Relationship between University Level and Employment of Language-Learning Strategies: A Study of EAP Learners

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Abstract

This study scrutinized the relationship between utilizing language-learning strategies and university levels in reading-comprehension process of language learners in Iran. The participants comprised 406 EAP students at three university levels. The findings reflected significant differences among the students in implementing learning strategies. The students at higher university levels employed overall, direct, and indirect strategies significantly more frequently than the students at the lower stages. The results also revealed that 63% of the variance in the implementation of learning strategies could be due to the participants' university levels. The findings are of significance because they can help language teachers tailor effective strategic-based language-teaching programs to the academic needs of the students at different stages of learning. The findings can assist language teachers in identifying problematic areas at different stages of learning enabling them to do remedial work with unsuccessful learners.

Keywords: language-learning strategies, strategic-based instruction, university level

1. Introduction

Most of the systematic researches on language-learning strategies emerged in the 1960s under the influence of significant development in cognitive psychology and some radical reactions to teacher-directed transmission model of education. There has been considerable debate over the changes in institutionalized education and adaptation to learner-centered approaches, in which learners are not proactive, but self-reliant enough to take responsibility for their own learning. Brown (1994) regarded this approach as strategic investment, consisting of a set of procedures that raise learners' awareness about what is involved in learning a second language and enable them to self-direct, organize, and undertake responsibility for learning.

Strategic approach to language learning has encouraged many researchers to explore learning differences in terms of psychosocial variables, including level of language proficiency, learning style, gender, motivation, anxiety, beliefs, learning tasks, and cultural backgrounds (e.g., Carson & Longhini, 2002; Cohen & Dörnyei, 2002; Dreyer & Oxford, 1996; Horwitz et al., 1986; MacIntyre, 2002; Su, 2005; Wharton, 2000). The importance of strategic process of language learning has been also stressed by the earlier researchers due to providing useful insights into the cognitive process of language learning (e.g., Dörnyei, 2005; Ellis, 1994).

As language learning is a complex multidimensional cognitive process, detailed analyses of the factors affecting the strategic process of language learning is of crucial importance. Although many studies have explored the impact of different variables on the strategic process of language learning, many questions remain unanswered. As an example, how university students at different educational levels employ language learning strategies has been rarely surveyed by a systematic approach. Definitely, detailed analysis of strategic processing of language learning enables language teachers to get a clear picture of the cognitive process as well as the overlapping and distinct areas of language learning at different stages. Teachers can also identify learning problems or deficiencies at different stages to take appropriate remedial actions.

Due to ineffective instructional programs at most universities, language learners often run into major problems to comprehend academic materials even at advanced stages of learning. As an example, there exist many postgraduate students having enough linguistic foundation yet unable to comprehend academic texts written in English. The reason may be ineffective employment of language-learning strategies leading to major learning

difficulties.

The present study aims to analyze the differences in implementing language-learning strategies among Iranian students at different university levels. As improving L2 reading ability is the major focus of many language-teaching programs at universities, the differences in the strategic patterns of the students are explored in the process of reading comprehension. The findings can provide enlightening information as the strategic patterns of language learners are compared, which can reveal the overlapping and distinct areas of strategy use at different stages of learning. The findings can provide useful information about the extent to which success in reading comprehension is reliant on the implementation of language-learning strategies, which can encourage language teachers to take corrective measures to improve the efficacy of instructional reading programs.

2. Review of Literature

Earlier researchers have explored the impact of years of language learning on the employment of language-learning strategies (e.g., Ok, 2003; Ramirez, 1986). Ramirez found that years of language learning affected the application of language-learning strategies by 105 students studying French at three high school levels in New York. Ok probed the influence of school year on the employment of language-learning strategies by 325 Korean secondary school students. The findings showed that overall strategy use by language learners did not differ significantly in different school years. However, the third-year students applied compensation and memory strategies more frequently compared to the first-year students who used metacognitive, cognitive, affective, and social strategies more frequently.

Some researchers examined the effect of course level on the strategic behaviors of language learners (e.g., Griffiths, 2003; Politzer, 1983). As an example, Griffiths worked on the relation between course level and strategy use by the speakers of other languages in New Zealand. The findings manifested a positive relationship between the frequency of strategy use and course levels. Similarly, Politzer found that course level significantly influenced selection of learning strategies. The students at higher courses used positive, student-directed, communicative, and functional strategies most frequently. The effect of course level on choosing certain language-learning strategies has been also manifested in other studies (e.g., Ghrib, 2004). Ghrib probed the relation between course level and using learning strategies by 130 Tunisian secondary school students studying at the 6th and 7th grades. The study was conducted by using two questionnaires developed by the researcher. The results revealed that course level significantly influenced choice of certain language-learning strategies. The 6th-grade students employed resourcing, avoidance, translation, and borrowing strategies more frequently than did the 7th-grade students who used social, affective, paraphrase, circumlocution, and simplification strategies more frequently.

