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Persian EFL Students' Developmental versus Fossilized Prepositional Errors

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ABSTRACT

This study investigated the developmental and fossilized prepositional errors in Persian EFL learners' compositions at three levels of proficiency; participants were divided into lower-intermediate, upper-intermediate, and advanced levels. For each participant, four compositions were collected, and after identifying the prepositional errors for each level, their frequency and mean differences were compared across these levels to identify developmental and fossilized errors. Fifteen prepositional error types were identified, of which the most frequently made was the wrong selection of prepositions before nouns. Out of 15 error types, two were identified as developmental and 12 as fossilized. Findings indicate that most of the students committed fossilized errors, which shows the permanent retention of prepositional errors in their compositions. Accordingly, serious pedagogical consideration needs to be given to the teaching of prepositions to improve the writing competence of Iranian EFL learners.

INTRODUCTION

According to James (2001), "In the 1950s and 1960s the favored paradigm for studying foreign/second language learning and organizing its teaching was *Contrastive Analysis*" (p. 4). The Contrastive Analysis Hypothesis (CAH) claimed that the principal barrier to second language acquisition (SLA) was the interference of the first language system with the second language system. Arising from the shortcomings of the CAH to adequately account for second language learners' errors, *Error Analysis* (EA) was suggested by researchers as a new approach to investigate student errors. Indeed, EA attributed learner errors to different feasible sources, not just the interference from learners' first language (Brown, 2000, p. 218). In EA, errors play an important role in describing the learners' language. Learners' language, referred to as *interlanguage* (Selinker, 1972), is a system of rules which encompasses both L1 and L2 elements. The developmental nature of interlanguage accounts for a learner's ability to create and test hypotheses of the L2 grammar, a process which leads to internalizing the L2 rules. At the same time, this process cannot progress without making errors. Based on the research of Ellis (1985), analyzing learners' errors is not undesirable, but rather can be a guide for the analyst to understand the nature of the learning process.

Errors need to be classified according to whether they have been gradually developed during the second language learning process, which are called *developmental errors*, or those errors which have been permanent and stable, which are called *fossilized errors* (Richards, 1974). Developmental errors are those errors which reflect the learners' competence at a particular state, and illustrate some of the general characteristics of language acquisition (Richards, p. 173). Based on Dulay and Burt (1974), they are similar to those errors made by children who are learning their first language. The term *fossilization*, first introduced by Selinker (1972), refers to "the long term persistence of the non-target-like structures in the interlanguage of non-native speakers" (Selinker & Lakshmanan, 1992, p. 197). According to Selinker, fossilization is the point where there is no further language growth—even a cessation of learning—in spite of continuous exposure to input, adequate motivation, and sufficient opportunity to practice.

Preposition usage is one of the most difficult aspects of English grammar for non-native speakers to master. According to Celce-Murcia and Larsen-Freeman (1999), prepositions are generally troublesome to learners for whom English is a foreign or second language (p. 401). Takahaski (1996) also believes that the correct usage of prepositions is the greatest problem for EFL learners of English. The majority of Persian EFL learners have a good knowledge of English grammar and vocabulary; however, they seem to have serious problems with prepositions, and, among English-as-a-foreign-language learners, some of these problems are unique to Iranian EFL students. Among previous Persian studies, only a small number of them have been conducted to investigate the difficulties of preposition use in writing, independent from other syntactic-grammatical errors. Moreover, no study so far has attempted to identify the fossilized, as compared to developmental, prepositional errors. Thus, it seemed reasonable to conduct a study to discover the types and the rate of grammatical errors on using prepositions, and to determine the prepositional error types which disappear developmentally across different levels of language proficiency, and those which persist in the interlanguage of Persian EFL learners.

LITERATURE REVIEW

EA and interlanguage hypotheses as substantial components of SLA research have been broadly used to investigate second language learners' process of second language learning. SLA researchers have analyzed learner interlanguage in terms of errors in the L2 output. Based on these hypotheses, "Errors can be observed and classified to reveal something of the system operating within the learner" (Brown, 2000, p. 218). Hence, errors are clues to language teachers as to the developmental stages of the learners' interlanguage.

