

Interface between Linguistic Noticing and Fossilization of Grammatical, Lexical, and Cohesive Features among Advanced EFL Learners

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Abstract: Fossilization has become the focus of many L2 studies since its introduction in 1972 as many learners fail to achieve native-speaker competence. Researchers have tried to unravel the causes of fossilization, among which noticing has been claimed to be of great importance. This study aimed to explore the effect of noticing on fossilization. To achieve this aim, a mixed-methods approach was utilized. Sixty advanced L1 Persian learners of English studying in Iran were chosen to perform two written and three spoken tasks twice. Qualitative data included the content analysis of the participants' performance on the written and spoken tasks while the quantitative data included percentages of noticed errors and recurrent erroneous forms. The errors observed in both performances were counted and classified. Three main categories named Grammatical Errors, Lexical Errors, and Cohesive Errors were identified. The observed errors were further classified into 36 subcategories. When learners' ability in noticing their errors was investigated, it was found that they could notice 37.4% of the 3,796 fossilized forms they had produced. Most of the errors observed were categorized in the category of grammatical errors. Noticing affected the number of errors produced. It can be concluded that becoming aware of ones fossilized forms, one will produce fewer fossilized forms. The results of the current study have implications for English language teachers and learners. By being informed of the errors learners make while learning a language and how their noticing affects fossilization, teachers can improve their teaching practice which in turn enhances learning.

Keywords: Grammatical Errors, Lexical Errors, Cohesive Errors, Fossilization, Noticing.

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Introduction

Fossilization in language learning was introduced less than half a century ago by Selinker (1972) as the permanent inability to master the target language in most foreign and second language learners. Some learners exhibit inability in gaining native-like mastery in the target language. They fail in the attempt to acquire full competence and their success seems to fall short of native standards. Therefore, erroneous grammatical, lexical, phonological, and pragmatic forms linger in their language production (Ellis, 2008).

Among other variables, learners' inability to notice the fossilized features evident in their speech might result in the persistence of these features in advanced EFL learners' interlanguage. As Mitchell and Myles (2004) have also noted, these fossilized forms occur as they have become quite automatized before the learner acquires the native-like feature. This implies that they are out of the attention span of language learners and, as postulated in Schmidt's Noticing Hypothesis (1990), lack of attention to such features can initiate their stabilization in the learners' interlanguage. Since its introduction, researchers have identified the causes of fossilization (Selinker, 1972), possibility of acquiring certain features (Goad & White, 2006), the position of fossilization in L2 acquisition (Long, 2003), and pragmatic fossilization (Trillo, 2002). However, it seems that the degree to which learners notice the fossilized features they produce in speech and writing has remained under-researched. Therefore, the current study aimed to investigate the common fossilized forms among EFL learners and the effect of noticing on fossilization.

Literature Review

Fossilization in L2 Acquisition

Fossilization was first defined by Selinker (1972) as a linguistic phenomenon including "items, rules and subsystems which speakers of a particular native language will tend to keep in their interlanguage (IL) relative to a particular target language (TL)" (p. 209) regardless of age or degree of instruction. Hyltenstam (1988) maintained that fossilization is a process whose occurrence is specific to the second or foreign language, not the interlanguage deviated from the norms governing the production of the target language.

Putting forth a revision of Selinker's notion of fossilization, Selinker and Lamendella (1978) contended that this phenomenon emerges in the form of a permanent cessation of target language learning before the learner has fully mastered the common norms and principles of the target language at all levels of linguistic structure and in all discourse

scopes. Fossilization occurs despite the learner's enjoying positive capabilities, learning opportunities, and ample incentive to learn and mingle successfully into the society speaking the target language. What Selinker and Lamendella modified in their definition was the significance of permanency of fossilized language as well as the learner's ability to get by in the target society in spite of fossilized errors.

By contrast, Ellis (1985) laid out a view based on which fossilization is not necessarily negative. He believes that correct forms as well as errors can get engraved in a learner's interlanguage. Therefore, if the proper and accurate structures of the target language remain in the mind of the learner, the correct forms will fossilize in his or her mind, and that is almost the most prosperous goal of learning a foreign language.

