

Processability Theory: Stage-like Development of “3 sg-s” and “cancel aux- second” in Iranian EFL Learn- ers’ Writing Performance

Mahin Sadat Tabatabaee¹

Keyvan Mahmoodi*²

Abbas Bayat³

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Abstract

Processability Theory (PT) is a second language acquisition (SLA) theory developed to explain developmental sequences in SLA as well as some other phenomena (Pienemann, 1998a). Processability has been a main concern in SLA research since 1990s. Following the agenda of Processability Theory and through analyzing the written performance of Iranian EFL learners’ writing performances, the present research studied the acquisition of “3 sg-s” and “cancel aux-second or cancel inversion” across five proficiency levels, from elementary to advanced, and compared it

¹ PhD Candidate of TEFL, English Language Department, Islamic Azad University, Malayer Branch, Hamedan, Iran; tabatabaee@malayeriau.ac.ir

² Assistant Professor, English Language Department, Islamic Azad University, Malayer Branch, Hamedan, Iran, (Corresponding author); keivan_mahmoodi@iau-malayer.ac.ir

³ Assistant Professor, English Language Department, Islamic Azad University, Malayer Branch, Hamedan, Iran; bayatabbas@malayeriau.ac.ir

with the stage-like development model of morpho-syntactic structures proposed by Pienemann (1998a). The study followed a descriptive method of research, and the data was collected from 350 participants in five different proficiency levels from elementary, pre-intermediate, intermediate, upper-intermediate and advanced. The participants were asked to provide samples of their written performance on different tasks including an introduction task, a habitual action task, a story retelling task, a picture description task, and a composition and communication task. The data in this research was analyzed both qualitatively, in order to recognize and classify the type and order of the morpho-syntactic structures, and quantitatively, by calculating means. The results of Kruskal-Wallis test revealed that both “3 sg-s” and “cancel aux-second,” as two morpho-syntactic features, emerge very early in the language learners’ performance. Very similarly, the competence of the learner grows stronger in concern with these variables through the higher proficiency levels. These findings imply that PT is valid to a considerable extent for Iranian EFL learners, as well.

Keywords: Cancel Aux-second, Processability Theory, Second Language Learning, Stage-like Development, Third Person Singular-s (3sg-s).

Introduction

Processability Theory (PT) is a second language acquisition (SLA) theory developed to clarify sequences of development in SLA as well as some other phenomena (Pienemann, 1998a). The purpose of 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 L2 learning and use (Ellis, 2008). Regardless of its being a first or second language, one can find a lot of evidence in support of the notion that speakers of any language learn it systematically (Doughty, 2003; Heinsch, 1994; Larsen-Freeman & Long, 1991; Pienemann, 1995, 1998a).

As Doman (2012) points out, researches conducted in various fields, such as SLA and speech processing, contribute to the view that language learning is systematic. It is strongly believed by researchers (e.g. Pinker & Alen, 1988; Swain, 2005; Tarone, 1997) that language is learned in sequences, although some amount of variation occurred in language learning. Dulay and Burt (1973, 1974) and Bailey et al. (1974) inspired by the research done by Brown (1973) initially proposed the existence of L2 acquisition order. Most of these studies are considered descriptive since they suggest systematicity and regularity of L2; however, they cannot answer why this phenomenon happens. One of the theories that aims to follow an explanatory-adequacy line in this area is Processability Theory (PT) presented by Pienemann (1998a). PT addresses the problem of SLA from a processing viewpoint. It claims that some processing operations are used to envisage the order of developmental of second language grammar acquisition regardless of the language being studied. PT aims to offer a psycholinguistically applicable and cross-linguistically plausible clarification for the sequences and stages the learners follow in learning to produce the tar-

get L2 morpho-syntactic structures. The logical reasoning for Processability Theory is that the learner can produce and comprehend, at any developmental stage, only those L2 linguistic forms that can be handled by the current state of the language processor. Hence, the notion of the human language processor architecture is crucial in the theory. Acquisition of language is constrained by the human language processing architecture so that learners are able to acquire only the linguistic forms and functions that they afford to process (Pienemann, 2011).

Up to the present time, a number of different studies concerning second language acquisition have examined the validity of Processability Theory in a number of languages. They include Swedish (Glahn et al., 2001), Scandinavian (Hakansson, 2001, 2013), Arabic (Husseinali, 2006, Mansouri, 2000; 2005), Italian (Bettoni et al., 2009), French (Ågren, 2009), Chinese (Zhang, 2004, 2005), and Japanese (Di Biase & Kawaguchi, 2002). Moreover, there are some studies done in this field in EFL and ESL contexts (e.g. Khansir & Zaab, 2015; Mohammadkhani et al., 2011; Taki & 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 typical order in the development of second language is in need of more investigation at least in EFL contexts.

Therefore, the present study mainly aimed to cross-sectionally validate the Processability Theory and it studied the acquisition of “3ed sg-s” and “cancel aux-second” across five proficiency levels, from elementary to advanced and compared it with the stage-like development model of morpho-syntactic structures proposed by Pienemann (1998a). The question that guided this research was whether there was any significant difference among the means of the frequency of “3 sg- s” and “Cancel Aux-second” in the interlanguage of Iranian EFL learners across five proficiency levels.