Errors in a language learner's performance, including the writing process, have long been the subject of interest among teachers, linguists, and syllabus planners. Of the four skills in English, writing is considered to be the most complex skill to master. Writing and grammar are inextricably intertwined, as much of good writing derives its excellence from correct grammar. Therefore, investigation into EFL students' grammatical errors in writing provides useful insights into the learning difficulties which need to ultimately be overcome through more effective pedagogical measures. Sometimes the same grammatical errors may be found in the writings of students at different levels of language proficiency, which indicates fossilized errors (Selinker, 1972). It is therefore possible to discover grammatical errors pertaining to a specific

level of language proficiency which may indicate the developmental errors of that level (Dulay, Burt, & Krashen, 1982).

Within English structures, prepositions seem to be one of the main challenges that most language learners have to meet in the process of second language learning. In fact, prepositions seem to put a heavy burden on almost all language learners (Mukattash, 1976). According to Pittman (1966) and Zughoul (1979), prepositions are notoriously known for their downright unpredictability. Most of the experts in the field of English as a second or foreign language generally agree that ESL/EFL learners are frequently confused about when and how to use prepositions. Jabbour-Lagoeki (1990), Scott and Tucker (1974), and Vriend (1988) all report that ESL/EFL students in general omit or misuse English prepositions. Celce-Murcia and Larsen-Freeman (1999) believe that non-native speakers of English tend to have three types of problems with prepositions: (1) choosing the wrong preposition, (2) omitting a needed preposition, and (3) using a preposition where one is not needed. Similarly, Vriend (1988) reported that ESL/EFL students in general often omit, displace, or misuse English prepositions.

Several studies have investigated EFL learners' prepositional errors (Azeez, 2005; Dulay & Burt, 1974; Hamdallah, 1988; Scott & Tucker, 1974; Tahaineh, 2009; Vriend, 1988), stating that EFL learners have serious problems in the use and production of English prepositions. As only a small number of previous Persian studies (Delshad, 1980; Henning, 1978; Koosha & Jafarpour, 2006) have been conducted to investigate Persian EFL learners' prepositional errors independent from other grammatical errors, the primary significance of this study lies in taking a further step toward investigating and gaining a comprehensive understanding of prepositional error types. Moreover, none of the previous studies tried to identify the developmental and fossilized prepositional errors among Persian EFL learners of different proficiency levels.

To pursue such a line of study, the present research is designed to: (a) find the most frequent grammatical errors made by Persian EFL learners using English prepositions, (b) compare these errors across the three proficiency levels, and, finally, (c) determine the fossilized errors which may persist even after many years of instruction and the developmental errors which will gradually disappear toward the higher levels of language proficiency.

PURPOSE OF THE STUDY

This study investigated the kinds and frequencies of prepositional errors in the English writings of Persian EFL learners. Furthermore, it examined the errors on three levels of English proficiency to follow the students' interlanguage development. Then, the prepositional errors that disappeared developmentally across the three levels, as well as the type and the frequency of fossilized errors, were identified. Based on the researchers' review of the literature and the reported results of the previous studies done in this area, this study aims to shed new light on the following two research questions: (1) What are the major types of English prepositional errors made in compositions written by Persian EFL learners majoring in English translation at different levels of Bachelor of Arts proficiency? (2) Based on the rate of error occurrence across different proficiency levels, which of these errors are developmental and which are fossilized?

RESEARCH METHODOLOGY

Participants

The 78 participants of this study were chosen from sophomore, junior, and senior B.A. students of English translation at Golpayegan Payam-Noor University, Iran. One hundred students were selected from among four classes through a random selection process. They consisted of 20 male and 58 female students, their ages ranging from 20 to 25 years. Based on scores from a standard English proficiency test called the Oxford Placement Test (Allan, 1992), the students were divided into three levels of lower-intermediate (LI), upper-intermediate (UI), and advanced (AD) groups. The possible scores on this test ranged from zero to one hundred. Those students who scored below 35 were assigned to the LI group (26 students), the students whose scores were between 35 and 65 were assigned to the UI group (29 students), and the students who scored above 65 were assigned to the AD group (23 students).

Materials

The Oxford Placement Test

The Oxford Placement Test has proved to be a highly effective initial-placement instrument and a reliable means of grading students at all levels from elementary upwards, with a consistent record of predictive validity regarding examination entry. The test consists of two sections, listening and grammar, which take about an hour to complete. For the purpose of this study, the grammar section of the Oxford Placement Test 2 was used. It consisted of 100 multiple-choice items, in which the test takers were asked to read the stem with a blank, and then choose one of the three options. They were allowed 50 minutes in which to answer the questions.

