

L1 Transfer in Post-Verbal Preposition: An Inter-level Comparison

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Abstract: The study intended to investigate the well-known issue of L1 transfer in L2 acquisition. The primary aim of this research was to compare the extent to which L1 transfer may take place in different developmental stages in L2 learning procedure. Persian learners of English have been observed to misuse a number of the prepositions with some of the verbs. Having scrutinized more than a hundred pieces of students' writing assignments, the authors came up with a pattern of errors in this area. It was observed that the majority of these errors could be attributed to Persian: the learners' choice of preposition mirror the corresponding case in their L1, Persian. Moreover, the pattern of mistakes was put to test to check whether these mistakes increase or decrease according to the level of proficiency of the learners. To this end, two groups of students, one in elementary and the other in intermediate level, were tested on their use of proper prepositions with different verbs and the results of these tests were compared to see whether any significant difference exists between the two groups of students. The results showed no significant difference between the students of the two proficiency levels.

Keywords: transfer, developmental stages, contrastive analysis

1. Introduction

Cross-linguistics influence or first language transfer is said to be working in conjunction with some other factors which can either impede or inhibit the rate of transfer. Ellis (2008) uses the term "constraint" to talk about these accompanying factors. He discusses a range of constraints which might interact with the issue of transfer. Constraints like sociolinguistics, markedness and developmental factors among others are introduced in this area. By developmental factors, he means "the extent to which transfer is evident at different levels of development" (p. 392).

From a different point of view, Odlin (1989) puts forward some other factors interacting with cross-linguistic influence among which "pedagogical factors" can be noticed. To give some examples of these factors, he points to the role of teacher, textbooks, materials and pedagogical practices employed to train learners.

In the present study, it was assumed that the effect of Odlin's pedagogical factors can be observed and assessed in the course of time. In other words, while the students progress through different stages of proficiency, the influence of teacher, textbook and practices can be discerned more clearly. Accepting this assumption, one can expect that the discrepancy among students of different levels of proficiency can be identified with the differing pedagogical factors.

The effect of developmental stage or proficiency of the learners on their rate of L1 transfer has been mentioned in Jarvis' (2000) study. He suggests six different ways in which transfer rate might change with the learners' proficiency. One of these ways is that L1 influence decreases while

proficiency increases and in the other the influence of L1 remains constant in different stages (for more details, see Jarvis, 2000, p. 246-7).

Looking at the issue from this perspective, it seems that at the initial stages of learning a second language learners mostly resort to their mother tongue to fill the gaps they feel in their interlanguage and later on, in the higher levels, they regularly substitute the L2 features with those of their L1. However, in the eyes of the latter view, the influence of the L1 never diminishes and is omnipresent all through the L2 process of second language acquisition. Both of these views are considered in this study.

2. The present study

What has been presented so far is the overall view of the issue under study. In this paper, however, we have narrowed down the issue of transfer to the use of prepositional verbs. Besides, the interaction of transfer of these forms and the learners' levels of proficiency has been investigated.

Through an in-depth examination of more than hundreds of pieces of students' writings, a number of mistakes were found to be prevailing in most of the students' written language. These errors included choosing the proper preposition to use with some particular verbs among which were *marry*, *use*, *hate*, *climb*, *enjoy* and *respect* as the most frequent among the students.

Having closely examined the error types, a close affinity was found between the pattern of these errors and the structural properties of their corresponding postverbal prepositions in Persian. Following are some examples of the learners' errors:

- *I'm married *with* a teacher.
- *I don't use *from* computer a lot.
- *We should respect *to* our mother.

All these errors can be explained by referring to Persian language. For instance, in Persian, the verb *use* is used with the preposition [æz] which equals the English preposition *from* or *of* in many cases. Therefore, the first sentence above in Persian is as follows:

- [mæn æz kɑmpijuter zia:d estefade nemikonæam.]
- ↓ ↓ ↓ ↓ ↓
- I *from* computer much don't use.

The very same pattern can be witnessed in all of the other verbs noted earlier. The third sentence is brought here to shed more light on the issue:

- [ma: bayæd bɛ: ma:dærema:n ehteram bogzari:m.]
- ↓ ↓ ↓ ↓ ↓
- We should *to* our mother respect pay

These examples illustrate the influence of the first language of the learners in their writings. Noting this pattern of errors in students' writings, the second phase of the research was designed which is explained in detail below.

