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The Study of Stage-like Development of Morpho-Syntactic Structures in EFL Learners' Writing Performance: A Processability Theory Account for Cases of "Plural-s" and "Adverb Fronting"

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Abstract. Processability Theory (PT) is a theory of second language acquisition (SLA) developed to explain developmental sequences in SLA as well as some other phenomena (Pienemann, 1998; 2015). Processability has been a significant concern in second language acquisition research since the 1990s. Within the framework of processability theory and through analyzing the writing performances of Iranian EFL

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learners, the present research focused on the acquisition of "Plural-s" and "Adverb-fronting" across five proficiency levels, from elementary to advanced, and compared it with the stage-like development model of morpho-syntactic structures proposed by Pienemann (1998, 2015). The study followed a descriptive method of research, and the data was collected from 350 participants at five different proficiency levels from elementary, pre-intermediate, intermediate, upper-intermediate, and advanced. The participants were asked to provide samples of their written s-plural on different tasks such as introduction task, habitual action task, story retelling task, picture description task, composition, and communication task. The data in this research was analyzed both qualitatively, in order to identify and classify the type and order of the morpho-syntactic structures and quantitatively, by calculating means. The results of the Kruskal-Wallis test revealed that both "Plural-s" and "Adverb-fronting," as two morpho-syntactic structures, emerge very early in the language learners' performance. Just the same, the competence of the learner grows stronger in concern with these variables through the higher proficiency levels. These findings imply that Processability Theory is valid to a considerable extent for Iranian EFL learners, as well.

Keywords: Adverb fronting, plural-s, processability theory, second language learning, stage-like development

1. Introduction

Processability Theory (PT) is a theory of second language acquisition (SLA) which was developed to explain developmental sequences in SLA as well as some other phenomena (Pienemann, 1998; 2015). The purpose of Second Language Acquisition (SLA) research has been to clarify how the learners acquire a language based on the input they receive and to describe different patterns in order to indicate systematicity in the learning and use of L2 (Ellis, 2008). Irrespective of whether it is a first or second language, one can find a large amount of evidence in support of the notion that language learning for the speakers of any language is systematic (Pienemann, 1995, 1998; Heinsch, 1994; Doughty, 2003; Larsen-Freeman & Long, 1991).

As Doman (2012) points out, researches conducted in various fields, such as speech processing, SLA, language change and variation and pidgin and Creole languages contribute to the notion that language learning is systematic. They (e.g., Pinker, & Alan, 1988; Swain, 2005; Tarone,

1997) firmly pointed to the idea that language is learned in sequences, although they showed that some amount of variation occurred in language learning. The existence of L2 acquisition order was initially proposed by Dulay and Burt (1973, 1974) and Bailey, Madden, and Krashen (1974) inspired by the research done by Brown (1973). Most of these studies are considered descriptive since they suggest systematicity and regularity of L2, but they fail to provide an answer to why this phenomenon happens. One of the theories that aim to follow an explanatory-adequacy line in this area is the Processability Theory (PT) presented by Pienemann (1998). PT addresses the problem of SLA from a processing point of view. It claims that some processing operations are used to predict the developmental order of second language grammar acquisition regardless of the language under study. PT aims to offer a cross-linguistically applicable and psycholinguistically plausible explanation for the stages and sequences the learners get through in learning to produce morpho-syntactic structures of the target L2. The logic underlying processability theory is that: "at any stage of development, the learner can produce and comprehend only those L2 linguistic forms which the current state of the language processor can handle". Therefore, the notion of the architecture of the human language processor is crucial in theory. The architecture of human language processing constrains language acquisition: "learners can acquire only those linguistic forms and functions which he or she can process' (Pienemann, 2011b, p. 27).

Up to the present time, several different studies concerning second language acquisition have examined the validity of processability theory in several languages. They include Swedish (Glahn et al., 2001), (Hakansson, 2001; Hakansson, 2013), Arabic (Husseinali, 2006; Mansouri, 2000; Mansouri, 2005), Italian (Bettoni, Di Biase & Nuzzo, 2009), French (gren, 2009), Chinese (Zhang, 2004, Zhang, 2005), Japanese (Di Biase & Kawaguchi, 2002; Di Biase & Kawaguchi, 2005). Moreover, there are some studies done in this field in EFL and ESL contexts (e.g., Khansir & Zaab, 2015; Mohammadkhani, Eslamdoost & Gholamreza'i, 2011; Taki and Hamzehian, 2016). The results of these studies showed that morpho-syntactic structures were acquired following the fixed sequence predicted by PT. However, it seems that the study of this standard order

in the development of the second language needs more investigation at least in EFL contexts.

