On the Relationship among Iranian ESP Learners’ Learning Strategy Use, Learning Styles and their English Language Achievement

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Abstract

The present study investigated the relationship among the ESP learners’ learning style, learning strategy use, and their English language achievement. In so doing, 355 ESP students completed Oxford’s SILL (1990) and Kolb’s Learning Style Inventory (1985), and their course grade was regarded as a measure of English language achievement. The results of Pearson product moment correlations revealed: a) significant relationship among the learners’ memory and cognitive strategy use and their English language achievement, b) no significant relationship between the learners’ learning styles and their English language achievement. The learners’ prominent learning style was “assimilator” and their dominant learning modes were found to be reflective observation (RO), abstract conceptualization (AC), and active experimentation (AE). The results of regression analysis proved strategy use as a stronger predictor of English language achievement.

Keywords: ESP; learning style; strategy use; Iranian EAP learners; English achievement

1. Introduction

Abundant amount of research in the field of ESP has found the need for specificity in ESP teaching and learning methodologies. Different stages of ESP development have been evolved since the time it was considered as a main issue in Applied Linguistics; however, these preceding approaches did not take learning processes into account until the newest perspective on the ESP teaching brought it into focus, which is more like an approach to language learning, accustomed to learners’ needs (Hutchinson & Waters, 1987).

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Among the concerns of such a new perspective is the focus on language learning styles and strategies as two influential factors in any instructional framework. As stated by (Oxford, 2003), these two key factors show how well – EFL/ESL students learn a language. Learning strategies were first manifested in (Rubin, 1975) study who defined them as the techniques a learner may employ to acquire language. The effectiveness of learning strategies in language learning has turned the concept into a hotly debated issue, leading to the emergence of various definitions and classifications (Cohen, 1988; O’Malley & Chamot, 1990; Oxford, 1990; Stern, 1992). (Oxford, 1990) defines strategies as the learners’ operations which help them acquire, store, retrieve, and use information. In furthering the discussion, she stated that “learning strategies are actions taken by the learners to make learning easier, faster, more enjoyable, more self-directed, more effective, and more transferable to the new situation” (1990, p.8). Six main categories of L2 learning strategies have been proposed by (Oxford, 1990): memory strategies, cognitive strategies, compensation strategies, metacognitive strategies, affective strategies, and social strategies.

Another contributing factor in language learning success and a determining variable in describing individual differences is learning style. In contrast to language learning strategies which are consciously chosen by the learners, learning styles are inherent preferences that learners use in acquiring a new language. The inherent nature of learning styles turns them to a favored habitual mental activity in processing new information (Ehrman & Oxford, 1990). Learning styles are general approaches, with no dichotomy in between which lie along a continuum, with four main dimensions related to L2 learning; sensory preferences, personality types, desired degree of generality, and biological differences (Oxford, 2003). (Kolb, 1981) believes that learning styles, quite unique in each person, are developed as a result of life experience and the environmental factors, enabling people to emphasize on some learning abilities over others. Based on his theory of experiential learning, language learning relies on four major learning modes upon which learners’ accomplishment in L2 learning heavily depends, namely concrete experience abilities (CE) (e.g., feeling), reflective observation abilities (RO) (e.g., reflection, watching), abstract conceptualization abilities (AC) (e.g., abstractness, thinking), and active experimentation abilities (AE) (e.g., action, doing) (Kolb, 1984). The combination of these four learning modes has led to four learning styles; the converger, the diverger, the assimilator, and the accommodator.

Learning strategies and learning styles are two related factors, which go hand in hand in any instructional framework. Hence, striking a balance between learners’ preferred style and strategy and also between the teaching methodology and materials is of paramount importance which possibly results in learners’ better performance, self-esteem, and low anxiety (Oxford, 2003).

Minimal attention seems to have been paid in the literature of the field to the main objective of the present study, i.e., exploring the relationship among learning style, learning strategy use, and English language achievement of ESP learners, especially in Iran. Hence, to fill the research gap felt, the following research questions were proposed.