3. Review of literature

Persian learners of English have been subject to many studies in the field of transfer. Many varied aspects and areas of language have been scrutinized in these studies: the effect of Persian on English pronunciation and intonation (e.g. Boudaud & Cardoso, 2009; Scarborough, 2007), proper use of articles (e.g. Mobini, 2007); contrastive analysis of rhetorical features (e.g. Khodabandeh, 2007) and the study of wh-movement patterns in the two languages (e.g. Jahangard, 2010), and the transfer of collocations (Sadeghi, 2009), among others.

Few studies, however, have been conducted so far investigating the "developmental factors" role in L1 transfer which is the focus of attention in this study.

One rigorous study focusing on developmental factors is by Mohan and Lo (1985). This research explored the effect of the developmental factors on writing proficiency of Chinese learners of English. The results of the study demonstrated that the ability to project coherent rhetorical organization on the written text develops late and that appropriate practice in composition may have a profound positive influence on the learners.

It seems that prepositional errors have failed to attract the interest of the Iranian researchers and there is a tangible paucity of research in this regard. Nonetheless, there exist a few studies which have probed into this issue in some other languages. Tahaine (2010) examined the writings of his Arab students, and attempted to discover the pattern of mistakes in their preposition use. The findings of the research showed that first language interference was the primary source of errors in preposition using. This supports our hunch which was point to earlier above, i.e., in EFL learners' writings, the main source of error in preposition use is most likely attributable to L1 transfer.

Similarly, Mougén, Canale and Carrol (1977) investigated prepositional errors in which the performance of two groups of bilingual learners with English and French languages as their L1s was compared. The results revealed that there was a considerable improvement in students' accuracy in using English prepositions after the instruction.

Blom (2006) has looked at the issue from another viewpoint. He compared Swedish learners' use of prepositions productively and receptively. The results proved that while learners had more receptive knowledge of prepositions than the productive one. They resorted to their L1 whenever they failed to find the proper L2 form. Again, this lent support to our tentative postulation that the learners' L1 might have a key role in inducing the erroneous prepositional structures in their writings at different developmental stages of second language acquisition.

4. Research questions

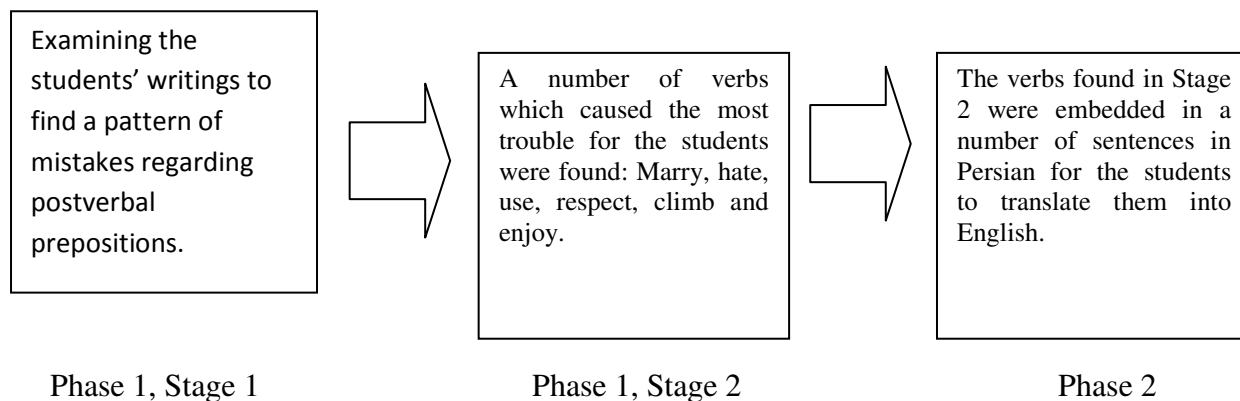
1. Is there a systematic pattern in the post-verbal preposition errors in Persian EFL learners?
2. Are these mistakes developmental or are induced by the learners' L1?
3. Is there any significant difference between the rate of preverbal preposition errors made by elementary and intermediate levels?