Student Compositions

The corpus of data for this study was the learners' compositions during the second semester of the 2009-2010 academic year. For each participant four compositions were collected, which formed a total sample of 312 compositions. Each composition was administered at the university by the teacher and the researchers. The participants were given four topics and were asked to write their compositions within a 50-minute class session. The selected topics were: (1) Features of a good friend, (2) Your problems at this university, (3) Why did you choose English as your major?, and (4) How do you overcome stressful situations?

In order to get more reliable and uniform data, the participants were asked to write their compositions in about three paragraphs, and to write on their own without consulting with their friends, teacher, or researchers. Moreover, they were not told that their use of prepositions would be studied; had they been told, they might have underused or overused such words.

Procedure

After participants were placed in their groups, the compositions of the participants were selected. The compositions were analyzed in terms of prepositional errors, and the errors were assessed by an English professor to ensure that the errors were accurately spotted.

After identifying the errors, each error was classified and coded. Altogether, five general patterns of prepositions were recognized and investigated. This classification of prepositional patterns was used by Koosha and Jafarpour (2006) in their study on Iranian EFL learners' prepositional errors. These patterns include: (1) Noun + Preposition (e.g., *motivation in, argument about*); (2) Preposition + Noun (e.g., *by car, on credit*); (3) Verb + Preposition (e.g., *consist of, insist on*); (4) Adjective + Preposition (e.g., *good at, tired of*); and (5) Preposition + Preposition (e.g., *out of, next to*).

According to Corder (1973) and Brown (2000) (as cited in Keshavarz, 2005), EFL learner errors can be divided into three categories: substitution, addition, and omission. In their studies on errors of EFL students using the same classification of prepositional errors, Hamdallah (1988), Scott and Tucker (1974), and Tahaineh (2009) further delineated the three categories as follows:

- (1) *Substitution*: An incorrect preposition is substituted for a correct one. For example:
 - The teacher was satisfied *from our compositions (instead of *with*).
 - He was angry *from his bad marks (instead of *at*).
- (2) *Addition*: A preposition is used in a sentence which does not require a preposition. For example:
 - He entered *into the room (an unnecessary *into*).
 - They always discuss *about politics (an unnecessary *about*).
- (3) *Omission*: A preposition is deleted which is necessary. For example:
 - She came *Ø Sunday (omission of *on*).
 - The classes are held *Ø noon (omission of *at*).

After classifying the types of prepositional errors, the most frequently occurring prepositional errors were identified. The prepositional error types for each proficiency level were then identified from the corpus. Next, the types and frequency of these errors were compared across the three levels to find out whether the rate of each prepositional error type significantly decreased across the three levels (developmental errors) or remained the same (fossilized errors).

DATA ANALYSIS AND RESULTS

The first research question addressed the major grammatical errors of Persian EFL learners at three levels of language proficiency on using English prepositions in their compositions. Fifteen major types of prepositional errors were identified in the corpus, which totaled 642 errors. The error categories were: (1) the wrong selection of a preposition after a noun, (2) the addition of a preposition after a noun, (3) the omission of a preposition after a noun, (4) the wrong selection of a preposition before a noun, (5) the addition of a preposition before a noun, (6) the omission of a preposition before a noun, (7) the wrong selection of a preposition after a verb, (8) the addition of a preposition after a verb, (9) the omission of a preposition after a verb, (10) the wrong selection of a preposition after an adjective, (11) the addition of a preposition after an adjective, (12) the omission of a preposition after an adjective, (13) the wrong selection of a preposition after a preposition, (14) the addition of a preposition after a preposition, and (15) the omission of a preposition after a preposition.

The SPSS program was used to analyze the data regarding the frequency of each error type in each level. Table 1 shows the percentage and frequency of the occurrence of each error type in each level. As can be seen, the majority of students had difficulty in the selection of the correct preposition, especially those preceding nouns. In other words, the most frequently recurring error in the corpus was the wrong selection of prepositions before the nouns.

