THE EFFECT OF LEARNING STYLE PREFERENCE ON COURSE ACHIEVEMENT AMONG PRESERVICE ENGLISH TEACHERS

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Abstract

The purpose of this research is to explore the effect of preservice English teachers’ preferred learning styles and reading strategies on course achievement and other course-related studies. The participants were 28 second-year student teachers from the English Language Teacher (ELT) Education department at Mugla University in Turkey, who were taking the core course Language Acquisition in the spring 2009-2010 academic year. During the course, student teachers were asked to independently read a chapter on Second Language Acquisition (SLA) theories from The Principles of Language learning and teaching by H. D. Brown (2000), develop a poster reflecting those theories, and complete an open-ended questionnaire which aimed to explore their learning style and reading strategy preferences. Students were also informed that this chapter would be covered in the final exam. The data used in the study were student teachers’ preferred learning styles, reading strategies, posters and test results. Using the scores from the final exam, 14 students from higher scoring group and 14 students from lower scoring group were chosen for the study. Each group represented 25% of the total test-taking population. Preferred learning styles and reading strategies were qualitatively analyzed. The results showed that student teachers from both groups preferred more or less the same learning styles and reading strategies. Of note, however, was that the students from the lower score group preferred additional reading strategies that appeared to positively affect part of their test results. It was concluded that learning-strategy awareness and training activities can have a constructive impact on ELT course achievement.

Key words: English Language Teacher (ELT), learning style preferences, Second Language Acquisition (SLA), student teachers, teacher education.

Introduction

Problems of Research

Educators are generally in agreement with the idea that students have different learning styles or strategies and use different methods and brain channels to reach and process information. There are several definitions for learning style (see, Pashler et al. 2009). Erden and Altun (2006) define learning style as all the preferences of a learner in a learning process. They also maintain that while these preferences are also common to others, they can be peculiar to someone and can be part of his/her personality and thus they can be stable. Dunn (1990) explains learning style as the concentration and attention of any learner to process at the beginning of reviewing new material, and to ways of remembering the difficult and new information.

There is growing research on learning strategy in the foreign language classroom that describes the different types of strategies (Rubin, 1975; Bialystok, 1978; Cohen and Aphek, 1981; Nambiar, 2009). Learning styles are defined as “the specific cognitive, affective and physiological traits that determine how a learner processes information” (Nambiar, 2009, p.13) According to Nambiar (2009), these specific characteristics distinguish one learner from another, explaining why some learners are visually or auditory oriented, reflective or impulsive
and vary in their tolerance to ambiguity. The learning style of a learner will determine to some extent the strategies used in language processing (Cohen, 1998; Fan, 2003; Oxford, 2003 in Nambiar, 2001, p.13).

One of the important goals in learning to read is to become a skillful and independent reader. Two essential skills are required in reading. They are meaning from a written message (Carroll, 1970), and reading for remembering (Baker and Brown, 1984). Reading comprehension includes cognitive and metacognitive activity and the aim is to understand the material being read. Successful readers use their previous knowledge and literacy skills and continually monitor their comprehension (Arabsolghar and Elkins, 2001). For that reason, “teachers using different instructional programmes can promote students’ awareness and control of their own reading” (Paris, Wasik and Turner, 1984 in Arabsolghar and Elkins, 2001, p.155)

Reading and understanding a text hold various process problems for second language (L2) learners (Sharp, 2004). In this context, a reading strategy can act as an activity or a series of activities that aids comprehension (Garner, 1987). It is also accepted that good readers successfully use reading strategies to understand different kinds of reading materials (see, Arabsolghar and Elkins, 2001). For instance, one might use strategy to properly digest an essay and use different strategy to review a newspaper article. Studies in L2 reading strategy use have been conducted since the late 1970s. These studies have shown that readers characterized as successful and less successful use similar strategies (see Anderson, 1991; Vann and Abraham, 1990). However, Malcolm (2009, p. 641) points out that “they may differ in frequency and variety of strategy use, as well as in the ability to use a number of strategies in an orchestrated manner” (see also, Barnett, 1988; Carrell 1989; Ikeda and Takeuchi, 2006). This suggests that identifying a proper strategy or method should be a matter of concern for language learners and teachers.