Therefore, the primary purpose of the present study was to cross-sectionally validate the processability theory, in general, and, to test the written performance of Iranian EFL learners' use for identifying the stage-like development of morpho-syntactic structures, in particular by comparing it with Pienemann's model to identify whether there is any consistency or not. To this end, the present research focused on the acquisition of "Plural-s" and "Adverb-fronting" across five proficiency levels from elementary to advanced. The question that guided this research was whether there was any significant difference among the means of the frequency of "Plural-s" and "Adverb-fronting" in the interlanguage of Iranian EFL learners across five proficiency levels.

2. Literature Review

2. 1. Background of the study

Researchers interested in appreciating how people acquire a second language (L2), especially the acquisition of morpho-syntactic structures, have been discussing two research issues for decades: the logical problem and the developmental problem (Hawkins, 2001). The logical problem is to account for what makes it possible for L2 speakers to develop the mental representations of grammar in the first place. As it is often observed, the L2 syntactic knowledge that speakers have developed appears to go beyond the properties of input that they have been exposed to, i.e., how do speakers come to know more than presented in the input? The developmental problem is to describe how the knowledge of morpho-syntax develops over time, i.e., why some properties are acquired earlier than others, and why some properties remain difficult even for the advanced second language speakers (Hawkins, 2001). The existence of L2 acquisition orders was initially suggested by Dulay and Burt (1973, 1974) and Bailey, Madden, and Krashen (1974) inspired by the research done by Brown (1973). Brown (1973) examined L1 development, with a focus on the emergence of 14 English morphemes. The study was conducted with three children in preschool for over four years. The results suggested the following typical sequence in the acquisition of 14 English

morphemes: present progressive; in, on; plural; past irregular; possessive; uncontractible copula; articles; past regular; third person regular; third person irregular; uncontractible auxiliary; contractible copula; and contractible auxiliary. Dulay and Burt (1973) adapted this study to L2 acquisition research to study a developmental sequence of grammatical morphemes in L2 English.

The research paradigm was advanced by looking at various aspects of language (e.g., morphology and syntax) from various perspectives (e.g., contrastive, error, textual analysis, and psycholinguistics). They investigated L2 learners' developmental sequence of eight morphemes in L2 English. They collected speech samples from 151 Spanish-speaking children, aged six to eight, learning English as a second language in the USA. The results suggested the following standard sequence of acquisition for individual grammatical morphemes in L2 acquisition:

1) plural;
2)-ing (progressive);
3) copula;
4) article;
5) auxiliary;
6) irregular past;
7) third person singular; and
8) -'s (possessive).

Researchers further investigated the acquisition of English morphemes with learners from different L1 backgrounds (Dulay & Burt, 1974). The researchers compared the oral performance of 60 Spanish and 55 Chinese children learning English as an L2 using the Bilingual Syntax Measure. The results suggested the following typical acquisition order of the morphemes for both of the groups of L1 learners: -ing (progressive), plural and copula, auxiliary and articles, irregular past, and regular past, third-person singular and -'s (possessive). Bailey, Madden, and Krashen (1974) replicated Dulay and Burt's research with 73 adult speakers from various L1 backgrounds (i.e., 33 L1 Spanish speakers and 40 speakers from differing L1, such as Greek, Turkish, Italian, Japanese, Chinese, and Arabic). Their results also suggested a standard acquisition order regardless of their different L1s, and the acquisition order was similar

to the one suggested by Dulay and Burt (1974). Research by Krashen, Sferlazza, Feldman, and Fathman (1976) tested the acquisition of English morphemes with 66 adult L2 learners from different L1s. The results showed a similar acquisition sequence pattern to the one by Bailey, Madden, and Krashen (1974) regardless of L1. Many studies criticized these morpheme studies mostly because of the methods that the studies employed, such as unsuitable criteria for acquisition (based on the accuracy of morpheme production). Moreover, morpheme studies did not consider the theoretical explanations for the typical sequence of acquisition, namely what makes acquisition occur, i.e., a property theory, and why the acquisition of morphemes follows a specific order, i.e., a transition theory (e.g., Gregg, 2005).

The Multidimensional Model was proposed by Clahsen, Meisel, and Pienemann (1981) based on further investigations of the morpheme studies in order to predict a second language acquisition sequence. In this model, two significant aspects of second language development were highlighted: fixed development sequence which is not affected by the individual and environmental differences, as well as various features responding to the individual and environmental differences. The fixed developmental sequence is based on the learner's language processing capacity, and the variation features rely on the learner variables, such as the learner's psychological orientation toward the simplification of grammar.

Teachability Hypothesis was proposed by Pienemann (1984, 1988b) based on his application of the multidimensional model to German as a second language. According to the teachability hypothesis, the instruction does not change an L2 learner's acquisition sequence of grammatical structures because the L2 learners can skip none of the developmental stages, which was hypothesized by the multidimensional model.