5. Methodology

As was initially noted, this research was implemented in two phases. The first phase was to screen the commonest errors the students made in the use of post-verbal prepositions in English. The outcome of this screening was fed into the second phase of the research

The second phase of the study was based on the outcome of the first phase. The verbs which the students had difficulty with were collected through the first stage of the research and were put to a closer study in the second stage.

The graph below summarizes the two phases of the study:



5.1. Participants

Fifty Iranian, adult Persian learners of English participated in this research. They were studying English in a private language institute and had already been placed into two levels:

elementary and intermediate through a placement test and an interview run by the institute. The age of the participants ranged between 18 and 35 and they were selected as intact classes.

5.2. Materials

Two sets of Persian sentences, each containing 13 sentences, formed the material of the study. These sentences were to be translated to English by the participants. The verbs that had emerged from the first phase of the research were embedded in these sets. These verbs comprised *enjoy*, *marry*, *hate*, *use*, *climb* and *respect*. In order to minimize the effect of the context of the sentence, each of these verbs was utilized in two different sentences; only the verb *respect* was used in one sentence and the verb *enjoy* was used in 4 different sentences so as to offer the learners a better chance to test their knowledge.

Two different versions of these sentences were devised, one for each group of participants. These two sets were adjusted to the levels of the students. The overall context and meaning of the sentences were kept quite the same and the grammatical structure was simplified for the Elementary group. A translated example can make the point clearer:

- Elementary: I use standard devices.
- Intermediate: I use the devices which are quite standard.

These sentences were given to the participants to translate them to English; meanwhile, they were not aware of the purpose of this exercise (an English version of the test can be found in the Appendix.).

5.3. Procedure

The procedure of collecting the required data was very straightforward. Being provided with the set of the Persian sentences, the participants were asked to translate them into English. They were allowed to take the exercise home and do it as homework.

The materials, as noted earlier, consisted of a set of out-of-context sentences in Persian which contained the target verbs. The students were supposed to take the sentences home and translate them into English.

One interesting point to mention here is that although they did the exercise at home, they did not care to check the correct preposition to use in the sentences. This fact suggests that the influence of their L1 was so strong that had assured them of the accuracy of the grammatical point and they used the wrong preposition heedless of any probable error.

5.4. Data analysis

The sentences were scored regarding the use of preposition only. To put it another way, all of the other mistakes in a sentence were not taken into account. The students scored 0 whenever they used the preposition which was the translated form of the Persian preposition used with each of the target verbs (the negative L1 transfer was scored zero). Otherwise, they scored 1.

The data obtained from the scoring of the sentences were entered into SPSS and a number of statistical analyses were conducted. To start, a descriptive analysis of each of the items was run to evaluate the overall performance of the learners. Furthermore, a one-sample t-test was conducted to compare the performance of the two groups.

Besides, in order to check the impact of the context of each sentence on the correct use of the prepositions, a paired-sample t-test for each pair of the sentences was run. For the verb *enjoy* a one-way ANOVA had to be administered regarding the 4 sentences which contained this verb.

6. Results and discussion

Table 1, depicts the outcome of the descriptive statistical analysis conducted on the outcome of the translation tests. In the table, each of the variables is introduced by the initials of the verb. The table shows the mean and standard deviation of the correct use of the post-verbal preposition with each of the target verbs.

A value of .68 was estimated to show the reliability of the test and the average mark of all the participants on all the items was calculated to be .49 which simply indicates the high rate of L1 transfer in translating the items.

Table 1. Descriptive Statistics of the Correct Use of the Post-Verbal Prepositions

Verbs	Mean	Std. Deviation
EN1	.4565	.50361
EN2	.4565	.50361
MAR1	.2391	.43127
HAT1	.5217	.50505
CLI1	.6739	.47396
EN3	.3478	.48154
USE1	.5870	.49782
RES	.6739	.47396
CLI2	.4130	.49782
MAR2	.2391	.43127
HAT2	.6087	.49344
USE2	.6957	.46522
EN4	.6522	.48154

As the above table shows, the participants managed to score the highest on the second sentence including the verb *use* (mean= .69), while their average gain with the first sentence with the same verb was only .58. However, the paired-sample t-test for the two sentences revealed no statistically significant difference between these two means ($t=1.15$, sig. = .25).