Han's (2003) cognitive and empirical analysis of fossilization revealed that fossilization is closely intertwined with those cognitive processes or underlying mental mechanisms involved in the production of permanently stabilized interlanguage structures and forms. Moreover, her study revealed that fossilization involves the stabilized interlanguage structures that remain in language learners' speaking and writing production in the course of time. She added that fossilization operates independently from the input and learner variables.

All the definitions proposed for fossilization share five properties: First, fossilization is likely to occur at the various levels of language learning. Second, fossilization happens to learners of all age groups and both genders. Third, fossilization might occur in the form of both structure fossilization and competence fossilization. Fourth, it involves manifestly deviant forms from the target language norms. Fifth, there are soft and hard degrees of fossilization (Wei, 2008). Han (2009), additionally, proposed three properties that fossilization definitions share. First, she reported that all the definitions emphasize the role of persistent deviation in fossilization. The second property is the resistance to outside influence, including instruction and corrective feedback. The third feature is its being out of the learner's control. All the efforts made to define fossilization since 1972 has added to the complexity of the phenomenon. This has led to diversity in the concept of fossilization. For the purpose of this study, fossilization refers to the persistence of erroneous forms in learners' interlanguage (Preston, 1989).

Noticing and Fossilization

Whether the process of learning a foreign/ second language takes place consciously with the attention of the learner or unconsciously without the learner noticing has always been subject

to controversy. To address this problem, Schmidt (1990) proposed Noticing Hypothesis. Based on this hypothesis, if the learners notice linguistic items, they become intake. According to this hypothesis, noticing plays an essential role in L2 learning. In his hypothesis, Schmidt raised three main issues: “intake, noticing, and subliminal perception,” “the incidental learning and intentional learning,” and “the issue of implicit learning and explicit learning” (p. 138).

In the Noticing Hypothesis (1990), Schmidt proposed that language awareness and active dynamic attention to the language components is the key to the internalization of the language and the building of the intake. Lewis (2000) explained the process of moving from noticing to intake as “transition from input to intake through exercises and activities which help the learner observe or notice the L2 more accurately, ensure quicker and more carefully formulated hypotheses about the L2, and so aid acquisition” (p. 52). Doughty (2003) asserted that based on Noticing Hypothesis, the operation of target language acquisition is largely driven by the language items the learners pay attention to and notice in target language input as well as what they perceive the importance of the noticed input to be. Schmidt (2001) further indicated that the minimum requirement of noticing is to draw the attention of the learner to the bolder grammatical elements in input to a degree which is far larger than a simple threshold level of subjective awareness. Noticing hypothesis could be backed up by raising the argument that learning and memory are closely tied to each other.

Of the factors affecting fossilization, examining whether advanced EFL learners notice the fossilized features in their own speech seems worthwhile. Several studies have been conducted highlighting the importance of noticing and its effect on learners’ accurate production (e.g. Han, 2009; Hanaoka, 2007; Laufer & Girsai, 2008; Lewis, 2000; Mennim, 2007; Schmidt, 2010). The aforementioned studies have documented the effect of noticing on acquiring native-like competence.

In view of the above literature review, this study helps understand the effect of learners’ noticing on the rate of their fossilization. If fossilized features go unnoticed, learners might not be able to notice the role of the recasts that the teachers provide them with and this will hamper defossilization. Noticing plays a major role in learning (Schmidt, 1990) and if the fossilized features fall out of the attention span of the advanced EFL language learners, defossilization will be unlikely. To this end, the current study was undertaken to delve into learners’ ability to notice the erroneous forms they produce in speech and writing. This study

also sought to investigate the types of fossilized forms identified by learners. Therefore, the following questions were formulated:

- (1) What grammatical, lexical, and cohesive fossilized forms are common among advanced EFL learners?
- (2) Do advanced EFL learners notice the fossilized features in judgment tests?