Later, Pienemann and Johnston (1985, 1987a, 1987b) suggested a new predictive framework relying on a set of universal speech processing constraints in order to explain the implicational order of second language acquisition. This theoretical framework initiated a shift in research from the multidimensional to Processability Theory (PT) (Pienemann, 1998c). PT is a psychological approach toward language acquisition pro-

cesses indicating that language acquisition is reliant on the acquisition of a set of procedural skills. PT aims to solve the developmental problem of what causes the development of L2 competence to follow a describable route. The central construct in this theory is that language-processing mechanisms constrain SLA. Hence, language development occurs mainly based on the elimination of these processing constraints (Pienemann, 1998c). Therefore, based on a universal psycholinguistics matrix, namely the hierarchy of language processability (Pienemann 1988 and 2005), one can identify the current states of learner's second language development.

Pienemann (1998c) stated that the three central features of PT are language-specific, incremental, and linear. According to processability theory, there are specific procedural skills obligatory for the processing and the production of utterances in the second language. In the first stage, learners develop lexicon that is the essential element to all language processing in later stages. In the second stage, the learners use the bound morphemes to produce free morphemes. In the third stage, disconnected phrases bring together by intra-phrasal components such as conjunctions.

Nevertheless, learners do not know syntactic structures, and the order of words is based on pragmatics. In the fourth and fifth stages, lexical features gradually emerge into phrases based on syntactic knowledge. The last stage is consistent with the automatic use of subordinate clauses.

These parallel processing routines illustrate that speech production is incremental. Therefore, the language acquisition procedures pass through different stages according to the PT and each of which processes specific structures and learners can only produce and comprehend those specific structures relevant to their current stage of language acquisition and moving to the next stage necessitates the processing of the late stages. As Pienemann (1988; 2005) stated, the logic underlying processability theory is that: "at any stage of development, the learner can produce and comprehend only those L2 linguistic forms which the current state of the language processor can handle". So, new linguistic information can only be acquired if the prerequisites are previously provided. It is consequently vital to understand the architecture of the language processor

and how it handles a second language. This enables one to predict the course of development of L2 linguistic forms in language production and comprehension across languages. Since knowing about the path of second language development provides essential insights into what learners are ready to acquire in the foreign/second language at any given point of time and this can support second language learning both in natural and instructional settings (Kessler, 2008, Pienemann and Kessler 2007).

Pienemann (1998) claimed that English morphology and syntax develop in six stages presented in Table 1.

Table 1: Developmental stages for English morphology and syntax (Pienemann, 2005b, p. 24)

Stage	Processing procedure	L2 process	Morphology	Syntax
6	Subordinate clause procedure	Main and subordinate clause		Cancel inversion
5	Sentence procedure	Inter-phrasal agreement	Subject+ verb agreement(3rd person singular-s)	Do2nd, Aux2nd
4	Verb phrase procedure	Inter-phrasal agreement	Tense agreement	Y-N inversion, copula inversion
3	Noun phrase procedure	Phrasal information	Noun phrase agreement, negation + verb	Adverb fronting, Do- fronting
2	Category procedure	Lexical morphology Possessive pronouns	Plural	Canonical word order
1	Word/lemma	Noun procedure	Invariant forms	Single constituents

The elements presented in Table 1 form a hierarchy so that the element of a lower stage is a prerequisite for the other elements in the higher stages, and it is impossible for the stages to be skipped.

2.2. Lexical-functional grammar

Processability Theory was supported by Lexical Functional Grammar (LFG) as a grammatical theory. LFG belongs to the frame of generative grammar, and feature unification is the main characteristic of this grammar. Put, the process of feature unification ensures that the different parts that constitute a sentence do fit together. (Pienemann, 1998). Kaplan and Bresnan published the original version in 1982 and

consisted of three parts. The first part was a constituent structure(=c-structure) component that generates 'surface structure' constituents and c-structure relationships. The second part was a lexicon, whose entries contain syntactic and other information relevant to the generation of sentences. The third part was a functional component which compiles for every sentence all the grammatical information needed to interpret the sentence semantically.

It was revised by Bresnan in 2001 and contained additional features that were necessary to preserve the principle of typological plausibility. While the original version only accounted for the constituent structure, Bresnan included an argument and functional structure (a-and f-structure). These structures only appear in the extended version of PT since the original version (1998) was based on the early LFG. Pienemann's choice for Lexical-Functional Grammar was due to many factors. First and foremost, the processability hierarchy of PT relies on the concept of feature unification, and this concept is a central notion in LFG. The concept of feature unification is fundamental to PT because it "captures a psychologically plausible process that involves the identification of grammatical information in the lexical entry, the temporal storage of that information and its utilization at another point in the constituent structure" (Pienemann 2005, 18).

Lexical-Functional Grammar also adjusts to PT because the grammar has proven to be typological plausible. According to Pienemann, PT has to apply to any given language. Finally, LFG considers language acquisition as a lexically driven process; hence, it represents a lexical approach to grammar. In a lexically driven grammar, lexical items can also contain grammatical information. The words of a language are considered the atoms of the syntactic structure, signifying that they are the smallest units of the language (Fabri, 2008).