Research in reading often deals with readers’ meaning-making processes. Thus, strategy usage has been a focus of second language reading both in print and digital media (Akyl and Erçetin, 2009). But it is difficult to make a distinction between skills and strategies. A skill can become a strategy when it is used intentionally. The element of ‘intentionality’ is what distinguishes strategies from skills (Bernhardt, 1991; Grabe and Stoller, 2001; Urquhart and Weir, 1998 in Akyl and Erçetin, 2009, p. 137). In addition, Oxford (1990 cited in Meena 2001, p. 3) offers a comprehensive classification scheme of various reading strategies used by learners. The following six strategies can be referred to as subcategories of reading strategies:

- **cognitive strategies** (note-taking, summarizing, paraphrasing, predicting, analyzing and using context clues);
- **memory strategies** (grouping and associating, semantic mapping, using key words, employing word associations, and placing new words into a context);
- **compensation strategies** (inference, guessing while reading, using reference materials such as dictionaries);
- **metacognitive strategies** (directed attention and self-evaluation, organization, setting goals and objectives, seeking practice opportunities);
- **affective strategies** (self-encouraging behavior); and
- **social strategies** (cooperation with peers, questioning, asking for correction and feedback).

Moreover, Carrell (1985) discusses whether we can facilitate ESL reading by explicit teaching of text structure. Block (1986) examined the comprehension strategies of college level students -both native and non-native English speakers- while Casanave (1988) maintained that successful reading comprehension depends not only on readers’ ability to access appropriate content and formal schemata but also on their ability to monitor what they understand and to take an appropriate strategic action. Grabe (1991, p. 375) brought together research and its implications for the classroom. It is highlighted in the study that specific attention is given
Research Focus

The studies to date have shown that use of metaphors, cognitive and metacognitive skills, interactive approaches to reading, and explicit teaching of strategies all play a significant role in understanding a text. Within this context, the present study aims to explore the effects of student teachers’ preferred learning styles and reading strategies on their course achievement and other course-related studies. The study seeks to answer the following questions:

1. What kinds of learning styles and reading strategies do student teachers use while reading a text on their own?
2. To what extent do the learning styles and reading strategies of student teachers affect their course achievement?
3. Are there any differences in use of learning styles and reading strategies between lower score and higher score groups?

Methodology of Research

General Background of Research

This is a case study using a mixed methods design that combines both quantitative and qualitative techniques. Dörnyei (2007, p.151) points out that as “…cases are primarily people, researchers can also explore in depth a programme, an institution, an organization, or a community.” The number of qualitative and mix-method studies combining qualitative and quantitative approaches has surged in recent years (Duff, 2007).

Sample of Research

The participants were 54 second-year students in the Department of English Language Teacher Education of a Turkish university taking the course “Language Acquisition” as part of their ELT program. They ranged in age from 19 to 22 years-old. The purpose of the course is to help students gain information about first and second language acquisition processes. It illustrates theories of first and second language acquisition (e.g.: behaviorism, innatism, information processing, connectionism, interactionist position) and the developmental stages.
and sequences of first and target language acquisition. The participants are considered to be advanced learners as they had each fulfilled the department’s language requirement.

**Instrument and Procedures**

The data for the study were gathered using three different instruments. The first was an open-ended questionnaire consisting of question items which led student teachers to write or tick reading strategies they use while reading a text. The second was a review of a task in which the student teachers were asked to develop posters that reflect Second Language Acquisition (SLA) theories. The third data gathering instrument was a 2-part final exam. Part 1 was made up of questions for the general assessment of course objectives. Part 2 contained questions that aimed to assess comprehension of a text which student teachers studied on their own.

This study was conducted in the department of English Language Teacher Education at Mugla University in Turkey. The study began with 54 second year student teachers who undertook the Language Acquisition course in the spring term of the 2009-2010 academic year. The student teachers were taking this three-credit course once a week for 14 weeks as part of the core curriculum in an English-language teacher education program. Before starting the course, student teachers were provided with a course syllabus and knew the content of the course in advance. The researcher himself lectured the course. Before beginning the current study, inquiry questions were asked in order to reveal the baseline knowledge of the student teachers. There were also discussion sessions with students regarding first and second language learning processes throughout the course. It was observed that student teachers were content with the sessions and were actively participating in the discussions. When the course was approaching the final units, the instructor assigned a chapter on SLA theories to the student teachers to read independently. The text was titled “Theories of Second language Acquisition” from Brown’s (2001) book “Principles of Language Learning and Teaching (Fourth Edition).” They were then given one week to individually develop a poster that would reflect the SLA theories before the final exam was administered.