However, advancement in course level or years of study does not necessarily lead to frequent use of learning strategies. In their study, Cohen and Aphek (1981) reported that learners at different course levels were not significantly different in the use of learning strategies.

The present study aims to probe the probable significant relation between implementation of language-learning strategies and university level among Iranian EAP students. The study seeks the differences in the strategic patterns of Associate Degree, BA, and MA students in Iran. The strategic differences are explored in the process of reading comprehension, which is the major focus of English teaching programs at the universities in Iran. Furthermore, the study seeks the extent to which university level can exert influence on the implementation of language-learning strategies.

The research questions are:

1) Is there any significant relationship between university levels and employing language-learning strategies?

2) To what extent does university level influence employment of language-learning strategies?

3. Methodology

3.1 Participants

642 students getting Associate Degree, BA, and MA in different disciplines of social sciences participated in this study. They were recruited from Islamic Azad University of Neyshabur in Iran. On the basis of their scores in a reading test, only the students at the intermediate level of reading proficiency were selected. The reason for choosing the intermediate level students was to homogenize them in terms of reading proficiency. Thus, the final sample comprised 406 students doing EAP courses at three university levels of Associate Degree, Bachelor of Arts, and Master of Arts. The participants were males and females, ranging in age from 20 to 30. The frequency of the participants across three university levels is shown in Table 1.

Table 1. Frequency of the participants

University Levels	Frequency
Associate Degree	135
Bachelor of Arts	111
Master of Arts	160

3.2 Instruments

To probe the research questions, the following instruments were utilized in the study.

3.2.1 Reading Comprehension Test

A reading test derived from a TOEFL Test was employed in this study. The test consisted of of five reading texts and 50 test items.It was administerd to all the participants. The time alloted to take the test was about 60 minutes.

3.2.2 Language-Learning Strategy Questionnaire

The fifth version of Oxford's (1990) Strategy Inventory for Language Learning comprising 50 English statements, contextualizing the implementation of learning strategies in reading comprehension, was administered to the participants. It was organized on a 5-point Likert scale, including five adverbs of frequency. The time dedicated to answer the questionnaire was 25 minutes. It was piloted by a sample of 35 participants. The reliability estimate of the questionnaire was calculated by using Cronbach's alpha formula. The results are displayed in Table 2.

Table 2. The reliability estimate of learning stategy questionnaire

Questionnaire	Number of items	Reliability Estimate
Learning Strategy	50	.930

As manifested in Table 2, the reliability coefficient of the questionnaire was .930, indicating very small error of measurement.

3.3 Data Collection Procedures

Initially, the participants took the test in about 60 minutes. Based on their scores on the reading test, only the participants at intermediate proficiency level were selected as a purposive sample utilized in this study. They filled out the questionnaire in about 25 minutes.

4. Results and Discussion

To probe the first reseach question, concerning the significant differences among the participants at different university levels in using language-learning strategies, descriptive statistics were applied. The results are demonstrated in Table 3.

Table 3. Descriptive statistics

Learning Strategies	University Levels	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Mini	Max
						Lower Bound	Upper Bound		
Overall Strategies	Associate Degree	10	2.6380	.36914	.11673	2.3739	2.9021	2.04	3.23
	Bachelor of Arts	316	3.0970	.47727	.02685	3.0441	3.1498	1.57	4.47
	Master of Arts	78	3.3478	.48801	.05526	3.2378	3.4579	2.35	4.81
	Total	404	3.1340	.49257	.02451	3.0859	3.1822	1.57	4.81
Direct Strategies	Associate Degree	10	2.6660	.30909	.09774	2.4449	2.8871	2.20	3.10
	Bachelor of Arts	316	3.1376	.48257	.02715	3.0842	3.1910	1.62	4.70
	Master of Arts	78	3.4103	.54061	.06121	3.2884	3.5321	2.37	5.83
	Total	404	3.1786	.50815	.02528	3.1289	3.2283	1.62	5.83

Indirect Strategies	Associate Degree	10	2.5970	.55540	.17563	2.1997	2.9943	1.83	3.39
	Bachelor of Arts	316	3.0447	.56151	.03159	2.9826	3.1069	1.36	4.61
	Master of Arts	78	3.2677	.61161	.06925	3.1298	3.4056	1.65	4.61
	Total	404	3.0767	.58170	.02894	3.0198	3.1336	1.36	4.61