2.3. Previous studies

Numerous empirical studies have supported processability theory.

Table 2: Overview of Interlanguage Researches based on Processibility Theory from 1996 to 2004 (according to Pienmann, 2005b, p. 61-65)

Researcher/Year	Language	Structure	Results
Fetter (1996)	English	Morphosyntax	Does not confirm PT as many patterns are missing in the implicational scaling
Pienemann & Hakansson (1999)	Swedish	Morphosyntax	Confirmation of PT
Bartning (2009)	French	Morphology and Syntax	Morphology is more systematic and develops predictably, unlike syntax
Mansouri(2000 in pienemann, 2005b)	Arabic	Morphology and syntax	Confirmation of PT
Devaele & Veronique (2001)	French	French adjectives in gender assignment	PT is not suitable for this kind of research
Glahn et al. (2001)	Scandinavian languages	Morphology Syntax	Confirmation of PT
Hakansson, Salameh & Nettelblatt (2003)	Swedish and French acquisition in bilingual children	Morphology	Confirmation of PT
Di Biase & Kawaguchi (2002)	Japanese Italian	Morphosyntax	Confirmation of PT
Iwasaki (2003, in Pienemann, 2005b)	Japanese	Morphosyntax	Confirmation of PT

Table 2 shows that the recent researches confirmed the PT; in other words, specific structures appear in the predicted order.

Table 3: The latest interlanguage research based on Processability Theory

Researcher/Year	Language	Structure	Results
Kawaguchi (2005)	Japanese	Syntax	Confirmation of PT
Mansouri (2005)	Arabic	Morphology and Syntax	Confirmation of PT
Zhang (2005)	Chinese	5 grammatical morphemes	Morphemes are acquired in a predicted order proposed by PT
Mansouri& Duffy (2005)	English	Syntax	Confirmation of PT
Dao (2007, in charters, Dao & Jensen)	English	Inflections in lexical and phrasal contexts	As opposed to PT, inflections emerge in a phrasal context before inflections in lexical contexts
Hakansson&Norby (2007, in Hakansson, 2013)	Swedish	Written and oral production	Confirmation of PT
Philipsson (2007)	Swedish	Question and verb morphology	Grammaticality judgment tests show that the structures testing declarative knowledge, unlike procedural, are not acquired according to the predictions of PT
Ellis (2008)	English	Grammatical structures	Grammaticality judgment tests show that the structures testing declarative knowledge, unlike procedural, are not acquired according to the predictions of PT
Jensen (2008)	German	A cross-sectional study of German word order	Confirmation of PT
Rahkonen&Hakansson (2008, in Hakansson, 2013)	Swedish	Lexical morphology Phrasal morphology Inter-phrasal morphology Inversion in main clauses Cancel inversion in subordinate clauses Pre-verbal negation in subordinate clauses	The structures emerge according to the predicted order, lexical and phrasal morphology emerge first, followed by the word order in the subordinate clause
Doman (2012)	English	Syntax (relative clauses)	Confirmation of Pienemann'sTeachability Hypothesis
Bonilla (2014)	Spanish	Morphology and Syntax	Confirmation of PT
Tang & Zhang (2015)	English	Written and oral production	Confirmation of PT, learners, are more successful in written than in oral testing
Zhang &Lantolf (2015)	Chinese	Topicalization in the Chinese language	It is possible to artificially construct a developmental route different from the one predicted by natural developmental sequences

Table 3 displays that most of the structures are acquired according to the schedule predicted by the PT. Furthermore, it is evident from tables 2 and 3 that, it is possible to predict the path of the second language by applying PT not only to English but also to other languages as well.

PT has been supported by several empirical studies which have mainly targeted learners' oral performance (e.g., Baten, 2011; Dyson, 2009; Kawaguchi, 2009). Recently, the learners' production, as well as the reception skills, have been tested using the PT framework (Buyl & Housen, 2015; Spinner, 2013). These studies have suggested that a similar mechanism may be at work for the learners in an L2 development course concerning both production and reception.

However, the validity of PT has not been adequately tested for writing performance because the learners' writing -s plural based on PT has not been sufficiently studied yet. PT studies on writing were done by Michimoto (2015a; 2015b) in which 45 and 56 Japanese EFL (English as a foreign language) learners participated respectively. Unfortunately, technical problems remain in both these studies, and the studies have insufficient morphological data to meet the PT criterion regarding the emergence of lexical and morphological variation. The study discusses how to establish a suitable method for designing writing tasks. In his more recent study, a reanalysis was done for the data from Michimoto (2015a) by separating morphology and syntax under recent PT studies (Eguchi & Sugiura, 2015; Yamaguchi & Kawaguchi, 2014). The results of the study showed evidence of predictive ability regarding the learners' syntactic structures based on PT. Also, Hakansson and Norby (2006) studied Swedish learners' writing performance. They tested PT with production and writing tasks such as composition and translation tasks to elicit target structures from the learners. The results clarified that the participants produced syntactic structures following PT production in their speaking and writing, but for some participants, the writing tasks which allowed planning time helped the participants produce some target structures that they could not produce in speaking tasks. The results of writing done by the subjects showed evidence of predictive ability regarding the learners' syntactic structures based on PT.