Table 1. Frequency and Percentage of Each Error Type in Each Level

No	Error Type		Lower Intermediate		Upper Intermediate		Advanced		Total	
			Frequency	Percentage	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
	Main Category	Subcategory								
1	Noun + Prep	S	31	61%	30	61%	33	80%	94	15%
		A	8	16%	12	24%	4	10%	24	4%
		O	12	23%	7	15%	4	10%	23	3%
		Total	51	20%	49	23%	41	24%	141	22%
2	Prep + Noun	S	39	56%	46	69%	45	76%	130	20%
		A	15	21%	12	18%	10	17%	37	6%
		O	16	23%	9	13%	4	7%	29	4.5%
		Total	70	27%	67	32%	59	34%	196	30.5%
3	Verb + Prep	S	40	35%	28	39%	19	36%	87	13.5%
		A	39	34%	16	22%	10	19%	65	10%
		O	35	31%	28	39%	24	45%	87	13.5%
		Total	114	45%	72	34%	53	31%	239	37%
4	Adjective + Prep	S	7	46%	15	75%	14	88%	36	6%
		A	4	27%	1	5%	1	6%	6	1%
		O	4	27%	4	20%	1	6%	9	1%
		Total	15	6%	20	9%	16	9%	51	8%
5	Prep + Prep	S	2	33%	5	100%	3	75%	10	1.6%
		A	4	67%	0	0%	0	0%	4	0.7%
		O	0	0%	0	0%	1	25%	1	0.2%
		Total	6	2%	5	2%	4	2%	15	2.5%
	Total	S	119	47%	124	58%	114	66%	357	56%
		A	70	27%	41	19%	25	14%	136	21%
		O	67	26%	48	23%	34	20%	149	23%
		Total	256	40%	213	33%	173	27%	642	100%

Note: Prep = preposition, S = substitution, A = addition, O = omission

The second research question investigated those prepositional errors which gradually (developmentally) disappeared from the learners' writings in the higher levels of proficiency, and those prepositional errors which persisted across the three levels of proficiency (fossilized

errors). To identify them, one-way ANOVAs and the Tukey Post Hoc analyses were run for each error type, and the mean differences were identified. If the mean difference on each error type was significant across the three groups, and there was a decrease in means from the LI to the UI to the AD Level, the error was regarded as developmental. On the other hand, if there was no significant difference in the mean of each error type across the three groups, and the error remained nearly the same for all of them, the error was categorized as fossilized.

Noun + Preposition

In this error category, the learners omitted a preposition, or used an unnecessary or wrong preposition after the noun. These types of errors have interlingual as well as intralingual sources, such as overgeneralization and ignorance of rule restrictions in their occurrence. For example:

- Many of the scientists and doctors have done a lot of research *about it (instead of *on*).
- My excessive interest *to English made me *to choose this major (instead of *in* and unnecessary *to*).
- You must know that your plan is *for learning English (unnecessary *for*).
- As a result *of they cannot decide on a good solution (unnecessary *of*).
- To deal with a foreigner requires knowledge *Ø English (omission of *of*).
- Fast foods really cause damage *Ø our body (omission of *to*).

Table 2. Descriptive Statistics for Noun + Preposition

Levels	Error Type	No.	Mean	Std. Deviation
Lower Intermediate	Substitution	31	1.19	.895
	Addition	8	.31	.618
	Omission	12	.46	.706
Upper Intermediate	Substitution	30	1.03	.981
	Addition	12	.41	.780
	Omission	7	.24	.435
Advanced	Substitution	33	1.43	1.121
	Addition	4	.17	.491
	Omission	4	.22	.518

Table 3. ANOVA Results of the Mean Scores for Noun + Preposition

Error Type	Source of Variation	Sum of Squares	df	Mean Squares	F	Sig.
Substitution	Between groups	2.062	2	1.031	1.036	.360
	Within groups	74.656	75	.995		
	Total	76.718	77			
Addition	Between groups	.738	2	.369	.868	.424
	Within groups	31.877	75	.425		
	Total	32.615	77			
Omission	Between groups	.930	2	.465	1.473	.236
	Within groups	23.685	75	.316		
	Total	24.615	77			

Substitution

This error type was made when the learners did not apply a correct preposition after a noun. As can be seen in Table 2, the obtained means are nearly similar within the three groups. According to the ANOVA results in Table 3, the significant value of .360 at $F = 1.036$ was much greater than .05, which shows that the mean differences across the three groups were not significant. To put it differently, the participants in the three levels made the same rate of this error, which indicates no development, meaning the error was fossilized.

Addition

This error type was made when the learners used an unnecessary preposition after a noun. Drawing on the descriptive statistics in Table 2, and the ANOVA results in Table 3, there was no significant difference between the three levels for this error type ($F = .868$, $p = .424$). Therefore, the error had not improved toward upper levels of proficiency and had remained fossilized.