1.1. Research questions

1. Is there any significant association among the Iranian ESP learners’ learning style, learning strategy use, and their English language achievement?

2. Between Iranian ESP learners’ learning style and language learning strategies, which one is a stronger predictor of their English language achievement?

2. Methodology

2.1. Participants

The sample of the study incorporated 355 ESP students of Humanities and Social Sciences at three different universities in Iran. The sample was selected based on cluster sampling procedure from several ESP classes. A semi-structured interview was also conducted with 29 participants selected randomly from among the participants of the study.
2.2. Instruments

In order to collect the data, the present study adopted two questionnaires, and a semi-structured interview. The first questionnaire was the Persian version of Kolb’s Learning Style Inventory (LSI, 1985), which was distributed to participants after expert view. It consists of 12 statements, each with a choice of four endings which should be ranked from 4 to 1, according to how well learners think each ending fits their way of approaching a learning task. The Cronbach’s alpha reliability estimation of LSI in the present study were found to be .81 for CE, .80 for RO, .81 for AC, and .78 for AE.

The Persian version of Oxford’s Strategy Inventory for Language Learning (SILL, 1990) was the second instrument utilized in this study to assess participants’ choice and frequency of strategy use. The questionnaire had already been piloted and validated in Iranian context by Pishghadam (2008). SILL consists of 50 items, including 6 categories of memory, cognitive, compensation, metacognitive, affective, and social strategies. The Cronbach’s alpha reliability of SILL in the present study was found to be 0.92, indicating a high reliability coefficient.

As the third instrument, a semi-structured interview was conducted. The interview guide comprised seven expert-validated items.

2.3. Procedures

Firstly, the informed consent of the participants was obtained, and then 355 ESP learners were chosen from several ESP classes from three different universities. Secondly, participants were requested to complete the Persian versions of Oxford’s SILL (1990) and Kolb’s LSI (1985). Besides, participants’ ESP course grade was collected and regarded as a measure of their English language achievement. Thirdly, in order to triangulate the collected data, 29 participants, selected randomly from among the participants, were interviewed. Finally, the collected data were analyzed through conducting Pearson product moment correlations and hierarchical multiple-regression analyses.

3. Results

First, the descriptive statistics were calculated, the result of which is summarized and tabulated in Table 1.

|                        | N    | Mean | Std. Deviation |
|------------------------|------|------|----------------|
| Course grade           | 338  | 16.04| 1.87           |
| Compensatory Methods   | 355  | 2.04 | .83            |
| Metacognitive          | 355  | 2.02 | .89            |
| Memory Strategies      | 355  | 2.00 | .65            |
| Cognitive Processes    | 355  | 1.92 | .66            |
| Total Strategy Score   | 355  | 1.88 | .66            |
| Social                 | 355  | 1.84 | .89            |
| Affective              | 355  | 1.64 | .83            |
| Valid N (listwise)     | 338  |      |                |

As can be seen in Table 1, the most frequently-used strategies were compensatory strategies and the least frequently-used ones were affective strategies. The learners’ total strategy score was 1.88 which, according to the scoring rubrics of SILL, can be considered as a low level of learning strategy use.

Next, participants’ learning style mean scores were calculated, which is presented in Table 2.

|                          | Frequency | Percent | Valid Percent | Cumulative Percent |
|--------------------------|-----------|---------|---------------|--------------------|
| Valid Assimilator        | 208       | 58.6    | 58.6          | 90.7               |
| Converger                | 91        | 25.6    | 25.6          | 32.1               |
As Table 2 shows, the learners’ most prevalent learning style was ‘assimilator’ with the frequency level of 208 and 58% of the total population sample.

To answer the first research question, Pearson product moment correlation coefficient was conducted to investigate the relationship among strategy use, learning style, and English language achievement. The results are summarized in Table 3.

As indicated in Table 3, the relationship between ESP learners’ English language achievement and total strategy use was found to be positively significant ($r=.14$, $n=338$, $p < .001$), with high levels of strategy use associated with high levels of English language achievement. Furthermore, Table 3 indicates that memory, and cognitive strategies were the only strategies that were significantly correlated with the learners’ learning style.