Furthermore, In Iran, Taki and Hamzehian (2016) investigated the

validity of processability theory among Iranian EFL learners' oral performance. In order to do research, 10 intermediate EFL learners were selected based on their performance on the Oxford Placement Test. Then, they participated in five tasks; namely, interview, spot-the-difference task, picture description, picture identification, and story-telling task. Their speech was recorded and then transcribed according to predetermined target structures (i.e., interrogatives, word order, and negation). The frequency of the occurrence of target structures was calculated based on the emergence criterion. The results indicated that Iranian EFL learners produced language structures in the predicted procedural stages as proposed by processability theory.

Likewise, Khansir and Zaab (2015) studied the impact of processability theory on the speaking skill of Iranian EFL learners. In their study, Iranian EFL learners' speaking ability in producing the morpheme structures was examined through two production tasks. One through the use of the picture description task designed on the basis of particular focus on the learners' ability to use target structures in context; another, was reconstruction task in which the learners were asked to read and listen to two audio texts to help the learners focus on forms and elicit the target structures. The result of this research showed that both tasks were capable instruments to help EFL learners produce the target structures in the order predicted by processability theory. In another study, Mohammadkhani, Eslamdoost, and Gholamreza'i (2011) tried to find a relationship between second language instruction and learners' productive use of third-person singular-s. Researchers collected written data from 151 participants in three different proficiency groups in two phases. The findings showed that elementary learners were less developed in their Interlanguage and are in lower levels of development based on Processability theory (1998, 2003). While advanced and intermediate learners were in fact in higher levels of processing capacity and could provide the grammatical structures systematically.

As it is evident, there are very few studies testing PT on EFL learners, and in other countries, PT has been supported by several studies which have mainly targeted learners' oral performance and very few cases on writing performance with the fewer number of participants. So,

the present study was an attempt to address this gap by focusing on the acquisition of "Plural-s" and "Adverb fronting" across five proficiency levels, from elementary to advanced on EFL learners' writing-s plural and comparing it with Pienemann's stage-like development model of morpho-syntactic structures.

3. Method

Within the framework of processability theory and through analyzing the written performance of Iranian EFL learners, the present research focused on the acquisition of "Plural-s" and "Adverb fronting" across five proficiency levels, from elementary to advanced and compared it with the stage-like development model of morpho-syntactic structures proposed by Pienemann (1998; 2015).

Following a descriptive model of research and a post-hoc design, the purpose was to find out whether the order of emergence of "Plural-s" and "Adverb fronting" in the Iranian EFL learners' writing performance was compatible with the order presented in Pienemann's model or not. Plural-s is plural marking on nouns, for example: "I like cats," and adverb fronting is the position of adverb at the beginning of the sentence before subject to make more emphasis, for example: "Last summer, I graduated from the university". According to Pienemann's PT model, plural-s occurs at the second stage of second language development, and adverb fronting occurs at the third stage of second language development.

3. 1. Participants

Since the study included participants from different institutes from elementary to advanced levels, and the researchers did not afford random sampling from a pool of participants, they followed a non-random availability sampling. The research was administered in different branches of Safir English Language Institutes located in the city of Tehran. The proficiency level of participants ranged from elementary to advance (62 male and female elementary students, 45 male and female pre-intermediate students, 43 male and female intermediate students, 100 male and female upper intermediate students and 100 male and female advanced

students). They were all adult EFL learners whose age ranged from 18 to 55 years old. They were all native speakers of the Persian language learning English through Touch Stone series from elementary to advance. Each level was divided into 6 terms, and totally the learners attended language classes for 42 terms. The learners' proficiency levels were determined through institutional placement tests.

3.2. Materials

The materials utilized in this study consisted of learner corpora collected from the EFL learners studying in different branches of Safir institutes in Tehran. The corpora were 350 writings from five levels of elementary, pre-intermediate, intermediate, upper-intermediate, and advanced. The writings were elicited through different writing tasks, such as picture description task, routine action task, story writing task, story retelling task, audio-video retelling task, communication task, introduction task, and composition. Two TEFL professors approved the construct validity of the procedure for eliciting the writing performance. For content validity, the researchers made sure that the topic chosen for writing tasks were general enough, and they matched the topics covered through the classes.

