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The Effect of Students’ and Instructors’ Learning Styles on Achievement of Foreign Language Preparatory School Students

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Abstract

This study aims to investigate the learning styles of students and instructors at foreign language preparatory school of a state university. It also aims to find out whether there is statistically significant difference between the academic achievement levels of students with different learning styles and achievement levels of students who have the same learning styles as their instructors and those who do not. In this study, quantitative data was obtained from a learning styles inventory, students’ placement exam scores and average exam scores within the term. The learning styles inventory was used to determine the learning styles of 139 students and 12 instructors at Compulsory Foreign Language Preparatory School of Bulent Ecevit University in 2012-2013 Spring term. The data was analysed with Chi Square test and Analysis of Covariance (ANCOVA). It was found out that the most common learning style among the participants was diverging. The distribution of the learning styles did not differ according to students’ gender and the high schools they had graduated. The students’ achievement levels did not differ significantly according to their learning styles. It was also discovered that there were no statistically significant differences between the achievement levels of students who have the same learning styles as their instructors and those who do not.

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Keywords: Learning Styles, Academic Achievement, Learning Style Profile, Foreign Language Preparatory School, Foreign Language Instructors;

1. Introduction

Learning is a complicated process which is affected by many factors related with the learning atmosphere and the learner. Learning styles is one of the factors that affect the learning outcomes of all learners. “Learning style” is the particular way in which an individual organizes experience and retains information, and it is an indicator of how a learner perceives new information and reacts to the learning environment (Stradley et al., 2002). This particular

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way can be different in individuals, and this causes different individuals to learn better in different ways. One of the
best known scholars having done research about learning styles is Kolb.

Kolb defines learning as a four-step process (Ju An and Sook Yoo, 2008). As Kolb summarizes, learners engage
themselves in concrete learning experiences at first, and then they reflect on this experience from different
perspectives. Making use of this reflection, they come up with abstract conceptualisation, which means
generalisation, or principles resulting from experimentation (Ju An and Sook Yoo, 2008). Kolb defines learning
styles as follows (1984):

1. Accommodating: Doing and experiencing things, realising plans, venturing new experiences.
2. Diverging: Has concrete perspective and organising meaningful entities in various relationships.
3. Assimilating: Covers inductive reasoning and ability to create theoretical models.

As in all stages of education, the improvement of learning and teaching processes has been a key issue in higher
education. Thus, a better understanding of the factors that influence academic performance is necessary (Brajapati et
al., 2010). In foreign language education level of higher education, students from different departments, from
different backgrounds study in the same classes. This difference in their departments also means a variation in
cognitive skills in different areas such as verbal and qualitative and also vast differences in learning styles.

In order to attain success in language schools, learner-centered approaches must be accepted. Also, studies carried
out by National Committee of Higher Education (1997) indicate that learners must know their learning styles in
order to succeed. Thus, learning tasks that enable learners to be aware of their own learning styles and to manage
their own learning styles must be used (National Committee of Inquiry into Higher Education, 1997).

Language learning is a complicated process affected by a number of factors. As Sharp points out, age, gender,
motivation, intelligence, anxiety level, learning strategies and language learning styles are the leading factors that
affect language learning (2004). In foreign language schools in Turkey, once the student is admitted to a university,
he has to study at foreign language schools before moving on with his bachelor’s degree program. These language
schools are made up of students from a wide range of departments, ages, skills and learning styles. These differences
can cause hindrances in language learning. In classes made up of various learning styles, it is always necessary for
the teachers, particularly the language teachers to identify, respect and work on the diversity of the learners’
differences (Razawi, 2011). However, this is not always easy for language instructors who have a considerable
burden to teach many hours a week in different classes.

The fact that the instructors’ learning styles can affect their way of teaching and thus the learning of students with
different learning styles can be an issue to be considered in assigning students to classes in language schools.
Mismatches between the learning styles of students and those of instructors may result in a course that is not being
delivered in a manner that allows people of all learning-style preferences to learn (Neel and Grindem, 2010). This
can cause insufficient learning and low exam scores in language learning students.

1.1. Aim of the study

This study aims to investigate the foreign language learning process of university language school students in the
sample state university’s foreign language school in Black Sea region of Turkey within the scope of learning styles.
At the beginning of the study, the learning styles of the students and instructors were determined. Then, the
relationship between learning style, gender, schools graduated and achievement levels were analysed. In the second
part of the study, whether having the same learning style as the instructor affects learning was investigated. This
study aiming to help language school administrators in assigning students to classes in an appropriate way seeks
answers for the following research questions:

1. How is the learning styles profile of the participant students and instructors?
2. Do the learning styles of students differ significantly according to their gender?
3. Do the learning styles of students differ significantly according to the high schools they had graduated?
4. Do the foreign language achievement levels of the students differ significantly according to their learning styles?
5. Do the gain scores of the students differ significantly according to whether they have the same learning style with their instructor or not?

