The Influence of Demographic Factors on Landscape Preference of High School Students in Iran

1Sima Alizadeh, 2Aldrin Abdullah and 3Minoo Sadeghi

1,2School of Housing, Building and Planning, Universiti Sains Malaysia
3School of Educational Studies, Universiti Sains Malaysia

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ABSTRACT
This research intends to study the influence of gender, field of study, and level of education factors on landscape preference among 384 high school students in Isfahan, Iran. In order to attain this purpose, the respondents rated 30 images of six types of landscape including mountain, urban, forest, desert, water, and farmland landscapes. The results indicated that preference of water and mountain landscapes are significantly different between gender groups. In terms of field of study, students' preferences were significantly different towards urban, forest, and desert landscapes. Regarding level of education, the results showed that desert landscape is preferred more among the students at grade 3 than the students at grade 1 of high school.

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INTRODUCTION

In parts of the world dominated by humans, society obviously attaches great significance to land and landscape [1] and the quality of public open space and landscape design play an extremely important role in urban life [2]. According to Relph [3], one of the main problems related to modern landscaping and urbanization is disregarding the close and sensitive connection between landscape and people’s interest which must be noted carefully in landscape design. That is why in the recent years scholars are more interested than ever to comprehend which landscape people prefer and why [4]. Hence, widespread academic studies have been done in an effort to discover what demographic factors lay behind people’s preference and judgments of landscapes [5]. Although the body of literature pertaining to peoples’ differences in landscape preference based on socio-demographic factors has been grown considerably [6], still no respective investigation has been performed in Iran. Even a lot of controversy surrounds the findings of conducted studies on the impact of demographic factors towards landscape preference. In addition, in previous investigations participants were mostly selected from university students and adults whilst, school students and teenagers have seldom been studied. As a result, through this research a number of demographic variables including gender, field of study, and level of education are investigated among high school students in Iran.

Methodology:

The article presents data from a quantitative survey examining a total of 384 high school students (192 boys and 192 girls) from Isfahan city, Iran who were selected by stratified random sampling technique. The sample were taken from different fields of study that are mathematics, experimental sciences, humanities, and the arts (n=72 in each group) as well as students with no field of study (n=96). Moreover, the students were chosen from four levels of education consisting of grade 1, grade 2, grade 3, and grade 4 of high school (n=96 in each group). The questionnaire was composed of two parts. The first part asked about the participants’ demographic factors including gender, field of study, and level of education. In the second part visual preference survey was applied for evaluating the respondents’ preference towards landscape. In this regard, a series of 30 colour images of six landscape types of Iran comprising mountain, urban, forest, desert, water, and farmland landscapes were
presented to the subjects by projecting the photos onto a screen. The respondents were asked to rank each image of landscapes on a 7-point Likert scale from the least to the most preferred points.

RESULTS AND DISCUSSION

(i) Students Differences in Landscape Preference in terms of Gender:

In order to study the differences of means between boy and girl students in preference towards landscapes, t-test was utilized. The findings revealed that statistically, there is no significant difference between the means of preferences for urban, forest, desert, and farmland landscapes between boy and girl students (p>.05); therefore the research hypothesis based on the significant difference between boy and girl students in preferences for these landscapes is rejected. However, as Table 1 exhibits, significant differences were found between boy and girl students in their preferences for mountain and water landscapes (p<.01). This is revealed that boys prefer mountain landscape more than girls while girls have greater preference toward water landscape in comparison with boys. As a result, the research hypothesis respecting the significant difference in preference of mountain and water landscapes between gender groups is confirmed.

Table 1: T-test estimations of differences in students’ landscape preference based on gender.

<table>
<thead>
<tr>
<th>Group Statistics</th>
<th>Leven’s Test for Equality of Variances</th>
<th>t-test for Equality of Means</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F</td>
<td>Sig</td>
</tr>
<tr>
<td>Mountain</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Boy</td>
<td>10.66</td>
<td>.001</td>
</tr>
<tr>
<td>Girl</td>
<td>10.94</td>
<td>.001</td>
</tr>
<tr>
<td>Water</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Boy</td>
<td>10.66</td>
<td>.001</td>
</tr>
<tr>
<td>Girl</td>
<td>10.94</td>
<td>.001</td>
</tr>
</tbody>
</table>

Consistent with this result, a number of relevant studies have also demonstrated that females and males are different in their landscape preferences [7, 8]. However the findings are not supported by the studies of [2] and Van den Berg and Koole [9].