3.3. Data collection procedures

The procedures followed in the present research included the following steps. First, the data were collected through different tasks, including introduction task, habitual action task, story retelling task, picture description task, composition, communication task. Next, the researchers focused on training the raters for the assessment of the participants' writings at different levels based on the model presented by Pienemann (1988, 2005) related to the type and frequency of morpho-syntactic structures at different stages. Once the raters felt comfortable with the model for rating, they were given a chance to rate a few scripts independently, and inter-rater reliability of 0.83 was achieved. In the following step, the writings were rated by the raters (score 1 for correct morpho-syntactic structure and 0 scores for absent or incorrect structure). Finally, the data analysis was accomplished.

4. Results and Discussion

The present study aimed at investigating the stage-like development of morpho-syntactic structures in the EFL learners' writing performance concerning "-s plural" and "adverb fronting" at different levels from elementary, pre-intermediate, intermediate, upper-intermediate and advanced levels. The data in this research was analyzed both qualitatively (in order to identify and classify the type and order of the morpho-syntactic structures), and quantitatively (using SPSS and analysis through cross-tabulation, normality test, and Kruskal-Wallis). In this part, the results of the data analysis are presented.

4. 1. Result for "Plural-S"

The first morpho-syntactic variable which was studied in this research was the processability of "Plural- S" across the five mentioned levels from elementary to advanced.

Table 4. 1: Level * Crosstabulation for plural-s

		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	23	25	26	27	28	33	Total
Level	Elementary	16	5	10	9	3	3	8	3	1	1	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	62
	Preintermediate	5	0	5	6	6	4	5	1	4	3	1	0	1	1	0	0	0	1	0	0	1	0	0	1	0	0	0	0	45
	Intermediate	3	0	7	5	2	6	5	0	1	2	1	1	2	2	2	2	1	1	0	0	0	0	0	0	0	0	0	0	43
	Upperintermediate	12	2	12	8	5	8	9	7	9	2	6	2	6	2	0	0	3	0	2	1	2	1	0	1	0	0	0	0	100
	Advanced	4	0	2	6	5	5	7	2	9	0	14	3	5	3	5	6	3	1	3	1	7	3	1	0	2	1	1	1	100
Total		40	7	36	34	21	26	34	13	24	8	23	6	14	9	8	8	7	3	5	2	10	4	1	2	2	1	1	1	350

In Table 4.1, the lowest and highest score and also the frequency for the scores regarding language learners' performances for the correct usage of "plural-s" have been illustrated. As it is observed, "plural-s" emerges in the very early stages of learner language and its frequency of usage increases along the higher stages of proficiency. The next step for this variable is to show the graphic representation of the distribution of plural-s across five levels from elementary to advance.

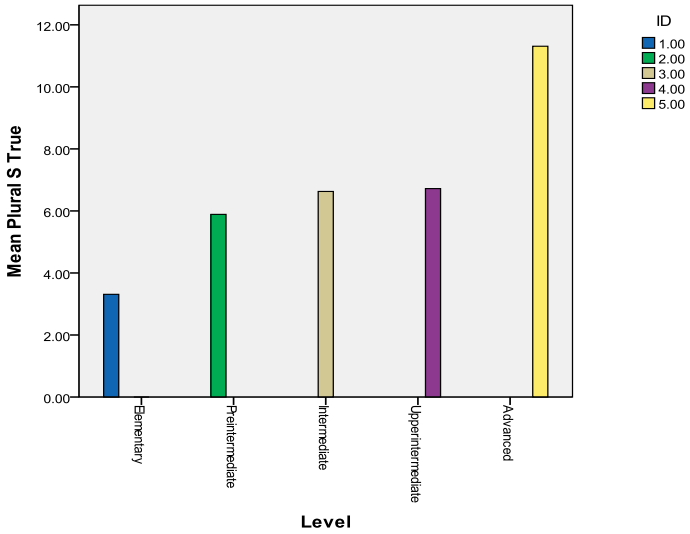

Figure 4. 1. The frequency for the scores about language learners' performance for actual usage of "plural-s."

In order to find out if there is any significant difference among the distributions of "plural-s" across the levels, a comparison of the means distribution for each level was necessary. To choose the appropriate statistical test, the normality was checked.

Table 4. 2: Tests of Normality for plural-s

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
Level	Statistic	df	Sig.	Statistic	df	Sig.
Elementary	.177	62	.000	.868	62	.000
Preintermediate	.180	45	.001	.835	45	.000
Intermediate	.202	43	.000	.906	43	.002
Upperintermediate	.128	100	.000	.913	100	.000
Advanced	.115	100	.002	.962	100	.006

a. Lilliefors Significance Correction

Table 4.2 shows that the data is not distributed normally ($sig. < 05$). Therefore, the Kruskal-Wallis test was chosen to compare the means of distribution of "plural-s" at each level.

Table 4. 3: Ranks for plural-s

	Level	N	Mean Rank
Plural S True	Elementary	62	101.96
	Pre-intermediate	45	154.57
	Intermediate	43	170.05
	Upper-intermediate	100	169.36
	Advanced	100	239.01
	Total	350	

Table 4. 3 provides the mean rank of the participants at each proficiency level for their performance regarding plural-s.

	ral-s
Chi-Square	75.005
Df	4
Asymp. Sig.	.000

a. Grouping Variable: Level

According to Table 4.4, there is a statistically significant difference among the distribution of "plural-s" across language learners' level of proficiency ($sig. < 0.05$).