1.2. Significance of the study

The results of the study are expected to help foreign language schools and instructors to carry out foreign language teaching process more effectively by knowing to what extent learning styles of students and instructors play a role in language learning. Administrators of foreign language schools may take the results of this study into consideration in the process of assigning students and instructors to classes.

1.3. Limitations of the study

This study is limited to 139 students and 12 language instructors in the foreign language school of a state university in Black Sea region of Turkey. Also, the data used for determining foreign language proficiency is limited to their placement exam scores and the average scores of the exams students had within the term.

2. Method

In order to investigate the relationship between the participants’ learning styles and their foreign language proficiency gain scores, the learning styles of the participants were determined by Kolb’s inventory. Using Chi Square test, it was investigated whether learning styles of the students differ significantly according to their gender and kinds of high schools they had graduated.

The average scores of the exams the participants had until the study was carried out were used to determine their foreign language proficiency. These marks were grouped into three levels as “Excellent, Good and Fail”. Using Chi Square test, it was investigated whether students’ level of foreign language proficiency differs significantly according to their learning styles.

The learning styles of the instructors of the student participants were also determined. The students were grouped into two, those who have the same learning style as their instructors and those who do not. The gain scores of the students were taken into consideration, using the placement exam scores they had at the beginning of the term and their average performance within the term. The latter score was considered as the level of proficiency the students have attained since the beginning of the academic term. With Analysis of Covariance (ANCOVA), it was investigated whether there was any significant difference in gain scores in the two student groups, one which has the same learning style as their instructors and the other who does not.

3. Findings

3.1. Findings about the first research question

Findings about the first research question of the study investigating the learning styles of the participant students and instructors are presented in frequencies and percentages in Table 1.

<table>
<thead>
<tr>
<th>Learning Styles</th>
<th>Students</th>
<th>Instructors</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>f (%)</td>
<td>f (%)</td>
</tr>
<tr>
<td>Assimilating</td>
<td>51 (36.7)</td>
<td>1 (8.3)</td>
</tr>
<tr>
<td>Diverging</td>
<td>62 (44.6)</td>
<td>7 (58.3)</td>
</tr>
<tr>
<td>Converging</td>
<td>15 (10.8)</td>
<td>1 (8.3)</td>
</tr>
<tr>
<td>Accommodating</td>
<td>11 (7.9)</td>
<td>3 (25.0)</td>
</tr>
<tr>
<td>Total</td>
<td>139 (100.0)</td>
<td>12 (100.0)</td>
</tr>
</tbody>
</table>

According to Table 1, it was found out that the most common learning style among the participant students was diverging (n= 62). Similarly, among instructors the most common learning style was found to be diverging (n=7).

3.2. Findings about the second research question
A Chi-Square test was carried out in order to answer the second research question of the study investigating the relationship between the learning styles of the participant students and their genders and the findings are presented in Table 2.

Table 2. Chi-Square test results for the participant students’ learning styles and genders

<table>
<thead>
<tr>
<th>Learning Styles</th>
<th>Male</th>
<th>Female</th>
<th>Sum</th>
<th>Chi-Square Test</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>f</td>
<td>%</td>
<td>f</td>
<td>%</td>
</tr>
<tr>
<td>Assimilating</td>
<td>21</td>
<td>15,1</td>
<td>30</td>
<td>21,6</td>
</tr>
<tr>
<td>Diverging</td>
<td>35</td>
<td>25,2</td>
<td>27</td>
<td>19,4</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>8</td>
<td>5,8</td>
</tr>
<tr>
<td>Converging</td>
<td>7</td>
<td>5,0</td>
<td>4</td>
<td>2,9</td>
</tr>
<tr>
<td>Accommodating</td>
<td>7</td>
<td>5,0</td>
<td>4</td>
<td>2,9</td>
</tr>
<tr>
<td>Total</td>
<td>71</td>
<td>51,1</td>
<td>68</td>
<td>48,9</td>
</tr>
</tbody>
</table>

It can be understood from Table 2 that the learning styles of participants do not differ significantly according to their gender [X² (3)= 3,442 p>.05]. In other words, there is no statistically significant relationship between the participants’ genders and their learning styles.

3.3. Findings about the third research question

A Chi-Square test was carried out in order to answer the third research question of the study investigating the relationship between the learning styles of the participant students and the kinds of high schools they had graduated and the findings are presented in Table 3.