As indicated in Table 3, MA students (M = 3.3478, SD. =. 48801) employed overall strategies most frequently. MA students also employed direct as well as indirect strategies more frequently than did BA and associate degree students. Figure 1 demonstrates the relation between university levels and employment of language-learning strategies.
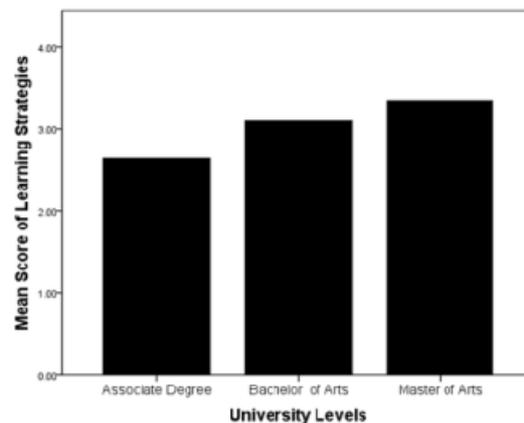

Figure 1. Relation between university levels and employment of language-learning strategies

As depicted in Figure 1, MA students employed language-learning strategies most frequently whereas associate degree students employed language-learning strategies least frequently. BA and MA students were very similar in the mean score of utilizing the strategies. Table 4 indicates the result of a one-way analysis of variance for examining significant differences among the participants' mean scores in employing the strategies.

Table 4. One-way analysis of variance

Learning Strategies		Sum of Squares	DF	Mean Square	F	Sig.
Overall Strategies	Between Groups	6.460	2	3.230	14.183	.000
	Within Groups	91.316	401	.228		
	Total	97.776	403			
Direct Strategies	Between Groups	7.344	2	3.672	15.224	.000
	Within Groups	96.718	401	.241		
	Total	104.062	403			
Indirect Strategies	Between Groups	5.470	2	2.735	8.378	.000
	Within Groups	130.896	401	.326		
	Total	136.366	403			

As reflected in Table 4, significant differences existed among the mean scores of overall $F_{(2, 401)} = 14.183$, p=.000; direct $F_{(2, 401)} = 15.224$, p=.000; and indirect strategies $F_{(2, 401)} = 8.378$, p= .000. To make a multiple comparison among the mean scores and locate any significant differences, a Tukey HSD test was utilized. The results are revealed in Tables 5 and 6.

Table 5. Multiple comparisons among the mean scores

Dependent Variable	(I) University Degree	(J) University Degree	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Overall Strategies	Associate Degree	Bachelor of Arts	-.45896*	.15327	.008	-.8195	-.0984
		Master of Arts	-.70982*	.16029	.000	-1.0869	-.3328
	Bachelor of Arts	Associate Degree	.45896*	.15327	.008	.0984	.8195
		Master of Arts	-.25086*	.06033	.000	-.3928	-.1089
	Master of Arts	Associate Degree	.70982*	.16029	.000	.3328	1.0869
		Bachelor of Arts	.25086*	.06033	.000	.1089	.3928
Direct Strategies	Associate Degree	Bachelor of Arts	-.47163*	.15774	.008	-.8427	-.1005
		Master of Arts	-.74426*	.16496	.000	-1.1323	-.3562
	Bachelor of Arts	Associate Degree	.47163*	.15774	.008	.1005	.8427
		Master of Arts	-.27263*	.06209	.000	-.4187	-.1266
	Master of Arts	Associate Degree	.74426*	.16496	.000	.3562	1.1323
		Bachelor of Arts	.27263*	.06209	.000	.1266	.4187
Indirect Strategies	Associate Degree	Bachelor of Arts	-.44772*	.18351	.040	-.8794	-.0160
		Master of Arts	-.67069*	.19190	.002	-1.1221	-.2192
	Bachelor of Arts	Associate Degree	.44772*	.18351	.040	.0160	.8794
		Master of Arts	-.22298*	.07224	.006	-.3929	-.0530
	Master of Arts	Associate Degree	.67069*	.19190	.002	.2192	1.1221
		Bachelor of Arts	.22298*	.07224	.006	.0530	.3929

Table 5 shows significant differences between the means of MA and Associate Degree students (I – J = .70982[*]) as well as the means of MA and BA students (I – J = .25086[*]) in using overall strategies. Significant differences also existed between the means of MA and Associate Degree students (I – J = .74426[*]) as well as the means of MA and BA students (I – J = .27263[*]) in using direct strategies. Significance differences were found between the means of MA and Associate Degree students (I – J = .67069[*]) as well as the means of MA and BA students (I – J = .22298[*]) in using indirect strategies. Table 6 presents the homogeneity of the means and locates where the means are significantly different.