Between the other pairs of sentences, no significant difference can be noticed except for one pair: EN3 and EN4 ($t=3.28$, sig. = .002). A more detailed comparison of these two items seems timely here. The four sentences containing the verb *enjoy* are presented below (the Elementary group version of the sentences):

- EN1: You can enjoy the extraordinary views of around here.
- EN2: Let's have a walk and enjoy the great weather.
- EN3: You can enjoy this delicious food.
- EN4: Enjoy life and forget the sorrows.

As mentioned above, the only significant difference was observed between the 3rd and the 4th sentences. Actually the sentence EN4 enjoys the highest mean among the 4 sentences (.65). The only factor that discriminates the 4th sentence from the others is that it is in an imperative structure. However, the underlying reason of this discrepancy is not yet clear to the authors.

Another pair of the sentences manifested a quite sharp difference. This is the pair of CL1 and CL2, the two sentences containing the verb *climb*. Although the difference between these two was not statistically significant ($t=2.89$, sig. = .006), the difference between the two means is not negligible (CL1= .67, CL2=.41). The two sentences are as follows:

- CL1: This is the mountain that I climbed three years ago.
- CL2: Can you climb that tall tree?

The participants mostly used a preposition like *of* or *from* with this verb which is obviously redundant in English but in Persian the verb which means *climb* is always utilized with a preposition which is the equivalent form of *from* in English.

To explicate the higher score of learners on the first sentence above (CL1), we can refer to the role of the relative clause which is embedded in this sentence. The participants may have failed

to find a proper slot to place the preposition which they might have used if they had known the correct place for the preposition 'of'. In other words, they might not be aware that they could bring the preposition at the end of the relative clause:

- *This is the mountain that I climbed *of* three years ago.

If this speculation of the authors was correct, the quite acceptable performance of learners on this item would not be due to their knowledge of preposition use, but to their lack of knowledge of the structure of relative clauses.

To conclude, although the statistics failed to display any significant influence of the context of the sentences on preposition use, the two instances discussed above may suggest further study to explore this area in a more careful manner.

Going back to Table 1, we can find out that the lowest gain of the participants was on the verb *marry*. As can be seen in the Table 1, in both sentences the learners failed to score any more than an average of .23. In addition, a closer look at the translated sentences manifested that the majority of the students used the preposition *with* to go with this verb. To put it more exact, among the wrong answers to this item (35 out of 46), two students chose *by* and one chose *at*; the others all used *with* which is the translated form of the preposition that is used in Persian with the equivalent form of *marry*. Below is an example of this item:

- [mæn ba: yek xælæbən ezdevaj kardæm.] }* → I got married *with* a pilot.
- ↓ ↓ ↓ ↓ ↓
- I with a pilot married.

This item clearly reveals the strong influence of the students' L1 on their choice of the proper preposition.

Up to this part of the paper, the two first research questions were answered with affirmatives. What follows is the investigation of the third research question which explores the difference between performance of students in elementary and intermediate levels. 25 elementary students and 21 intermediate students were to be compared on their gains on each of the items. To draw such a comparison a one-way ANOVA was run. Table 2 presents the outcome of this analysis.

Table 2. ANOVA of Performance of Students in Elementary and Intermediate Proficiency Levels

		Sum of Squares	df	Mean Square	F	Sig.
EN1	Between Groups	.175	1	.175	.685	.412
	Within Groups	11.238	44	.255		
	Total	11.413	45			
EN2	Between Groups	.221	1	.221	.867	.357
	Within Groups	11.192	44	.254		
	Total	11.413	45			
MAR1	Between Groups	.091	1	.091	.486	.489
	Within Groups	8.278	44	.188		
	Total	8.370	45			
HAT1	Between Groups	1.372	1	1.372	5.971	.019
	Within Groups	10.107	44	.230		
	Total	11.478	45			
CLI1	Between Groups	1.297	1	1.297	6.478	.015
	Within Groups	8.811	44	.200		
	Total	10.109	45			
EN3	Between Groups	.252	1	.252	1.089	.302