Method

Participants

Sixty L1 Persian advanced EFL learners from English language institutes in Mashhad and Tehran took part in this study. They studied different course books, and teaching method varied in the institutes. There were 42 female and 18 male participants. They were studying at high school or university, or they held B.A., M.A., or Ph.D. degrees in different fields. They had been studying English for 4-15 years with an average of 7 years. The age of the participants ranged from 14 to 41. The average age was 25. The participants were chosen from advanced classes held in the institutes on a voluntary basis. They further took Oxford Placement Test to ensure their language learning level.

Advanced language learners were asked to participate in the study because fossilization is only noticeable among learners with an adequate chance of exposure to the target language and those with enough motivation to learn the language. Errors produced by advanced learners are more prone to fossilization as they are more persistent and such errors are hypothesized to be candidates for fossilization (Han, 2004). Lower-level learners are yet to learn and practice target language forms. Therefore, it is not easy to count erroneous forms in their production as likely to fossilize. In addition to the above reason, identification of these fossilized linguistic features in the speech and writing of advanced learners could be more accurate and these features can be said to stick out in advanced learners' language. The stabilized forms which are features of elementary and intermediate levels could easily be identified in advanced learners' interlanguage as the learning of these features is supposed to have occurred during the previous stages of their language learning.

Instrumentation

The use of several approaches to the study of fossilization has been documented in Han (2004). The framework adopted in the current study was based on a combination of typical error and advanced learner approaches. In typical-error approach, errors prevalent in the interlanguage of learners who share the same L1 are studied. It is assumed that errors that

characterize a whole community of language learners with shared L1 background are prone to fossilization. Moreover, errors that stay with its most advanced learners are indicative of fossilization. Based on typical error and advanced learner approaches, three instruments were employed to elicit the data necessary for this study. These instruments included writing tasks, oral elicitation tasks, and linguistic judgment tasks. The present study focused on grammatical, lexical, and cohesive errors and did not deal with phonological, punctuation, and spelling erroneous forms since the latter ones can be found in either written or spoken production.

The first step toward data collection was taken via utilization of writing tasks. The learners were given two writing tasks that required them to write two essays on two topics: (a) Some experts believe that it is better for children to begin learning a foreign language at primary school rather than secondary school. Do the advantages of this outweigh the disadvantages? and (b) Being a celebrity – such as a famous film star or sports personality – brings problems as well as benefits. Do you think that being a celebrity brings more benefits or more problems? The learners were expected to write the two essays in 250-300 words. These writing tasks provided information on the fossilized features that learners produced. The tasks were given to the participants twice in a two-week interval and the errors that repeated in both were counted as persistence of erroneous forms can be a sign of fossilization (Han, 2004; Preston, 1989).

Oral Elicitation Tasks

Three speaking tasks were employed to elicit the target linguistic features in learners' speech. They included (1) Familiar Topic Question, (2) Picture Comparison, and (3) Picture Choice. In Familiar Topic Question, the participants were asked to choose a question from a list that the researchers developed from independent speaking tasks in the TOEFL test. Topic questions were common topics such as the characteristics of a good neighbor, advantages of getting married, single-gender and co-ed schools, and ideal marriage partner. In Picture Comparison, the participants compared and contrasted two pictures. This task was modeled on the second task of the fifth part of the Cambridge First Certificate in English (FCE) test which is the speaking task and which aims to assess FCE candidates' speaking ability (Harrison, 2008). In Picture Choice, the participants were given a set of five pictures whose advantages and drawbacks needed to be discussed. Finally, they had to choose one. The pictures were taken from the third task of the speaking part of the FCE test (Harrison, 2008). However, unlike the FCE test, in which this task is done collaboratively, the learners did it

individually (e.g. *I'd like you to imagine that a town wants to attract more tourists. Here are some ideas they're thinking about. How effective would these ideas be and which two are the best ones?*).

