “good at it”, had “new learning” experiences, and found the course “challenging”. On the other hand, “difficult subject”, finding the course “boring” and “disliking teaching methods” caused the participants of their study to consider a subject as least favorite (pp. 18-19). As Chapin (2006) stated, this situation shows that in addition to the interest in the subject matter of the course, amusement is also related to why students like a course more than others. Thus, a teacher needs to develop and apply enjoyable teaching methods in order to make students favor his/her classes.

Students who liked mathematics the least stated that the reason for their dislike was finding this subject difficult. Bayturan (2004) found that there was a relationship between students’ mathematics achievement and their attitudes. The participants who were successful in mathematics in his study liked mathematics, found it enjoyable and interesting, participated in the activities, and valued the importance of mathematics achievement more than other students who were less successful. Thus, teachers need to set up close relationships with their students, identify their learning levels, and design activities that can ease the learning processes of their students. As Osborne et al., (2003) stated, teachers and teachers’ teaching applications have key roles in influencing students’ positive attitudes towards the school subjects. Furthermore, families also affect student perceptions in relation to courses (Kawiak, 2013). Hence, teachers and families can praise student performances and positively contribute to the formation of their perceptions about the school courses (Rice et al., 2013).

The findings of the present study show that students consider mathematics as the most important school subject, followed by Turkish, science and technology, and social studies. However, the importance level that the students assigned to Turkish and science and technology is approximately equal. This finding overlaps with the former research revealing mathematics as the most important (Chapin, 2006; Dundar and Rapoport, 2012; Goodlad, 1984; Kılıç Çakmak et al., 2008; Schug et al., 1982; Stodolsky et al., 1991; Wolters and Pintrich, 1998) and social studies as the least important school subject, as perceived by students (Chapin, 2006; Dundar and Rapoport, 2012; Goodlad, 1984; Schug et al., 1982; Wolters and Pintrich, 1998). This study also focused on finding why students consider the school subjects as the most important or least important. Accordingly, the most mentioned factors that caused students to consider courses important were found to be: the usefulness of the subject matters in students’ daily lives, learning new topics from the subject, the subject’s contribution to standardized exams and/or GPA, and the difficulty of the subject. Similarly, Schug et al. (1982) found that if a course is related to students’ “career preparation”, “life skills”, and if it is “enjoyable” for them, they consider the course as important (p. 17).

The present study showed that students who considered the subjects as important were able to find a connection between the topics of subjects and daily life experiences. On the other hand, the students who found the courses as least important were not able to see a connection between the topics of subjects and daily life experiences. Thus, the usefulness of the course topics in daily life experiences is the chief factor that causes students to see a course as important. In this context, teachers need to give real life examples and establish connections between the course topics and daily life activities. Numerous other studies found that using real life connected teaching methods such as problem-based learning and context-based learning increased student achievement and resulted in making students consider the subjects as more important (Günhan and Başer, 2008; Lou et al., 2011; Yavuz and Kepçeoğlu, 2011). Failing to set up real-life connections when explaining the topics of any subject can result in student learning that is “inflexible”, “school-bound”, and “limited” (Boaler, 1998, p. 60). This finding is of importance that teachers need to take into consideration while planning their lessons.

Another noteworthy finding of the study is that students considered mathematics as the most difficult course, followed by science and technology, social studies, and Turkish. However, the difficulty level assigned by the students to science and technology and social studies courses were nearly indistinguishable. Turkish was considered as the easiest by the participants. Studies by
Goodlad (1984) and Stodolsky et al. (1991) also provide similar findings since they found that students regard the native language course as their easiest course. However, social studies, which the current study identifies as among the easiest subjects, was considered as the most difficult in other studies (Dundar and Rapoport, 2012; Goodlad, 1984). The reasons that students find a subject difficult are: the complexity of the topics of the subject, including memorizing, being boring, and lack of interest in the topics of the subjects. The factors that cause students to consider a course as easy are: having high grades, finding the subject matter as uncomplicated, finding the subject amusing, liking the subject, and being interested in the topics of the subject.

When all the courses are considered separately, “Topics and activities of this subject are complex” is the most frequently indicated reason that students consider science and technology, mathematics, and Turkish to be the most difficult school subject. However, memorization is the most significant factor relative to other reasons that cause social studies to be perceived as the most difficult. Students who found mathematics and Turkish to be the easiest subjects stated that these courses do not include complicated topics. On the other hand, students who get high grades from science and technology and social studies pronounced these subjects as the easiest. This result can be related to the high-stakes testing oriented education system in Turkey. Research on high-stakes testing shows that results obtained from these tests can be misleading (Linn et al., 1990; Shepard, 1990) since they require individuals to maintain extreme focus. In other words, two students who are at the same academic level may not get the same result. Therefore, it is not possible to generalize the results found in these exams (Koretz et al., 1991). Roeser and Lau (2002) stated that high-stakes testing prevent students from displaying their real performances. Supporting these arguments studies by Yalçınkaya (2010) and Kirikkaya and Yurkaya (2011) show that complementary measurement and evaluation techniques (such as performance assessment, structural communication grid, diagnostic tree and predict-observe-explain activities) increase student achievement and positively aid their attitudes towards the subjects.

Besides getting high grades, teacher-controlled factors such as the level of amusement of the classes and teaching style of the teacher also cause students to see a subject as easy compared to other subjects. Undoubtedly, teachers have a crucial role in directing student attitudes towards and perceptions about the courses since they are the planners, implementers, and role models of the courses (Cronin-Jones, 1991; Fisher and Rickards, 1998; Mata et al., 2012; Mohamed and Waheed, 2011; Simpson and Troost, 1982). Studies conducted show that teacher and text book centered courses that include a significant amount of memorization result in negative student attitudes towards school subjects (Governale, 1997; Haladyna and Shaughnessy, 1981).

Moreover, research reveals that students demand active learning environments (Goodlad, 1984; McTeer, 1976; Russel and Waters, 2010; Schug et al., 1982) that learning environments which are enjoyable, student centered, and not based on memorizing (Ada et al., 2009; Alkis and Gulec, 2006; Bilgin and Karaduman, 2005; Çibik, 2009; Çöreök, 2006; Gelici, 2011; Goodlad, 1984; Guler, 2011; Gültekin, 2007; Hong et al., 2013; Kara, 2011; Kayıran, 2007; Lou et al., 2011; McGowan, 1983; Ornstein, 2006; Ören and Tezcan, 2009; Şengül and Öz, 2008; Yalçınkaya, 2010; Yaşar and Ünlüer, 2011; Yıldırım and Tanrı, 2008), and positive teacher attitudes also contribute to developing positive student attitudes for courses (Alkis and Gulec, 2006; Chiodo and Byford, 2004).

CONCLUSION

To conclude, this study compared students’ attitudes towards four core school subjects—science and technology, mathematics, social studies, and Turkish—with respect to liking, importance, and difficulty and identified several common points that influence student attitudes in a positive manner. These common factors are enjoying the classes and relating the course content to daily life experiences. Therefore, teachers need to make their classes exciting and relate the course content to daily life practices in order to eradicate negative attitudes towards their courses. In this study, the participants ranked the four core subjects in terms of liking, importance, and difficulty and expressed the reasons for their views by answering open-ended questions. Thus, future research that focuses on the same topic can use the interview technique, incorporate more courses into its data structure, and select different sample groups in order to discover other important findings that were not identified in this study.

Conflict of Interests

The authors have not declared any conflict of interests.

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