Literature Review

Background of the Study

Researchers interested in appreciating how a second language (L2) is acquired, 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 refers to what makes it possible for the 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. This gives rise to the question of how speakers acquire more than presented in the input. Along the same line, the developmental problem is to describe how the morpho-syntax knowledge develops over time, why some properties are acquired earlier than others, and why some properties remain difficult even for the advanced second language speakers (Hawkins, 2001). Dulay and Burt (1973, 1974) and Bailey et al. (1974), inspired by Brown’s (1973) research, originally suggested the existence of L2 acquisition order.

Brown examined L1 development, with a focus on the emergence of 14 English morphemes. The study was conducted with three children in preschool over four years. The results suggested the following common sequence in the acquisition of 14 English morphemes: 1) present progressive; 2) in; 3) on; 4) plural; 5) past irregular; 6) possessive; 7) uncontractible copula; 8) articles; 9) past regular; 10) third person regular; 11) third person irregular; 12) uncontractible auxiliary; 13) contractible copula; and 14) 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 developed by looking at various aspects of language (e.g., morphology and syntax) from various perspectives (e.g., contrastive, error and textual analysis and psycholinguistics). They investigated L2 learners' developmental sequence of eight morphemes in English. They collected speech samples from 151 speakers of Spanish, learning English in the USA as a second language, aged between six to eight. The results suggested the following common acquisition sequence for certain grammatical morphemes in acquisition of L2: 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-background (Dulay & Burt, 1974). The researchers compared the oral performance of 55 Chinese and 60 Spanish children learning English as L2 using the Bilingual Syntax Measure. The results suggested the following common 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). A similar study was done by Bailey et al. (1974) with 73 adult speakers from numerous L1 backgrounds (i.e., 33 L1 Spanish speakers and 40 speakers from differing L1, such as Turkish, Greek, Chinese, Japanese, Italian, and Arabic). Their results also suggested a common acquisition order regardless of their different L1s, and the acquisition order was similar to the one suggested by Dulay and Burt. The acquisition of English morphemes was tested by Krashen et al. (1976) with 66 adult L2 learners from different L1s. The results showed a similar acquisition sequence pattern to the one by Bailey et al. regardless of L1. Nevertheless, a number of studies criticized these morpheme studies mostly because of the methods they had employed, such as unsuitable criteria for acquisition (based on accuracy of morpheme production). Moreover, morpheme studies did not consider the theoretical explanations for the common sequence of acquisition, namely what makes acquisition occur, i.e., a property theory, and why acquisition of morphemes follows a specific order, i.e., a transition theory (e.g., Gregg, 2005).

Clahsen et al. (1981) proposed the Multidimensional Model based on further investigations of the morpheme studies in order to predict second language acquisition sequence. In this model, two significant aspects of second language development were highlighted: a fixed development sequence, which is not affected by the individual and environmental differences, as well as varying features responding to the individual and environmental differences.

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

Later, Pienemann and Johnston (1985, 1987a, 1987b) suggested a new predictive framework relying on a set of constraints related to universal speech processing in order to explain the implicational order of second language acquisition. This theoretical framework, which is a psychological approach toward processes of language acquisition, initiated a shift in research from the multidimensional to Processability Theory (PT) (Pienemann, 1998a). The main construct in the theory is that language-processing mechanisms constrain SLA. Hence, language development occurs mainly based on the elimination of these processing constraints (Pienemann, 1998b). Therefore, the current states of learner's second language development can be identified according to a universal psycholinguistics matrix, i.e., language processability hierarchy (Pienemann 1988, 2005).

Pienemann (1998b) stated that the three central features of PT are language-specific, incremental and linear. Processability Theory states that there are specific procedural skills that are obligatory for the utterances in second language to be processed and produced. Learners, in the first stage, develop lexicon that is the basic element to all language processing in following stages. In order to produce free morphemes in the second stage, the learners use the bound morphemes. In the third stage, disconnected phrases are brought together by intra-phrasal components such as conjunctions. Nevertheless, learners have no syntactic-structures knowledge and they order the words based on pragmatics. In the fourth and fifth stages, the learners can gradually provide lexical features to phrases based on syntactic knowledge. The last stage matches the automatic use of subordinate clauses. As Pienemann (1988, 2005) states, the logic underlying Processability Theory is that the learner, at any stage of development, can produce and comprehend only those L2 linguistic forms possible to be handled by the current state of the language processor. Therefore, learners can acquire new linguistic information only if they have been provided with the prerequisites. Therefore, the architecture of the language processor and the way in which it handles a second language need to be understood. This way, the course of development of L2 linguistic forms in language production and comprehension across languages can be predicted. Since realizing the path of second language development provides significant insights into what learners are prepared to acquire in the second/foreign language at any given point of time, this way second language learning can be supported both in instructional and natural settings (Kessler, 2008; Pienemann & Kessler 2007).