The learners were asked to complete the tasks spontaneously as rehearsing in advance could affect their performance due to their attention to the produced forms. The performance of learners on these tasks was audio-recorded for further analysis. The whole task took about 10 minutes for each participant. The participants performed the tasks twice based on which the researchers could count and categorize the recurring errors.

Linguistic Judgment Tasks

As noticing can be one of the causes of fossilization and as the forms not in the attention span of the learners may fossilize, linguistic judgment tasks were utilized to assess the learners' ability in noticing the fossilized forms they produced. Test development was conducted based on the identified linguistic fossilized features in each individual's writing and speaking tasks. Each individual took a test in which the features that they could not produce correctly were presented. Judgment tasks included sentences that contained the fossilized features that the individual produced and the individuals were supposed to identify the erroneous form in each of the sentences (e.g. *You need to communicate with other while you travel.*).

To classify the errors, the existing taxonomies were reviewed (Burt & Kiparsky, 1972; Chandler, 2003; Marefat & Nushi, 2012, among others), but none of them could accommodate all the errors encountered in the participants' performance.

Data Collection

The present study was carried out in several phases. In the first phase, the participants completed two writing tasks, each twice. This assisted the identification of the fossilized linguistic features the learners tended to produce. The learners were also told to do the three oral elicitation tasks with the intention of further recognition of fossilized features. They performed the tasks twice. The oral tasks were audio-recorded for further analysis. The study adopted content analysis to identify the fossilized forms.

Based on the identified linguistic features, the researchers prepared linguistic judgment tasks for each advanced EFL learner. Each learner was given a test on the fossilized features evident in their own oral and written production; therefore, 60 different tests were developed and each individual took a test individually. This phase of the study indicated whether the participants were aware of the fossilized forms they produced and whether they could notice

them. The obtained data provided the researchers with the answer to the questions of the study. The data collection procedure lasted four months from January 2016 to April 2016.

Data Analysis

To answer the first question of the study, the spoken performance of the participants was transcribed and the errors that recurred in both written and spoken performances were categorized. Moreover, the fossilized forms were counted to see how frequent they were in the participants' language production. Furthermore, the percentage and frequency of the noticed forms were calculated based on learners' performance on the linguistic judgment tasks to provide an answer to the second question of the study.

Results

In the data obtained from the written and spoken tasks that the learners produced, the errors which appeared in both performances were identified and classified into three main categories, namely Grammatical Errors, Lexical Errors, Cohesive Errors - and 36 subcategories. A total number of 3,796 errors could be identified.

Grammatical Fossilized Forms

Table 1 shows the observed grammatical fossilized forms and the frequency with which they occurred. The forms are arranged in descending frequency order. Overall, 2,693 fossilized grammatical features were observed which were further classified into 23 subcategories.

Table 1. Observed fossilized grammatical forms and noticed forms

Number	Observed Forms	Fossilized Forms (f)	Fossilized Forms (%)	Noticed Forms (f)	Noticed Forms (%)
1	Determiners <i>e.g.: I'll take them to shopping center.</i>	524	19.5	187	35.6
2	Prepositions <i>e.g.: It affects on their behavior.</i>	371	13.8	129	34.7
3	Plurals <i>e.g.: One of his friend is an engineer.</i>	245	9.1	86	35.1
4	Tenses <i>e.g.: I was surprised when I see her.</i>	222	8.2	86	38.7
5	Incomplete Sentences <i>e.g.: They not familiar with it.</i>	190	7.1	104	54.7
6	Subject/Verb Agreement <i>e.g.: The ability to learn diminish as they grow older.</i>	185	6.9	92	49.7
7	Part of Speech <i>e.g.: Starting learning a language sooner has some disadvantageous.</i>	146	5.4	54	36.9