Omission

In this error category, the learners did not know that a preposition was needed after the noun, thereby omitting it. The descriptive statistics in Table 2 indicate that there was a slight decrease in the mean of this error category from LI to UI and AD Levels. But, according to the ANOVA results in Table 3, the mean differences across the three levels on this error category were not significant ($F = 1.473$, $p = .236$), indicating that this error type had remained unchanged toward the upper levels of proficiency.

Preposition + Noun

Wrong choice, unnecessary insertion, and omission of a preposition before a noun are instances of this error category (which show the role of L1 negative transfer), and some examples are given below.

- I chose English as my major *in the university (instead of *at*).
- Most of the original texts are written *to English (instead of *in*).
- Learning English is important for studying another major *in abroad (unnecessary *in*).
- I went *to home (unnecessary *to*).
- The classes are held *Ø noon (omission of *at*).
- Maybe with a big help *Ø God, problems are solved (omission of *from*).

Substitution

This error type was made when the learners did not apply a correct preposition before a noun. According to descriptive statistics in Table 4, the mean of this error type had increased from LI to UI and AD levels, revealing that even the majority of the advanced learners made the error. Hence, it was placed in the fossilized category.

Table 4. Descriptive Statistics for Preposition + Noun

Levels	Error Type	No.	Mean	Std. Deviation
Lower Intermediate	Substitution	39	1.50	1.364
	Addition	15	.58	.809
	Omission	16	.62	.983
Upper Intermediate	Substitution	46	1.59	1.018
	Addition	12	.38	.677
	Omission	9	.31	.712
Advanced	Substitution	45	1.96	.928
	Addition	10	.43	.590
	Omission	4	.17	.388

Table 5. ANOVA Results of the Mean Scores for Preposition + Noun

Error Type	Source of Variation	Sum of Squares	df	Mean Squares	F	Sig.
Substitution	Between groups	2.842	2	1.421	1.128	.329
	Within groups	94.491	75	1.260		
	Total	97.333	77			
Addition	Between groups	.559	2	.279	.569	.569
	Within groups	36.826	75	.491		
	Total	37.385	77			
Omission	Between groups	2.553	2	1.276	2.298	.108
	Within groups	41.665	75	.556		
	Total	44.218	77			

Addition

This error type was made when the learners added an unnecessary preposition before a noun. According to Table 4, there was a decrease in the mean of this error type from the LI to the UI level, but based on the ANOVA results (Table 5), the mean difference was not significant ($F = .569, p = .569$). Thus, the error was categorized as fossilized.

Omission

In this error category, a preposition was needed before a noun, but the students omitted it. By looking at the descriptive statistics in Table 4, the mean of the error had decreased from less proficient toward more proficient groups, but as the ANOVA results in Table 5 indicate, the mean differences across the three levels in this error category were not significant ($F = 2.298, p = .108$), indicating that this error had remained unchanged toward the upper levels of proficiency.

Verb + Preposition

Verb + Preposition error types were made when the learner added an unnecessary preposition, omitted a required preposition, or used a wrong preposition after a verb.

Table 6. Descriptive Statistics for Verb + Preposition

Levels	Error Type	No.	Mean	Std. Deviation
Lower Intermediate	Substitution	40	1.54	1.303
	Addition	39	1.50	.906
	Omission	35	1.35	1.29
Upper Intermediate	Substitution	28	.97	1.117
	Addition	16	.55	.870
	Omission	28	.97	.906
Advanced	Substitution	19	.83	.937
	Addition	10	.43	.59
	Omission	24	1.04	.928

Table 7. ANOVA Results of the Mean Scores for Verb + Preposition

Error Type	Source of Variation	Sum of Squares	df	Mean Squares	F	Sig.
Substitution	Between groups	7.230	2	3.615	2.803	.067
	Within groups	96.731	75	1.290		
	Total	103.962	77			
Addition	Between groups	17.509	2	8.754	13.311	.000
	Within groups	49.325	75	.658		
	Total	66.833	77			
Omission	Between groups	2.155	2	1.077	1.095	.340
	Within groups	73.807	75	.984		
	Total	75.962	77			

Substitution

This error type was made when the learners did not use an appropriate preposition after a verb. The source of this error seems to be the L1 effect. For example:

- Some teachers have good knowledge but cannot exchange *to students (instead of *with*).
- I was satisfied *from my English marks (instead of *with*).
- I have to adapt myself *with the new situation (instead of *to*).

As is shown in Table 6, there was a decrease in the mean of the errors from the LI toward the UI and AD groups, but the ANOVA results in Table 7 indicate no significant mean differences across the three levels ($F = 2.803$, $p = .067$). Therefore, it seems that the error had remained fossilized.