Table 6. Tukey HSD test for homogeneity of the means

University Levels	N	Subset for alpha = 0.05	
		1	2
	Overall Learning Strategies		
Associate Degree	10	2.6380	
Bachelor of Arts	316		3.0970
Master of Arts	78		3.3478
Sig.		1.000	.143
	Direct Strategies		
University Levels			
Associate Degree	10	2.6660	
Bachelor of Arts	316		3.1376
Master of Arts	78		3.4103
Sig.		1.000	.114
University Levels			
	Indirect Strategies		

Associate Degree	10	2.5970	
Bachelor of Arts	316		3.0447
Master of Arts	78		3.2677
Sig.		1.000	.340

Table 6 presents the homogeneity of the participants' means in utilizing overall, direct, and indirect strategies. No significant differences existed between the means of MA and BA students in using overall (p = .143), direct (p = .114), and indirect (p = .340) strategies.

To examine the second research question, a linear regression analysis was utilized. The condensed model is manifested in Table 7. In the analysis, the use of learning strategies was considered as the dependent variable and university level was considered as the independent variable.

Table 7. Regression model

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
	.250[a]	.063	.060	.47751

Table 7 indicates that the bivariate correlation between utilizing learning strategies and university levels was (R = .250). The findings also indicate that 63% of the variance in the employment of learning strategies can be concerned with the participants' university levels. Table 8 presents the regression coefficient between the implementation of learning strategies and university levels.

Table 8. Regression coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	2.239	.175		12.826	.000
University Levels	.283	.055	.250	5.179	.000

As shown in Table 8, the standardized coefficient or Pearson correlation coefficient between the university levels and implementation of learning strategies was (Beta = .250), which is significant at p = .000. The t value (t =5.179) was significant at p= .000, representing a significant linear relationship between using learning strategies and the participants' university levels. Figure 1 depicts the strength of the relation between the variables. The observed probability is concerned with the participants' university levels acting as the independent variable, and the expected probability is concerned with employment of learning strategies acting as the dependent variable.
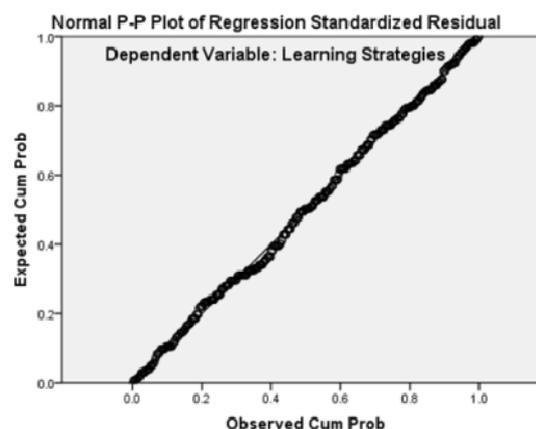

Figure 2. Regression line for the relationship between university levels and employment of learning strategies

Figure 2 demonstrates that the regression line is nearly steep, showing a strong positive relationship between the participants' university levels and employment of language-learning strategies in reading comprehension process. It means that the students at higher university levels had greater tendencies to apply language-learning strategies. As the findings reflected, MA students used language-learning strategies most frequently due to urgent needs to extract academic information from a number of English sources. The students also adopted a positive attitude toward particular reading instruction programs, in which language teachers give careful consideration to developing linguistic along with strategic competences of L2 learners. Generally, the findings suggest that cognitive process of language learning can be strongly influenced by linguistic as well as non-linguistic factors such as learners' language foundation, academic needs, attitudes, previous language-learning experiences, age, and strategic processing capabilities.

5. Conclusion

The study examined the differences among EAP students at different university levels in employing language-learning strategies. In addition, the extent to which the students' university level affected the employment of language-learning strategies was explored in this study. The findings manifested significant relationship between university levels and implementation of language-learning strategies. A positive linear relationship was also revealed between the university levels and employment of language-learning strategies. The results of this study reflected that language learners' strategic processing to comprehend reading texts was strongly dependent on their course levels and academic needs. Although the participants were homogeneous in terms of reading proficiency, they reported different strategic patterns in processing reading texts. The findings can encourage university teachers to adopt a different approach to teach reading effectively based on the linguistic and academic needs of EAP students at different stages of learning. The students at lower stages of learning have insufficient linguistic foundation; therefore, they are unable to use language-learning strategies effectively. Through effective strategic-based instruction, language teachers can narrow the gap between the students at different stages of learning. Despite the great importance of EAP courses at universities, there still exist major problems to resolve. Most of the problems are concerned with the effect of a variety of nonlinguistic factors on the cognitive process of language learning, most of which are largely ignored by language teachers. Thus, further studies are needed to explore cognitive process of language learning from different dimensions.

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