8	Word Order <i>e.g.: We must be careful about what are we looking for.</i>	117	4.3	66	56.4
9	Wrong Pronouns <i>e.g.: If you think about himself, you can't be a good father.</i>	109	4	59	54.1
10	Verb Forms <i>e.g.: This makes us to think.</i>	81	3	34	41.9
11	Extra Words <i>e.g.: Learning a new language it is fun.</i>	69	2.6	40	57.9
12	Relative Clauses <i>e.g.: I don't like busy streets that they are crowded.</i>	64	2.4	26	40.6
13	Conditionals <i>e.g.: If I had the opportunity, I like to try it.</i>	55	2	22	40
14	Count/Noncount Nouns <i>e.g.: They have a lot of informations.</i>	55	2	13	23.6
15	Infinitives and Participles <i>e.g.: Go shopping is very interesting.</i>	50	1.9	24	48
16	Modal Verbs <i>e.g.: It can improves language learning.</i>	43	1.6	19	44.1
17	Others	37	1.4	19	51.3
18	Passive <i>e.g.: Knowing by others is an advantage of being famous.</i>	36	1.3	16	44.4
19	Possession <i>e.g.: Their children behavior is not acceptable.</i>	32	1.2	13	40.6
20	Comparative <i>e.g.: Travelling by a plane is more expensive than a train.</i>	25	1	11	44
21	Negation <i>e.g.: Considering this issue, I can't see nothing bad.</i>	13	0.5	6	46.1
22	Question Forming <i>e.g.: Why the rate is getting higher?</i>	12	0.4	3	25
23	Reported Speech <i>e.g.: They told them do not talk.</i>	12	0.4	1	8.3
Total		2693	100	1110	41.2

As Table 1 shows, the most frequently produced fossilized grammatical feature was *Determiners* (n=524). The next subcategory which was produced more than other erroneous grammatical forms was *Prepositions* (n=371), and the third most frequent fossilized form was erroneous *Plurals* (n=245).

The learners' performance on the linguistic judgment tests demonstrated that they could notice some of the fossilized grammatical forms in their language production. As presented in Table 1, the fossilized forms noticed more than other fossilized forms were those in the category of *Extra Words*. About 58% of these errors were noticed. Learners also displayed a good noticing of fossilized forms in the category of *Word Order* (56.4%). The third group of

fossilized forms noticed more than the other categories were those categorized as *Incomplete Sentences*. Learners noticed 54.7% of the fossilized forms in this category. They noticed 54.1% of the fossilized forms in *Wrong Pronouns* as well. As Table 1 shows, in total, learners were able to identify 41.2% of the fossilized grammatical forms (e.g. *All problems are caused by the fame*).

Lexical Fossilized Forms

Table 2 shows the number and percentage of fossilized lexical forms observed in EFL learners' written and oral production and the learners' noticing tests. As can be seen, *Word Choice* (n=541), *Noun/Verb Collocation* (n=159), and *Adverb Collocation* (n=124) constituted most of the fossilized lexical forms. Among these, *Word Choice* was the subcategory in which learners produced the most fossilized forms.

Learners' noticing of their fossilized lexical forms seems to be lower than their ability in noticing other types of fossilized forms. The frequency and the percentage of the forms noticed are presented in Table 2. As the table shows, only 21.9% of lexical fossilized lexical forms were noticed.

Table 2. Observed fossilized lexical forms and noticed forms

Number	Observed Forms	Fossilized Forms (f)	Fossilized Forms (%)	Noticed Forms (f)	Noticed Forms (%)
1	Word Choice <i>e.g.: They get a placement in the office.</i>	541	60	137	25.3
2	Noun/Verb Collocation <i>e.g.: I wanted him to tell and example.</i>	159	17.6	27	16.9
3	Adjective/Noun Collocation <i>e.g.: It has a long impact on learning.</i>	124	13.8	15	12
4	Adverb Collocation <i>e.g.: It is very perfect to learn a language soon.</i>	23	2.6	4	17.3
5	Plural Forms <i>e.g.: shelves</i>	20	2.2	7	35
6	Missed Words <i>e.g.: Learning mother alphabet is wrong.</i>	15	1.7	3	20
7	Other	8	0.9	1	12.5
8	Past Forms <i>e.g.: I have already saw him.</i>	7	0.8	3	42.8
9	Wrong Idioms <i>e.g.: Life has up and down.</i>	4	0.4	1	25
Total		901	100	198	21.9

The *Past Forms* written erroneously were noticed more than other fossilized lexical forms in the present sample. Furthermore, EFL learners noticed about one thirds of the fossilized forms in the category of *Plural Forms*. The third most noticed category of fossilized forms was *Word Choice*. It should be noted that the frequency of some fossilized forms was lower than others and as a result, even noticing a few of them shows a high percentage (e.g. *I announce you Enrique who is very famous*).