Addition

This error type was made when the learners added an unnecessary preposition to the verb. The major source of this error seems to be the effect of the L1 here as well.

- I really enjoy *of teaching English (unnecessary *of*).
- Every person should use *from her real friends' advices (unnecessary *from*)

According to Table 6, the number of this error type decreased from 39 errors in the LI to 16 errors in the UI, and 10 errors in the AD group. Since there was a decrease in making the error by the UI and then the AD group, it seems that the error was developmentally disappearing. Moreover, based on the ANOVA results in Table 7, the mean difference among the three groups was significant ($F = 13.311, p = .000$). To locate the exact differences between the three groups, a Tukey Honestly Significant Difference (HSD) post-hoc test was performed, which is presented below.

Table 8. The Results of Post Hoc Analysis for Verb + Preposition (Addition)

(I) Level	(J) Level	Mean Differences (I-J)	Std. Error	Sig.
Lower Intermediate	Upper Intermediate	.948*	.219	.000
	Advanced	1.065*	.232	.000
Upper Intermediate	Lower Intermediate	-.948*	.219	.000
	Advanced	.117	.226	.864
Advanced	Lower Intermediate	-1.065*	.232	.000
	Upper Intermediate	-.117	.226	.864

Note: *The mean difference is significant at the .05 level. Dependent variable: Verb + Preposition (addition).

The results obtained from the Tukey Post Hoc analysis reveal that the mean differences between the LI and UI, and also between LI and AD groups are much higher ($p = .000$) than those of the UI and the AD groups ($p = 0.864$). These criteria may help place the error in the developmental category.

Omission

In this error category, a preposition was required after the verb, but the learners omitted it (for example, “When I am in a stressful situation, I listen * \emptyset music” [omission of *to*]). The developing nature of the interlanguage and the L2 system may account for the sources of these errors. Results obtained from the ANOVA (Table 7) indicate that the mean difference among the three groups were not significant ($F = 1.095, p = .340$). Similarly, as is shown in Table 1, the error percentage in the AD group (45%) showed an increase in comparison to the LI (31%) and UI (39%) groups. No decrease in the rate of error at the AD level resulted in the placement of the error in the fossilized category.

Adjective + Preposition

Choosing a wrong preposition, omitting a required preposition, and inserting an unnecessary preposition after an adjective are in this category of errors. By looking at the following examples, it can be found that most of the cases of substitution occurred due to first language interference, and the primary source of addition errors seemed to be intralingual factors. However, it seems that neither the students’ L1 influence, nor the influence of the target language can account for their omission errors, but rather, carelessness and lack of attention.

- Now I am satisfied *from this major (instead of *with*).
- You should be loyal *with your friends (instead of *to*).
- Many people fail to recognize the important *of friends in their life (redundant *of*).
- A person is good for friendship who has better *of characteristics (unnecessary *of*).
- Some of the students are not successful *Ø continuing their education (omission of *at*).
- It might cause them to be addicted *Ø these drugs (omission of *to*).

Table 9. Descriptive Statistics for Adjective + Preposition

Levels	Error Type	No.	Mean	Std. Deviation
Lower Intermediate	Substitution	7	.35	.562
	Addition	4	.15	.368
	Omission	4	.15	.368
Upper Intermediate	Substitution	15	.52	.634
	Addition	1	.03	.186
	Omission	4	.14	.351
Advanced	Substitution	14	.61	.783
	Addition	1	.04	.209
	Omission	1	.04	.209

Table 10. ANOVA Results of the Mean Scores for Adjective + Preposition

Error Type	Source of Variation	Sum of Squares	df	Mean Squares	F	Sig.
Substitution	Between groups	.883	2	.441	1.016	.367
	Within groups	32.604	75	.435		
	Total	33.487	77			
Addition	Between groups	.232	2	.116	1.638	.201
	Within groups	5.307	75	.071		
	Total	5.538	77			
Omission	Between groups	.172	2	.086	.829	.441
	Within groups	7.789	75	.104		
	Total	7.962	77			

Substitution

In this error type, the learners did not use an appropriate preposition after an adjective. Table 1 shows that errors in the Adjective + Preposition category were made 46%, 75%, and 88%, respectively). Moreover, the descriptive statistics in Table 9 indicates no decrease in the rate and mean of this error type, meaning that it was placed in the fossilized category.