4. 2. Results for "Adverb fronting" The next variable studied in this article was "adverb fronting" usage across the levels.

Table 4. 5: Level * Crosstabulation for Adverb fronting

		0	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**12**	**15**	**Total**
Level	Elementary	27	16	9	3	2	2	1	2	0	0	0	0	0	62
	Preintermediate	17	10	4	3	2	1	2	2	2	0	1	1	0	45
	Intermediate	8	9	7	5	5	2	1	2	1	0	1	1	1	43
	Upperintermediate	19	14	17	26	7	15	1	1	0	0	0	0	0	100
	Advanced	6	12	17	19	10	15	7	2	8	1	3	0	0	100
Total		77	61	54	56	26	35	12	9	11	1	5	2	1	350

In Table 4.5, the lowest and highest score and also the frequency for the scores concerning language learners' performance for correct usage of "adverb fronting" have been illustrated. The table shows that "adverb fronting" emerges in the early stages and the ability to use it grows stronger as the proficiency of the learners increases. The next step for this variable is to show the graphic representation of the distribution of adverb fronting across five levels from elementary to advanced.

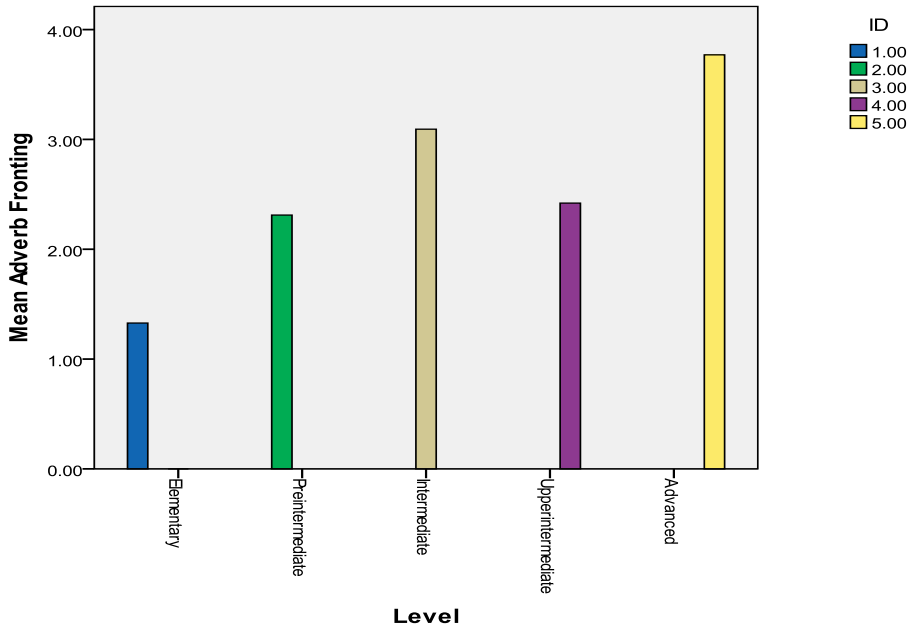

Figure 4. 2. The frequency for the scores regarding language learners' performance for actual usage of "Adverb fronting."

In order to find out if there is a significant difference among the distributions of "adverb-fronting" across the levels, a comparison of the means distribution for each level was necessary. To choose the appropriate statistical test, the normality was checked.

Table 4. 6: Tests of Normalityb for Adverb fronting

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
Level	Statistic	df	Sig.	Statistic	df	Sig.
Elementary	.263	62	.000	.743	62	.000
Preintermediate	.266	45	.000	.768	45	.000
Intermediate	.187	43	.001	.810	43	.000
Upperintermediate	.130	100	.000	.925	100	.000
Advanced	.162	100	.000	.939	100	.000

a. Lilliefors Significance Correction

Table 4. 6 shows that the data is not distributed normally ($sig. <$ 05). Therefore, the Kruskal-Wallis test was chosen to compare the means of distribution of "adverb fronting" at each level.

Table 4. 7: Ranks for Adverb fronting

	Level	N	Mean Rank
Adverb Fronting	Elementary	62	113.01
	Pre-intermediate	45	145.11
	Intermediate	43	181.01
	Upper-intermediate	100	176.52
	Advanced	100	224.54
	Total	350	

Table 4. 7 provides the mean rank of the participants at each proficiency level for their performance regarding adverb fronting.

Table 4. 8: Kruskal Wallis Test for Adverb-fronting

Chi-Square	52.662
Df	4
Asymp. Sig.	.000

a. Grouping Variable: Level

According to Table 4.8, there was a statistically significant difference among the distribution of "adverb fronting" across language learners' level of proficiency ($sig. < 0.05$).