Cohesive Fossilized Forms

Several fossilized forms related to cohesion were observed in learners' oral and written production. These fossilized forms are categorized in Table 3.

Table 3. The observed fossilized cohesive forms and the noticed forms

Number	Observed Forms	Fossilized Forms (f)	Fossilized Forms (%)	Noticed Forms (f)	Noticed Forms (%)
1	Wrong Cohesive Device <i>e.g.: In other hand, there are some disadvantages.</i>	79	39.1	24	30.3
2	Use of Cohesive Devices <i>e.g.: It's good to start learning a language soon. Even though it has some disadvantages.</i>	48	23.8	8	16.6
3	Extra Cohesive Devices <i>e.g.: Although being famous is good, but it has drawbacks.</i>	38	18.8	12	31.5
4	Missed Cohesive Devices <i>e.g.: Ever one wants to talk to you, take pictures.</i>	37	18.3	18	48.6
Total		202	100	62	30.6

As the table demonstrates, the most frequent fossilized form in this category was *Wrong Cohesive Device* (n= 9). *Use of Cohesive Devices* (n=48) was the second most frequent subcategory of fossilized forms. *Extra Cohesive Devices* (n=38) was the third subcategory in order of frequency.

The findings from Table 3 show that the learners were able to notice about 50% of fossilized forms in the subcategory *Missed Cohesive Devices*. The second most noticed subcategory was *Extra Cohesive Devices*. The use of *Wrong Cohesive Device* was the next

category with 30% of its fossilized forms noticed. As the three final subcategories were not considered by the learners, 62 fossilized forms were noticed out of 202 fossilized forms in this category (e.g. *Although these problems, we have to try hard*).

Discussion

The results of the current study revealed that making errors happened in many areas of language and discourse. This has been reported in Selinker and Lamendella (1978), who underscored the fact that fossilized errors occur in all scopes of language as well. The findings showed how learners were unable to use the correct form and their inability to notice their errors which led to the persistent use of non-target-like forms. Other researchers (e.g. Han 2004, 2009; Lardiere, 2007) have depicted the persistent use of erroneous forms as signs of fossilization. Han (2005) revealed that fossilized forms were produced regardless of learners' exposure to the language and incentive to learn the new language. The fact that these deviant forms were persistent in learners' production was also reported in Han (2004, 2009). Han (2009) referred to learners' lack of control over the production of fossilized forms. In line with Fauziati (2011), the current study showed that the production of these forms is inevitable no matter how long one has been learning the language. Fauziati (2011) maintains that these erroneous forms are a sign of lack of attention, poor memory, incomplete knowledge, and poor teaching of English teachers.

Furthermore, examining advanced learners' language ability indicated that fossilization occurs in high proficiency levels as well. This finding is in line with Wei's (2008) study, which showed that fossilization occurs in all proficiency levels. Moreover, the present study showed that fossilization occurs in different areas of language. This is compatible with former studies (Nozadze, 2012; Wei, 2008) which found that different features of language are fossilizable, including phonological, morphological, syntactic, semantic, and pragmatic fossilization. Studying Gregorian learners, Nozadze (2012) provided evidence for these types of fossilization among learners.

An important finding of this study was that the error subcategory that topped the list of errors within all the subcategories was *Word Choice*. It indicates that lexical errors of this type are the most prevalent ones among advanced learners. In fact, *Word Choice* in lexical errors is the most frequently occurring subcategory of errors in both spoken and written English. This finding is in agreement with that of Marefat and Nushi (2012). All these studies reported the frequent occurrence of *Word Choice* errors among language learners. In keeping

with the current study, these studies showed these errors occur in both written and spoken language production of language learners.