(ii) Students Differences in Landscape Preference in terms of Field of Study:

For studying the differences of means among different fields of study in preference of landscapes, analysis of variance was applied. The results revealed no significant difference in preferences of mountain, water, and farmland landscapes among students with different fields of study (p>.05). Thus, the research hypothesis based on the significant difference among fields of study in preferences of these landscapes is rejected. Moreover, the outcomes of Table 2 indicated that there are significant differences in preferences of urban (Welch=4.19, p<.01), forest (Welch=5.69, p<.01), and desert (F=3.16, p<.05) landscapes among students with different fields of study. It was observed that the students of mathematics field of study disclosed greater preference toward urban landscape than the students of experimental sciences and the arts fields (p<.05). Regarding forest landscape, students of the arts field displayed more preference than the students with no field (p<.05). Furthermore, the students of mathematics, experimental sciences, and the arts fields prefer forest landscape more than the students of humanities field (p<.01). Respecting desert landscape, it was found that the students of the arts are more in favor of this landscape than the students with no field (p<.01). Consequently, the research hypothesis concerning the significant difference in preference of urban, forest, and desert landscapes among students with different fields of study is approved.

Although the literature meets a great lack in the role of field of study in landscape preference, the attained results somewhat parallel the investigation by Stamps [10] who discovered that designers and non-designers are different in their preferences of landscapes. Likewise, Min [2] found expertise as an influential factor on landscape preference. In contrast, Yu [11] and Dearden [12] observed no differences among expert groups in preference of landscape.

(iii) Students Differences in Landscape Preference in terms of Level of Education:

In order to study the differences of means among four different levels of education respecting landscape preferences, analysis of variance was conducted. The results showed that statistically the mean of preferences for mountain, urban, forest, water, and farmland landscapes are not significantly different among students of different levels of education (p>.05). So, the research hypothesis based on the significant difference among levels of education in preferences of these landscapes is rejected. However, as Table 3 displays, preference toward desert landscape was significantly different among students in terms of level of education (F=2.66, p<.05). In fact the findings disclosed that landscape of desert is preferred more among the students at grade 3 than the students at grade 1 of high school. Accordingly, the research hypothesis respecting the significant difference in preference of desert landscape among students of different educational levels is validated.
Table 2: ANOVA estimation of differences in students’ landscape preference based on field of study.

<table>
<thead>
<tr>
<th>Dependent variable</th>
<th>Field of study</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Test of Homogeneity of Variances</th>
<th>MANOVA</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Levene Statistic</td>
<td>Sig</td>
</tr>
<tr>
<td>Urban</td>
<td>No Field</td>
<td>4.385</td>
<td>1.141</td>
<td>4.105 .003</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Mathematics</td>
<td>4.519</td>
<td>0.842</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Experimental Sciences</td>
<td>3.986</td>
<td>1.121</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Humanities</td>
<td>4.194</td>
<td>1.159</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>The Arts</td>
<td>3.917</td>
<td>1.379</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Forest</td>
<td>No Field</td>
<td>6.165</td>
<td>0.903</td>
<td>7.455 .000</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Mathematics</td>
<td>6.442</td>
<td>0.642</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Experimental Sciences</td>
<td>6.369</td>
<td>0.638</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Humanities</td>
<td>6.003</td>
<td>1.100</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>The Arts</td>
<td>6.556</td>
<td>0.510</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Desert</td>
<td>No Field</td>
<td>3.940</td>
<td>1.503</td>
<td>1.269 .281</td>
<td>3.169 .014</td>
</tr>
<tr>
<td></td>
<td>Mathematics</td>
<td>4.372</td>
<td>1.365</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Experimental Sciences</td>
<td>4.172</td>
<td>1.491</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Humanities</td>
<td>4.217</td>
<td>1.429</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>The Arts</td>
<td>4.697</td>
<td>1.209</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 3: ANOVA estimation of differences in students’ landscape preference based on level of education.

<table>
<thead>
<tr>
<th>Dependent variable</th>
<th>Level of education</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Test of Homogeneity of Variances</th>
<th>MANOVA</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>grade 1</td>
<td>3.940</td>
<td>1.50</td>
<td>2.100 .100</td>
<td>2.667 .047</td>
</tr>
<tr>
<td></td>
<td>grade 2</td>
<td>4.344</td>
<td>1.55</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>grade 3</td>
<td>4.500</td>
<td>1.31</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>grade 4</td>
<td>4.280</td>
<td>1.27</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The existence of correlation between education and landscape preference is generally supported in the literature [6, 8], but not similarly, the obtained results disclosed weak impact of educational level on landscape preference which is in line with the researches by Buijs, Elands [7] and Harris Jr. [13].

Summary:
Through this research the influence of demographic factors on preference of landscapes among 384 high school students in Isfahan, Iran was examined. The findings revealed that generally students’ choice of landscape differ in terms of gender, field of study, and less significantly, level of education. As a result, this is of great concern to create the landscapes and environments of the schools in accordance with students’ preference which may enhance their feeling of happiness and satisfaction and even improve their performances at school. At the end this is suggested other types of landscape that raise any correlation with demographic factors to be explored.

REFERENCES