4. 3. Discussion

The primary purpose of the present study was to explore whether there were any systematicity and regularity in the learners' use of their Interlanguage at different proficiency levels and to compare it with the model presented by Pienemann (1998; 2015). This purpose was achieved by asking the learners to provide samples of their written performances on different tasks such as introduction task, habitual action task, story retelling task, picture description task, composition, communication task. In this regard, the present research focused on the acquisition of "plural-s" and "adverb fronting" across five proficiency levels, from elementary to advance. The findings of this study showed a significant difference in the distribution of "plural-s" across different levels. First of all, the use of "Plural-s" was observed in the writing performance of language learners at all levels. Meanwhile, the higher the level of proficiency, the more the use of "Plural-s" was. The findings implied that "Plural-s" is a morpho-syntactic feature which emerges very early in the language learners' performance. Just the same, the competence of the learner grows stronger in concern with this variable through the higher proficiency levels. The finding of this study is to a great extent in line with that of Pienemann (1998; 2015) who concluded that this structure emerges in the earliest stages of second language development. It should be noted that "the emergence stage" for this variable in Pienemann's model is the second stage after the development of "words" and "formulae"; meanwhile, the results in this study marked elementary stage for this variable in the Interlanguage of the participants. This minor difference can be attributed to local intervening variables such as cognitive-development of the subjects as well as the low cognitive complexity of this structure.

The other finding of this study was that there was a significant difference in the distribution of "adverb fronting" across different levels. First of all, the use of "adverb fronting" was observed in the writing performance of language learners at all levels. Meanwhile, the higher the level of proficiency, the more the use of "adverb fronting" was. The findings implied that "adverb fronting" is a morphosyntactic feature which emerges in the early stages of the Interlanguage but with the lower frequency of occurrence compared with higher levels. Moreover,

the competence of the learner grows stronger in concern with this variable through the higher proficiency levels. Nevertheless, this finding is somehow different from that of Pienemann (1998 & 2015), who concluded that this syntactic structure is observed in the third stage of second language development. In the present study, it was observed earlier but with a lower frequency of occurrence and this minor difference may be attributed to the effect of transfer from the learners' first language since the adverb is used at the beginning of the sentences in the Persian language. Another reason could be the low cognitive complexity of these structures, so they emerge sooner than it is expected. In line with this claim, Ellis (2005) also states that the emergence of such structures is due to their low cognitive complexity rather than their developmental complexity.

So, based on the results, it is concluded that the Iranian EFL learners pass through definite stages in the processing of second language development. Their development is progressed hierarchically. These stages are acquired cumulatively in an order predicted by processability theory. There is no counterevidence for the above assumptions behind the theory. Findings of this study are generally consistent with the predictions made by processability theory. Generally, the processability theory showed to be valid for Iranian EFL learners.

5. Conclusion and Implications

According to the results of this study, the existing models aimed at the illustration of stage-like development of morpho-syntactic structures in the development of the second language are in general appropriate for the prediction of learner language. Meanwhile, there are some fine-tuning needed for the models, which should be done through local considerations in concern with the language learners, including their first language, their cultural background and the context of their learning the second language. This claim is because of some minor differences between the results of this study and the suggested models. This study can have implications for language teachers and learners and also material developers. The teachers can benefit from this study so that they can provide appropriate input to their learners. They can evaluate the

syllabuses in terms of their adaptation with the natural order in language development as suggested by the relevant models. Furthermore, they can have a better view of the assessment of the language learners' progress. Generally, by investigating the developmental patterns, one can get a closer insight into the development of the learner's interlanguage. Since developmental stages can be predicted in advance, a conclusion that interlanguage develops in a regular, predictable way can be drawn. Therefore, it is essential to describe and determine developmental stages in advance in order to adjust teaching to the learner's current developmental stage. It is also necessary to introduce the teachers the notion of interlanguage and developmental stages in order to observe the factors that hinder or facilitate their learner's progress applying an individualized approach to each learner while at the same time observing the changes in the learner's interlanguage on his/her way of mastering the second language. Finally, Observing the developmental path of the student's interlanguage removes the focus from describing and counting errors and makes the teachers aware that errors are to be expected and inevitable in the development of the learner's second language and they are indicators of progress. There are also some implications perceivable for language learners. The process of language learning can be discouraging for learners at different stages. If the learners are somehow provided with a general illustration of the due time of emergence of morpho-syntactic structures in their approximate system, they can formulate more logical expectations for themselves and self-assess their course of development. This can help them cope with the complexity of the situations of language learning and therefore give weight to their self-confidence. It benefits the material developers since they can develop the standard materials based on the natural order of language development because knowing about the path of second language development provides essential insights into what learners are ready to acquire in the foreign/second language at any given point in time. Therefore, this can support second language learning both in natural and instructional settings.

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