Word Choice errors can be prevalent due to error types. Two types of errors have been reported in the literature: treatable and untreatable. Treatable errors (e.g., verb tense and form, subject-verb agreement, article usage, plurals and possessive noun endings, and sentence fragments) are rule-based, so learners can correct such errors more easily as they can use resources such as a grammar book. On the other hand, untreatable errors (e.g., word choice errors and unidiomatic sentence structures) require learners to utilize the acquired knowledge of the language to resolve the errors (Ferris, 1999). That is why these errors are frequent among language learners. The learners have to put more effort to remove these errors.

Another reason for the high frequency of fossilized *Word Choice* forms can be the difficulty of overcoming semantic errors in comparison with other error types. Learners could not notice this type of error successfully as well. This finding is in line with two empirical studies showing that learners made progress over a semester in overcoming errors in verb tense and form but made only slight progress in reducing lexical errors. This demonstrates that untreatable errors are treated with more difficulty (Ferris & Roberts, 2001). As Liu (2008) has also reported, semantic errors are not rule-governed and are thus harder to be corrected as learners cannot easily refer to the acquired rules of the language to avoid these types of errors.

Moreover, a large number of the observed fossilized forms may occur due to transfer from Persian. Some of the observed grammatical and lexical errors identified were the result of interference. Application of L1 rules or word-for-word translation of what learners wished to produce caused these errors. Wherever learners lacked the knowledge to construct the correct form, they used L1. The data indicated that structures they employed and the vocabulary they utilized were word-for-word translations from Persian as both experts who categorized the data witnessed that many of the sentences were the result of interference from learners' L1. This finding is in conjunction with Selinker's (1972) study. He believed that interference is one of the main sources of fossilization. When learners translate structures and words from their L1, they use unnatural language that leads to fossilization. Ionin and Montrul (2010) also showed how transfer from L1 caused the production of erroneous forms. This may happen since learners do not know how to produce what they want to in the target language. Therefore, they use their knowledge of L1.

Determiners was the grammatical subcategory with error frequency higher than those of other grammatical subcategories. This finding has also been reported in Marefat and Nushi (2012). Furthermore, all the subcategories that were found in Marefat and Nushi (2012) were those observed in the current study as well. However, the difference between the frequencies of erroneous forms reported between the two studies may be because fossilization has an individual side (Han 2004) and individual differences in the error types caused this difference. Like Marefat and Nushi (2012), this study also reported more categories and subcategories of errors.

The results of this study confirm Wei's (2008) claim that fossilization is likely to happen while learners deal with affixes, morphemes, and articles. The current study revealed the areas in which learners were more likely to make errors. These areas are prone to fossilization as errors made in these areas are quite frequent. Moreover, like Wei's (2008) study, syntactic and semantic errors were quite common in the present study. Fossilized syntactic forms made by learners in this study were of various types as reported above. The high frequency of a particular linguistic error may not necessarily indicate a higher difficulty level of that error category for the students studying English as it can only be claimed that these errors were more frequent within this corpus. The frequency of these errors does not indicate the complexity of such forms since some of these erroneous forms have to be acquired in the first stages of language learning. Fossilized forms and their frequency may well differ among different groups of individuals.

When learners' noticing ability was taken into account, it was demonstrated that they identified less than half of all the errors. The forms that were not noticed may be better candidates for fossilization as fossilized forms are not under the control of the learner (Han, 2009). Learning does not occur if erroneous forms are not noticed, and learners are not able to dispose of erroneous forms if they do not notice them. Similar to the findings of the current study, Lewis (2000) underscores noticing as an important factor that provokes attention, focus, concentration, and internalization of the learned forms. Learners need to be attentive when they want to apply target language structures appropriately and correctly (Truscott, 1998). Otherwise, as this study revealed, the erroneous forms stay in their interlanguage and this leads to the fossilization of such erroneous forms.