To answer the second research question, a hierarchical multiple regression analysis was conducted to explore how much of the learners’ English language achievement variations can be predicted by the learners’ strategy use and learning style, the results of which are summarized in Table 4.

As shown in Table 4, strategy use was found to be a stronger predictor of English language achievement, with memory strategies (beta = .23, $p < .05$), and cognitive strategies (beta = .19, $p < .05$) recording higher values than Concrete Experience and Active Experimentation.

Finally, for analysis of the interview data, first, the collected data were coded. Then a frequency analysis was...
conducted on the data, the results of which are summarized in Table 5.

Table 5. Frequency analysis of the interview data

| Patterns                                           | Frequency | Percentage |
|----------------------------------------------------|-----------|------------|
| Learning through being involved and doing actions (AE) | 15        | 51.7       |
| Learning through observation (RO)                  | 9         | 31         |
| Familiarity to memory and cognitive strategies and using them | 28        | 96.5       |

N=29

As shown in Table 5, the interviewees’ most desired learning modes were found to be AE and RO, a finding which stands in contrast with those gained through the analysis of quantitative data which revealed that CE and AE were the most frequently-used learning modes.

4. Discussion

The aim of the present study was to shed some lights on the possible relationship among Iranian ESP learners’ learning styles, learning strategy use, and their English language achievement. Theresults showed that there was a significant relationship between the learners’ English language achievement and their total strategy use, while such association did not exist between their English language achievement and learning style. This finding is consistent with those offTabatabaie, and Mashayekhi (2013), which showed that no significant association existed between learners’ learning styles and their academic achievement. Nonetheless, the correlation coefficient showed a significant relationship between the ESP learners’ learning style and their use of memory and cognitive strategies, while total strategy use was not significantly correlated with the learning styles. In the same vein, Le and Qin (2006) reported on a positive correlation between EFL learners’ learning styles and their use of language learning strategies (LLS). Such difference may be due to the fact that the participants of this study were indeed ESP learners who were studying English during their compulsory ESP course. Thus, as Oxford (2002) suggests, the motivational factors might be one of the prominent factors that explain why ESP students use LLS less than EFL learners, which was also the case with the EFL subjects of Le and Qin (2006).In contrast to the small correlation of the ESP learners’ learning style with strategy use, their learning modes were mostly correlated to all sub-categories of LLS except for compensatory strategies, a finding which is in line with those of Metallidou and Platsidou (2008), whereby a small but significant correlation was found between the participants’ learning modes and metacognitive strategy use. Furthermore, having conducted the regression analysis, it was revealed that between participants’ learning strategy use and learning style, the former was a stronger predictor of learners’ English language achievement. This finding confirms the salient role of LLS in second language learning achievement as has been frequently suggested by experts in the field (e.g., Oxford, 2002; Rubin, 1975).It is noteworthy to say that the ESP participants in the study have mainly used memory and cognitive strategies. The results of subsequent interview showed that most of the ESP learners were not aware of the bulk of the strategies except for memory and cognitive ones.Such findings signifies the possible lack of strategy training, as well as the need for the presence of a meticulous needs analysis for the ESP learners.Beside these two prevalent strategies, the concrete experience (CE) and active experimentation (AE) were found to be the learners’ prominent learning modes which significantly, although slightly, contributed to their English language achievement. ‘Assimilator’ was found to be the prominent learning style of the ESP learners in the study. Kolb (1985) states that this learning style is the characteristic of the students studying basic sciences and mathematics, rather than applied sciences, a claim which stands in contrast with findings of the present study. Likewise, Chi-Ching and Noi (1994) differentiated the students of art, social sciences, and business who were considered divergers, from the science and law students who were specified as assimilators. These contrasting results imply that the difference may be due to the fact that the present study was conducted under institutional context of Iranian instructional discourse with its own specific teaching and learning methodologies and preferences. The findings of the study may help syllabus designers and ESP teachers to adjust ESP syllabi with the students’ preferred learning styles and strategies and adopt more effective pedagogical methods in ESP courses.
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