Addition

This error type was made when the learners followed an adjective with an unnecessary preposition. Based on the descriptive statistics in Table 9, there was a decrease in the mean of this error type from the LI to the UI level, but as can be seen in Table 10, the mean difference was not significant ($F = 1.638$, $p = .201$). Moreover, there was no decrease in the rate of this error with the AD-level participants. Therefore, the error had not improved toward the upper levels of language proficiency, meaning that it was fossilized.

Omission

In this error category the learners omitted a preposition which should have followed the adjective of the sentence. Based on the descriptive statistics in Table 9, there was a slight decrease in the mean of this error from the LI toward the UI and AD levels, but the results of the ANOVA indicates no significance in the mean differences ($F = .829, p = .441$). Therefore, this error was placed in the fossilized category.

Preposition + Preposition

This type of error was made when the learners used an unnecessary preposition, omitted a required preposition, or used a wrong preposition after another preposition. L1 negative transfer, intralingual factors, and the students' lack of attention may be among the sources of these errors, as in these examples:

- Stepping *outside of the stressful situation can help you to overcome it (instead of *out of*).
- We should try to make better our life *of these difficulties (instead of *out of*).
- *In during my life I had a lot of friends (unnecessary *in*).
- We should be careful about choosing our friends, *with considering the best characteristics of a good friend (unnecessary *with*).
- Next *Ø English, my favorite major is computer science (omission of *to*).

Substitution

This error type was made when the learners did not apply a correct preposition after another preposition. According to the ANOVA results in Table 12, the significant value of .644 at $F = .443$ was much greater than .05, which indicates that the mean differences across the three groups were not significant. Moreover, no decrease was found in the rate of this error from the LI to UI and AD levels (Table 11). Therefore, the error was categorized as fossilized.

Table 11. Descriptive Statistics for Preposition + Preposition

Levels	Error Type	No.	Mean	Std. Deviation
Lower Intermediate	Substitution	2	.08	.272
	Addition	4	.15	.368
	Omission	0	0	0
Upper Intermediate	Substitution	5	.017	.468
	Addition	0	0	0
	Omission	0	0	0
Advanced	Substitution	3	.13	.344
	Addition	0	0	0
	Omission	1	.04	.209

Table 12. ANOVA Results of the Mean Scores for Preposition + Preposition

Error Type	Source of Variation	Sum of Squares	df	Mean Squares	F	Sig.
Substitution	Between groups	.125	2	.063	.443	.644
	Within groups	10.593	75	.141		
	Total	10.718	77			
Addition	Between groups	.410	2	.205	4.545	.014
	Within groups	3.385	75	.045		
	Total	3.795	77			
Omission	Between groups	.031	2	.015	1.202	.306
	Within groups	.957	75	.013		
	Total	.988	77			

Addition

This error type was made when the learners added an unnecessary preposition after another preposition. Drawing on Table 1, 67% of the total errors in the Preposition + Preposition category were made by the LI group, while the UI and AD groups did not make this error at all. Moreover, the results obtained from the Tukey Post Hoc analysis (Table 13) reveal that the mean differences between the LI and UI ($p = .024$), as well as the LI and AD groups, are much higher ($p = .036$) than those of the UI and AD groups ($p = 1.000$). This may mean that the error is of the developmental type.

Table 13. The Results of Post Hoc Analysis for Preposition + Preposition (Addition)

(I) Level	(J) Level	Mean Differences (I-J)	Std. Error	Sig.
Lower Intermediate	Upper Intermediate	.154*	.057	.024
	Advanced	.154*	.061	.036
Upper Intermediate	Lower Intermediate	-.154*	.057	.024
	Advanced	.000	.059	1.000
Advanced	Lower Intermediate	-.154*	.061	.036
	Upper Intermediate	.000	.059	1.000

Note: *The mean difference is significant at the .05 level. Dependent variable: Preposition + Preposition (addition).

Omission

In this error category, the learners did not know that a preposition was needed after another preposition, so they omitted the second preposition. As shown in Table 11, none of the LI and UI participants made this error, and only 1 out of 23 participants in the AD group made the error. However, the error cannot be placed in the developmental or fossilized categories since the only occurrence at the AD level was not the result of the student's incompetence in this area, but in his carelessness.