	Within Groups	10.183	44	.231		
	Total	10.435	45			
USE1	Between Groups	2.821	1	2.821	14.897	.000
	Within Groups	8.331	44	.189		
	Total	11.152	45			
RES	Between Groups	.299	1	.299	1.342	.253
	Within Groups	9.810	44	.223		
	Total	10.109	45			
CLI2	Between Groups	.474	1	.474	1.953	.169
	Within Groups	10.678	44	.243		
	Total	11.152	45			
MAR2	Between Groups	.091	1	.091	.486	.489
	Within Groups	8.278	44	.188		
	Total	8.370	45			
HAT2	Between Groups	.431	1	.431	1.801	.186
	Within Groups	10.526	44	.239		
	Total	10.957	45			
USE2	Between Groups	.170	1	.170	.780	.382
	Within Groups	9.570	44	.217		
	Total	9.739	45			
EN4	Between Groups	.149	1	.149	.638	.429
	Within Groups	10.286	44	.234		
	Total	10.435	45			

As the Table shows, the only item on which the two groups performed differently was the first sentence with the verb *use* (USE1, sig. =.000) while in other items the difference is not significant. Table 3 is the representation of the group statistics of the data. By exploring this table, we can, surprisingly, observe some instances where the Elementary group outperformed the Intermediate group (EN2, MAR1, HAT1, and MAR2). This statistics clearly reveals that the students of higher proficiency did not enjoy a better performance.

Table 3. Group Statistics

	LEVEL	N	Mean	Std. Deviation	Std. Error Mean
EN1	Elementary	25	.4000	.50000	.10000
	Intermediate	21	.5238	.51177	.11168
EN2	Elementary	25	.5200	.50990	.10198
	Intermediate	21	.3810	.49761	.10859
MAR1	Elementary	25	.2800	.45826	.09165
	Intermediate	21	.1905	.40237	.08781
HAT1	Elementary	25	.6800	.47610	.09522
	Intermediate	21	.3333	.48305	.10541
CLI1	Elementary	25	.5200	.50990	.10198
	Intermediate	21	.8571	.35857	.07825
EN3	Elementary	25	.2800	.45826	.09165
	Intermediate	21	.4286	.50709	.11066

USE1	Elementary	25	.3600	.48990	.09798
	Intermediate	21	.8571	.35857	.07825
RES	Elementary	25	.6000	.50000	.10000
	Intermediate	21	.7619	.43644	.09524
CLI2	Elementary	25	.3200	.47610	.09522
	Intermediate	21	.5238	.51177	.11168
MAR2	Elementary	25	.2800	.45826	.09165
	Intermediate	21	.1905	.40237	.08781
HAT2	Elementary	25	.5200	.50990	.10198
	Intermediate	21	.7143	.46291	.10102
USE2	Elementary	25	.6400	.48990	.09798
	Intermediate	21	.7619	.43644	.09524
EN4	Elementary	25	.6000	.50000	.10000
	Intermediate	21	.7143	.46291	.10102

To explain this phenomenon we can, again, refer to Jarvis's (2000) point of view. To discuss the items on which the Intermediate group performed higher, we can use Jarvis's proposal that the rate of transfer decreases while proficiency increases.

On the other hand, the items on which the difference between the two groups' performance was not significant supports Jarvis's view claiming that some of the transferred forms remain constant in different developmental stages, a concept which is mostly known as fossilization.

7. Conclusion

To conclude we can interpret that the developmental stage of learners cannot be considered as the sole factor to determine the rate of L1 transfer. The discrepancy between the two groups of participants in this study, regarding the different verbs and prepositions, suggests that there is a group of factors and/or variables which interact with each other to constraint the extent to which cross-linguistic influence occurs.

Ellis (2009) presents a list of constraints which work in conjunction with L1 transfer and may enhance or limit the effect of L1 on the learners' interlanguage. He claims that a theory of transfer cannot be devised in isolation, excluding the other interacting factors.

Looking from a different standpoint at the results of this study, we can achieve quite the same conclusion that the interaction between developmental stage and transfer is not comprehensive enough in order to draw a fair comparison between the students' performance.

There are some limitations in this study, however, which may restrict the generalizability of the findings. The small number of participants, as well as, the small number of tokens which were put to test, need to be improved to add to the reliability of the study.

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