Table 3. Chi-Square test results for the participant students’ learning styles and high schools they graduated

<table>
<thead>
<tr>
<th>Learning Styles</th>
<th>Anatolian High School</th>
<th>Regular High Schools</th>
<th>Total</th>
<th>Chi-Square Test</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>f</td>
<td>%</td>
<td>f</td>
<td>%</td>
</tr>
<tr>
<td>Assimilating</td>
<td>9</td>
<td>6,5</td>
<td>42</td>
<td>30,2</td>
</tr>
<tr>
<td>Diverging</td>
<td>14</td>
<td>10,1</td>
<td>48</td>
<td>34,5</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>2,2</td>
<td>12</td>
<td>8,6</td>
</tr>
<tr>
<td>Converging</td>
<td>3</td>
<td>2,2</td>
<td>12</td>
<td>8,6</td>
</tr>
<tr>
<td>Accommodating</td>
<td>5</td>
<td>3,6</td>
<td>6</td>
<td>4,3</td>
</tr>
<tr>
<td>Total</td>
<td>31</td>
<td>22,3</td>
<td>108</td>
<td>77,7</td>
</tr>
</tbody>
</table>

It can be understood from Table 3 that the learning styles of participants do not differ significantly according to the high schools they graduated [X² (3)= 4,089 p>.05]. That is, there is no statistically significant relationship between the participants’ educational background and their learning styles.

3.4. Findings about the fourth research question

A Chi-Square test was carried out in order to answer the fourth research question of the study investigating the relationship between the learning styles of the participant students and their foreign language achievement levels and the findings are presented in Table 4.

Table 4. Chi-Square test results for the participant students’ learning styles and levels of foreign language achievement

<table>
<thead>
<tr>
<th>Learning Styles</th>
<th>Excellent</th>
<th>Good</th>
<th>Fail</th>
<th>Total</th>
<th>Chi-Square Test</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>f</td>
<td>%</td>
<td>f</td>
<td>%</td>
<td>f</td>
</tr>
<tr>
<td>Assimilating</td>
<td>18</td>
<td>12,9</td>
<td>17</td>
<td>12,2</td>
<td>16</td>
</tr>
<tr>
<td>Diverging</td>
<td>27</td>
<td>19,4</td>
<td>25</td>
<td>18,0</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>0,7</td>
<td>8</td>
<td>5,8</td>
<td>6</td>
</tr>
<tr>
<td>Converging</td>
<td>1</td>
<td>0,7</td>
<td>8</td>
<td>5,8</td>
<td>6</td>
</tr>
<tr>
<td>Accommodating</td>
<td>6</td>
<td>4,3</td>
<td>4</td>
<td>2,9</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>52</td>
<td>37,4</td>
<td>54</td>
<td>38,8</td>
<td>33</td>
</tr>
</tbody>
</table>

According to Table 4, the learning styles of participants do not differ significantly according to their level of foreign language achievement [X² (6)= 12,029 p>.05]. In other words, there is no statistically significant relationship between the participants’ grades and their learning styles.

3.5. Findings about the fifth research question

An Analysis of Covariance (ANCOVA) was carried out in order to answer the fifth research question of the study investigating whether there is significant difference between the foreign language achievement gain scores of the students who have the same learning style as their instructors and those who do not, and the findings are
presented in Table 5.

<table>
<thead>
<tr>
<th>Source of Variance</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Covariant (Grade)</td>
<td>1569,785</td>
<td>1</td>
<td>1569,785</td>
<td>11.787,001</td>
<td></td>
</tr>
<tr>
<td>Learning Style</td>
<td>426,543</td>
<td>3</td>
<td>142,181</td>
<td>1.068,365</td>
<td></td>
</tr>
<tr>
<td>Error</td>
<td>17845,277</td>
<td>134</td>
<td>133,174</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>663201,000</td>
<td>139</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

It can be understood from the results of the Covariance Analysis that the difference in the achievement levels of students who have the same learning styles as their instructors and who do not is not statistically significant $F_{(1,3)} = 1.068, p > 0.05$. In other words, the instructor’s learning style does not affect students’ learning either in positive or negative way.

4. Conclusion and recommendations

The results obtained from this study indicate that most students and teachers in the foreign language school had diverging learning style. This means that language courses must include elements related with concrete experience and reflective observation, which will make learning for students easier.

According to the results of Chi-Square tests, learning styles do not differ significantly according to students’ gender, schools they had graduated and level of foreign language achievement. These variables not being predictors of learning style, it can be assumed that every individual is different. Also, the fact that these variables cannot help us determine the individual’s learning style supports the complexity of the human brain.

Most importantly, student groups who had the same learning style as their instructors and who did not have any significant difference in their foreign language achievement gain scores. This means that foreign language learning is not affected by the instructor’s learning style either in a positive or negative way or the instructor’s learning style does not change his way of teaching. Further studies need to be performed about reflection of learning style on teaching.

It can also be concluded that the current way students are assigned to classes in foreign language schools has no negative effect in students’ learning. There is no need to determine students’ and instructors’ learning styles at the beginning of the academic year before assigning them to classes.

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