DISCUSSION AND IMPLICATIONS OF THE STUDY

The first research question of this study addressed the overall rates and types of English prepositional errors across three levels of English proficiency. A total number of 642 prepositional errors were found in the corpus, dispersed among 15 error categories. The results indicate that the largest proportion of errors in each category was made in the substitution of an incorrect preposition (56%). Omission errors ranked next to substitution errors (23%), and addition errors were found to be of less significance (21%). These findings are supported by Jabbour-Lagoocki (1990), Scott and Tucker (1974), Delshad (1980), and Tahaineh (2009), who claimed that ESL/EFL students, in general, omit or misuse English prepositions.

Errors related to the Verb + Preposition category were more frequent in number than the other four main categories of prepositional errors (37%). However, in contrast with the results of this study, Verb + Preposition errors were recognized as the least problematic areas (18.33%) for Persian EFL learners in Jafarpour's (2006) study. The present study's results also ran counter to the claim made by Azeez (2005) in his study on Nigerian students; Azeez concluded that, out of the various uses of prepositions, the wrong use of a preposition after an adjective was the most common, followed by the misuse of a preposition after a verb.

Overall, the results of the first research question indicated that the majority of students have difficulty in the selection of correct prepositions, especially those preceding a noun (20%). The other most frequently occurring categories of errors were in the following order: the wrong selection of a preposition after a noun (15%), the wrong selection of a preposition after a verb (13.5%), the omission of a preposition after a verb (13.5%), and the addition of a preposition after a verb (10%).

The second question of the study addressed the prepositional errors which gradually disappeared from students' writings (developmental errors) as well as those that persisted across the three levels of proficiency (fossilized errors). From 15 error types, only two of them were put in the developmental category (one was addition of a preposition after a verb, and the other was addition of a preposition after a preposition). Koosha and Jafarpour (2006), in their study on Iranian EFL learners' prepositional problems, also asserted that errors related to Verb + Preposition was learned in the later stages of language development. Similarly, Jafarpour (2006) reported that Preposition + Preposition patterns posed less problems for Iranian EFL students (8.7%), especially for students of higher levels.

The results indicated that 12 out of 15 error types were placed in the fossilized category; these errors persisted in the students' writings, even though they were at the AD level. The most frequent fossilized errors in the corpus (across the three levels) were (1) the wrong selection of a preposition before a noun, (2) the wrong selection of a preposition after a noun, (3) the wrong selection of a preposition after a verb, (4) the omission of a preposition after a verb, (5) the addition of a preposition before a noun, and (6) the wrong selection of a preposition after an adjective. Moreover, substitution and omission errors were found to be of the greatest difficulty even for the AD learners. This finding seems to be compatible with Tavakoli's findings (2008) that prepositional substitution and omission are difficult, even for AD learners. However, these findings are in contrast with Henning (1978), Tahaineh (2009), and Koosha and Jafarpour (2006) who claimed that more proficient L2 writers used significantly more accurate prepositions than the less proficient. In other words, their findings indicated that the subjects' proficiency level had a significant impact on their prepositional errors.

Since acquiring a working knowledge of prepositions is of the utmost importance for EFL students, explicit teaching on the subject would help, and this study is significant for

educators as it gives an overall picture of the most frequently occurring prepositional errors in student writings. Teachers can spend less time on the developmental errors that will naturally disappear through the stages of the language learning process, and focus instead on the fossilized prepositional errors. The findings of this study can also provide syllabus designers with the selection, gradation, and sequencing of materials for teaching prepositional items. Finally, test developers can make more informed choices in test development when they are armed with the knowledge of the most troublesome prepositional errors.

CONCLUSION

Encouraged by previous studies that emphasize the difficulties that L2 learners find in the use of English prepositions, this study focused on the use of prepositions. The four compositions written by the students provide good evidence that students make a lot of errors in this area. Because of this, it was felt necessary to diagnose these prepositional errors and identify the most common ones so that English teachers would be familiar with different types of errors that their students make and be better able to tackle them.

The findings of this study call for more research in this area. First, future research can address prepositional errors not just in production, but also in recognition tasks. This can be done through other test methods, such as fill-in-the-blank exercises, multiple-choice questions, or translation exercises from L1 to L2. Second, due to the multifunctional aspects of English prepositions, the conclusions made in this research need to be validated further by conducting more research on Iranian EFL students' problems with other functions of prepositions, such as their idiomatic usage or their semantic functions (spatial or temporal prepositions). It may also be helpful to replicate the study with a greater number of participants and a larger corpus of student writings. Finally, the present study calls for longitudinal case studies to carefully scrutinize and follow the prepositional development of Persian learners and identify the developmental and fossilized errors that emerge.

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