The final exam was divided into two parts. Part 1 consisted of questions from the topics and units studied in the classroom. Part 2 contained questions from the chapter on SLA theories. The test items were developed and examined by a testing expert from the department of Educational Sciences. The evaluation was made by an independent rater in order to obtain rater reliability. The test results were also checked by the course instructor. Before the final exam, the student teachers were asked to complete an open-ended questionnaire. This questionnaire aimed at exploring student teachers’ preferred learning styles and reading strategies. The posters were collected and analyzed according to the following criteria: comprehensive content, originality/creativity, visual interpretation of SLA theories, use of metaphors, relating of the topic to language teaching.

**Data Analysis**

The exam papers were evaluated by an independent rater according to the answer key developed by the course teacher. Students’ point means and standard deviations were calculated using an SPSS program. After that, 14 student teachers from the higher scoring group and 14 from the lower scoring group were selected for the remainder of the study. The lower group consisted of those student teachers whose grades ranged between 38 and 68 (25 % of the class); and the higher score group included student teachers whose grades range between 87 and 98 (25% of the class). These student teachers’ learning styles and reading strategies were analyzed and categorized. In the second stage of the study, student teachers’ posters were analyzed using the above-mentioned criteria. Later, the researcher investigated to what extent the information on the posters was reflected in the answers in the final exam. All these data were analyzed on
Results of Research

Student teachers’ mean, median, mode and Standard deviation on the final achievement test results in for the Language Acquisition course are illustrated in Table 1.

Table 1. Achievement test results of student teachers (st).

<table>
<thead>
<tr>
<th>Student Teachers</th>
<th>N</th>
<th>Lowest-highest Scores</th>
<th>x̄</th>
<th>mode</th>
<th>median</th>
<th>s</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>54</td>
<td>37-97</td>
<td>77.04</td>
<td>72</td>
<td>77</td>
<td>13.48</td>
</tr>
<tr>
<td>Low scored (st)</td>
<td>14</td>
<td>37-68</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High scored (st)</td>
<td>14</td>
<td>87-97</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

As can be seen in Table 1, the mean score on the final exam for the 54 student teachers enrolled in the course was 77 and mode was 72. From these results, it can be suggested that these findings would represent a normal scattering curve of the test. Based on the points obtained from the achievement test, out of the 54 students, 14 students who received lower points on the test (a score between 37 and 68) and 14 who obtained higher points (87 and 97) were selected for the remainder of the study (for a total of 28 students). The aim of this selection was to clearly see how their preferred learning styles and reading strategies were reflected in poster development and course achievement. Table 2 shows the learning style preferences of 54 student teachers.

Table 2. Learning style preferences of student teachers.

<table>
<thead>
<tr>
<th>Style preference comparison</th>
<th>Preference chosen</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Visual learning-Verbal learning</td>
<td>Visual learning</td>
<td>51</td>
<td>95</td>
</tr>
<tr>
<td>With Pictures-By writing</td>
<td>With Pictures</td>
<td>45</td>
<td>83</td>
</tr>
<tr>
<td>Repetition-Summarizing</td>
<td>Summarizing</td>
<td>32</td>
<td>59</td>
</tr>
<tr>
<td>Summary - Interpretation</td>
<td>Interpretation</td>
<td>43</td>
<td>80</td>
</tr>
<tr>
<td>Superficial-Deep learning</td>
<td>Deep learning</td>
<td>36</td>
<td>67</td>
</tr>
<tr>
<td>Holistic/global learning-Elaborative learning</td>
<td>Global/Holistic learning</td>
<td>34</td>
<td>63</td>
</tr>
</tbody>
</table>

In the open-ended questionnaire, the student teachers were asked to choose one style from each pair given (the first column above) that most describes their learning style while studying a printed text independently. The reported findings in the chart above show that 95% of the student teachers preferred visual learning and 83 % of them preferred learning through pictures. Interpreting materials (80 %) is followed by deep learning (67%), global/holistic learning (63%) and summarizing (59%).

Tables 3 and 4 show the reading strategy preferences of the lower and higher score groups.
When Table 3 is studied, it is observed that the students from the higher score group most preferred to use such reading strategies as underlining, underlining important points, note-taking and rereading. Four students from this group stated that they preferred additional strategies such as deducing main points and summarizing, in addition to the above-mentioned strategies. One of those students, however, chose a completely different technique – rapid reading.