For production to be error-free, awareness of the grammatical form is crucial (Truscott, 1998). Therefore, failing to notice erroneous forms can result in the production of these forms as it became evident in this study. Deliberate attention is the key to noticing the gap in one's

knowledge. Noticing is the prerequisite for a feature to become salient. This salience has been shown in different studies to result in the acquisition of the noticed forms (Bolitho, Carter, Hughes, Ivanic, Masuhara, & Tomlinson, 2003). In this study, the learners failed to notice more than 60% of the errors they had produced. This, in turn, contributes to the fossilization of these erroneous forms. Furthermore, the learners failed to notice the forms that carried less semantic importance and hence these forms are more prone to fossilization. Han (2004), arguing that some grammatical forms are mistakenly produced because of processing constraints, has also arrived at the same finding. As these forms do not carry semantic importance, it is not easy for learners to produce them. Failing to understand a grammatical form may be another reason for not noticing the form and concomitant fossilization.

Conclusion

The current study focused on the fossilized forms advanced learners tended to produce. When the written and spoken productions of the participants were analyzed, 3,796 erroneous forms were observed. The observed errors were classified into three categories and 36 subcategories. These categories are the ones in which learners tend to make errors. They produce most erroneous forms in grammar. SLA researchers (e.g., Ellis, 2005; Schachter, 1996; Sharwood-Smith, 1994) have demonstrated that the same L2 may present differential challenges to individual learners from different L1 backgrounds, and that features within the same target language may present differential challenges to an individual learner. As Hulstijn (2002) notes, not all language phenomena are equal in terms of how they are processed and acquired. Therefore, the frequency of errors observed in the current study may be different if the study is replicated due to individual differences. Given this, the quality and amount of L2 input needed to acquire the same target language may vary from individual to individual, and, by the same token, the quality and amount of L2 input required by an individual may vary for the acquisition of different features of the target language. The current study revealed the different error categories learners made. They were quite various and numerous, with each individual making a different type of error. However, the error types could be similar due to the same L1 background. These error types seem to be more common among Iranian language learners although the results are not generalizable to all contexts and settings and more studies with more participants are required.

Learners' noticing showed that 37.4% of the erroneous forms were noticed in the three categories. The findings show that noticing affects the number of fossilized forms learners produce. The more forms they notice, the fewer errors they tend to produce. It can be concluded that raising learners' awareness of erroneous forms can result in fewer fossilized forms. The better one notices forms, the fewer fossilized form they produce. Learners with higher noticing abilities seem to be better at noticing forms as well, and this results in production of fewer fossilized forms. The importance of noticing cannot be denied based on these results.

The current study bears implications for teachers, teacher educators, and test developers. Teachers can use the findings of this study to focus more on the forms whose noticing is more difficult for language learners as lack of noticing can result in fossilization. Teacher educators must also familiarize would-be teachers with these forms. Raising the awareness of teachers to the probable problems learners may face can lead to a more successful teaching and learning experience. Furthermore, test developers can focus on these forms in the written tests. This also encourage a more efficient noticing of these forms and ensure better learning as tests themselves are tools for learning (Stobart, 2008).

It is suggested that more attention be given to the factors that affect fossilization. The same study with more participants can be done as it can provide a wider picture of the issue. As it has already been noted, fossilized forms and their frequency are different from individual to individual. Hence, more studies will provide researchers with a better understanding of the phenomenon and the fossilizable forms. Different genders might also fossilize differently as gender is another individual factor that can affect different areas of language learning; therefore, it is worth considering its effect. Consideration of individual differences, such as L2 self, acquisition of different knowledge types, learning history, willingness to communicate, and self-confidence can also add up to our knowledge of the issue. Methods of instruction and feedback also seem to be worthy of investigation as they play an important role in the acquisition of the language, and they can affect fossilization among language learners. Finally, carrying out a longitudinal study will yield more reliable results because fossilization does not occur suddenly and hence considering it over a long period of language learning can enhance scholars' knowledge of the phenomenon.

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