When Table 4 is examined, it is observed that the preferred reading strategies of both the lower and higher scoring groups are underlining important points, rereading, and note-taking. However, five students out of 14 in the lower score group preferred different strategies such as cause-effect and interpretation, extracting key words from the text and making connections between the paragraphs; this is in addition to the most commonly preferred strategies among the participants in the study, rereading and underlining.
Although there is no direct relationship observed between learning style, reading strategy preferences and course achievement (the most observed strategies being rereading, underlining), it is notable that the students (ST15, ST16, ST18, ST19 and ST25) in the lower score group who preferred additional strategies from the norm scored higher points on Part 2 of the test than they did on the first. For this section of the test, students were encouraged to study independently, which required interpretive and evaluative skills. Part 1 of the test was studied in the classroom and was discussed with the course instructor. The lack of an observed direct relationship between reading strategy preference and course achievement may be due to the kinds of questions asked in the test. Some questions may have required rote-learning or memorization. It can also be argued that these findings imply a relationship between the reading strategy preference of the student teachers and the various aims or design of the course, such as memorization, interpretation and evaluation.

Table 5 shows the evaluations of posters developed by student teachers both in the lower and higher score groups in the SLA course.

Table 5. Student teachers’ SLA poster evaluations.

<table>
<thead>
<tr>
<th>Student No.</th>
<th>Group</th>
<th>Comprehensive content</th>
<th>Originality/ Creativity</th>
<th>Visual interpretation of SLA theories</th>
<th>Use of metaphor</th>
<th>Relating SLA theories to language teaching</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Observed</td>
<td>Partially observed</td>
<td>Partially observed</td>
<td>Observed</td>
<td>Partially observed</td>
</tr>
<tr>
<td>38</td>
<td>Higher</td>
<td>X</td>
<td></td>
<td>x</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>33</td>
<td>Higher</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>43</td>
<td>Higher</td>
<td>X</td>
<td>X</td>
<td>x</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>35</td>
<td>Higher</td>
<td>X</td>
<td>x</td>
<td>X</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>12</td>
<td>Higher</td>
<td>X</td>
<td>x</td>
<td>x</td>
<td>X</td>
<td>x</td>
</tr>
<tr>
<td>28</td>
<td>Higher</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>53</td>
<td>Higher</td>
<td>X</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>54</td>
<td>Higher</td>
<td>X</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>40</td>
<td>Higher</td>
<td>X</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>5</td>
<td>Higher</td>
<td>x</td>
<td></td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>32</td>
<td>Higher</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>3</td>
<td>Higher</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>8</td>
<td>Lower</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>30</td>
<td>Lower</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>36</td>
<td>Lower</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>7</td>
<td>Lower</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>25</td>
<td>Lower</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>36</td>
<td>Lower</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>15</td>
<td>Lower</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>47</td>
<td>Lower</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>13</td>
<td>Lower</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>34</td>
<td>Lower</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>19</td>
<td>Lower</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>6</td>
<td>Lower</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
</tbody>
</table>

Included in the study were 24 posters which were developed by the student teachers from the higher score and lower score groups. Although there are 28 participants in the study, four student teachers did not submit their posters due to various reasons. In order to analyze
the posters, the criteria dimensions such as comprehensive content, originality/creativity, visual interpretation of SLA theories, use of metaphors, and relating of the SLA theories to language teaching have been considered. The results showed that the students in the higher score group developed more comprehensive posters than the ones in lower score group. These students reflected all SLA theories on the posters in a more coherent and cohesive way. They were rich in content, and they used more visual images and metaphors in order to express their interpretations regarding the theories concerned.

For instance, in one of the posters from the higher score group, the student teacher used a garden metaphor to illustrate SLA theories. In their garden, there were three flowers, each representing one approach in language acquisition-innatism, cognitive, and constructivist approaches respectively. The petals of the flowers contained related hypotheses and views of the approaches. In another poster, the student teacher tried to represent the relationship between input and output and used a cake-making metaphor. A student teacher from the same group displayed the SLA theories with a honey-making bee metaphor. There is a bee and it collects pollen (knowledge) from the flowers. In another poster the SLA theories are colorfully illustrated in a garden with butterflies, birds and flowers in a good harmony.

On the other hand, a student’s poster from the lower score group lacked depth and displayed theories as the windows of a house. A poster from the same group shows a classroom with students as conditioned in behaviorism, another with computers as a cognitive classroom and a third with students being full of senses as a humanistic classroom. Another poster by a student from the same score group was very simplistic in design and conveys little clear meaning. The final poster from this lower scoring group gives the SLA theories as an opinion salad.

**Discussion**

It can be argued that the students in the higher score group took the task more seriously and attempted to interpret the theories in a meaningful and coherent way. However, this is not to say that the students in lower score group did not reflect SLA theories at all. There are some students who processed the SLA theories and reflected them in their posters according to the criteria provided. It is also important that the posters alone not account for the students’ knowledge and course achievement. This task was meant to demonstrate an awareness of the SLA materials read and to allow students a real, thoughtful and visual opportunity to convey their understanding.

It was observed that the student teachers in the present study reflected more or less similar learning styles and readings strategies. Anderson (1991, p.468) found that “there is no single set of processing strategies that significantly contributes to success on two reading measures and readers scoring high and those scoring low appear to be using the same kinds of strategies while reading and answering comprehension questions”. It is pointed out in the same study that “strategic reading is not only a matter of knowing what strategy to use, but also the reader must know how to use a strategy successfully and orchestrate its use with other strategies” (Anderson, 1991, p. 468-69). Yaylı (2010) found that “proficient readers used cognitive and metacognitive strategies more frequently than less proficient students in an expository and a narrative text (p.235). Similarly, Hamdan et al. (2010) pointed out that students used problem-solving the most out of any other category of metacognitive strategies. Rereading, guessing, contextualizing, visualizing and using dictionaries were the most exploited strategies of both cognitive and metacognitive strategies.

Block (1986) studied the comprehension strategies used by college- level students -- both native speakers of English and non-native speakers -- and stated that poor readers’ use of comprehension strategies was not as automatic as it was for fluent readers. Jie and Xiaoping
(2006) focused on the relationship between learning styles and language learning strategies in the EFL context and indicated that learning styles have significant influence on learners’ learning strategy choices and language learning outcomes. However, Bang and Zhao’s (2007) study implies that the learners’ English language proficiency may be a more important factor contributing to the level of L2 reading comprehension achieved rather than the specific strategies used. According to Yaylı (2010, p.235) “readers can be more successful, independent readers by self-regulating their comprehension and using appropriate strategies when necessary rather than depending on the teacher.”

**Conclusion**

Language Acquisition, as a core course in English Teacher Education programs, allows student teachers the opportunity to explicitly study and learn several hypotheses and theories related to second language acquisition. Teaching this course can be a challenge for a course instructor due to the necessity to relate the course content to the real life experiences of the student teachers. If student teachers can be motivated through teaching techniques which involve the student teachers’ active participation, the course content can be both interesting and easily applicable for language teacher candidates. During the implementation of the course in this study, an aim was to allow for and highlight different learning styles and reading strategies. As a part of the course, student teachers were asked to individually read a text and reflect what they had read by designing a poster. They were given one week to complete this task and were told that this chapter would be included in the final exam. Before the final exam was given, student teachers were asked to write what strategies they used while reading and absorbing the text in question. After that, they were given the final test of the course.

In the present case study, a relationship between learning styles, reading strategies and course achievement was sought. An additional focus of the study was on how learning style preferences and reading strategies were reflected in the posters developed by the student teachers. It is interesting to note that the students from the lower score group employed several different strategies in addition to those most commonly used by both groups. The five students from the lower scoring group who expressed that they used these additional strategies (such extracting main ideas, focusing on the key words in the text, and seeking cause-effect relationships) did well on the questions regarding the independently SLA theories (though they scored more poorly in other sections of the test).

As a second step, the posters developed by the student teachers were analyzed. It was found that the students from both the lower and higher score groups developed posters that generally corresponded to the criteria; but the students from the higher score group developed more comprehensive and coherent posters on SLA theories. They were rich in use of metaphors, and they related directly to language learning and teaching processes.

This study reconfirms that there are different types of learners with different learning styles and strategies. For that reason, a program or course syllabus should cater to all learners’ needs and expectations as best as possible. Variety is essential in learning and assessment environments if they are to truly meet the needs of the students and properly evaluate their success in the subject matter. In conclusion, it is observed that the student teachers in the present study reported a limited number of learning styles and reading strategies.

**References**


*Advised by Naglis Švickus, SMC “Scientia Educologica”, Lithuania*

Received: *December 04, 2010*  
Accepted: *March 30, 2011*