Pienemann (1998a) believed that English morphology and syntax develop in six stages initiating at the lower stage with Word/lemma, and developing further through Category procedure, Noun phrase procedure, Verb phrase procedure, Sentence procedure, and Subordinate clause procedure, respectively at

higher stages. In this hierarchical procedure, the element of a lower stage is a prerequisite for the other elements in the higher stages and the stages cannot be skipped.

Lexical Functional Grammar

Processability Theory is supported by Lexical Functional Grammar (LFG) as a grammatical theory. LFG belongs to the frame of generative grammar (Pienemann & Håkansson, 1999) and feature unification is the main characteristic of this grammar. Put in simple words, the process of feature unification guarantees that the various parts that constitute a sentence actually fit together (Pienemann, 1998a). The original version was published by Kaplan and Bresnan 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, the entries of which contain syntactic and other information that is relevant to the generation of sentences. The third part was a functional component that compiles for every sentence all the grammatical information necessary for semantic interpretation of the sentence.

This framework was revised by Bresnan in 2001 and contains additional features that are 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 (1998a) 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 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; therefore, this concept is very important to PT (Pienemann, 2005a).

Lexical Functional Grammar also adjusts to PT because the grammar has proven to be typologically plausible. According to Pienemann (1998a), PT has to be applicable 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 as the atoms of the syntactic structure, signifying that they are the smallest units of the language (Fabri, 2008; Pienemann & Hakansson, 1999).

Previous Studies

Numerous empirical studies have supported the Processability Theory. These studies include Fetter (1996), Mansouri (2000), Dewaele & Veronique (2001),

Glahn et al, (2001), Hakansson et al. (2003), Di Biase & Kawaguchi (2002), and Iwasaki (2003). These recent researches confirmed the PT; in other words, certain structures appear in the predicted order.

One can refer to some further studies (e.g. Ellis, 2008; Kawaguchi, 2005 ; Zhang, 2005; Zhang & Lantolf, 2015), which confirm that most of the structures are acquired according to the schedule that the PT has predicted. Furthermore, it is possible to predict the path of second language by applying PT not only to English but also to other languages as well.

A number of empirical studies which have mainly targeted learners' oral performance have also supported PT (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 a 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 performance based on PT has not been sufficiently studied yet. PT studies on writing were conducted by Michimoto (2015a, 2015b) in which 45 and 56 Japanese EFL (English as a foreign language) learners participated, respectively. Unfortunately, technical problems still remain in both of 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. By separating morphology and syntax in accordance with recent PT studies (Eguchi & Sugiura, 2015; Yamaguchi & Kawaguchi, 2014), a reanalysis was done for the data from Michimoto (2015a). The results of the study provided evidence of predictive ability based on PT regarding the learners' syntactic structures. 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 in accordance with 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 the subjects' writing showed evidence of predictive ability regarding syntactic structures of the learners based on PT.

Furthermore, in Iran, Taki and Hamzehian (2016) investigated the validity of Processability Theory among Iranian EFL learners' oral performance. Language structures produced by Iranian EFL learners were in the anticipated procedural stages proposed by Processing Theory. Likewise, Khansir and Zaab (2015) studied the influence of Processability Theory on Iranian EFL learners' speaking skill. They studied the speaking ability of Iranian EFL learners in producing the morpheme structures examined through two production tasks. The result of this research indicated that both tasks effectively helped EFL learners to produce the target structures as predicted by Processability Theory. In an-

other study, Mohammadkhani et al. (2011) studied the relationship between learners’ productive use of 3rd person singular -s and second language instruction. The findings indicated that, based on Processability Theory (1998a, 2003), elementary learners were in lower levels of development and less developed in their Interlanguage, while advanced and intermediate learners could provide the grammatical structures systematically and had higher levels of processing capacity.

As it is evident, there are very few studies testing PT on EFL learners, and in other countries, a number of studies having mainly targeted learners’ oral performance have supported PT, yet very few cases can be found on writing performance with the fewer number of participants.

A Cross Linguistic Consideration of “3 sg-s” and “cancel aux-second”

The two morpho-syntactic variables chosen for study within the Processability Theory in this research were “3 sg-s” and “cancel aux-second”. Verbs in English are suffixed with inflections to show grammatical states, namely past participle, past and present tense, etc. The morph that marks 3rd person singular verbs is one of such inflectional suffixes (Kazemian & Hashemi, 2014). This morph is absent in Persian.

The second morpho-syntactic feature in this study was “cancel aux-second” in subordinate clauses. “Cancel aux-second” refers to the fact that in indirect questions, the inversion of subject auxiliary does not apply in English. According to Jabbari and Ariamanesh (2015), in English main clause questions, usually both wh-movement and auxiliary inversion happen. In the case of wh-embedded clauses, however, the interrogative word does not carry a tense feature; hence, auxiliary inversion is not needed. Therefore, wh-embedded clauses contain wh-movement without auxiliary inversion. The rule is obligatory in English, but it does not exist in Persian. Consequently, it can be stated that some cross linguistic differences between English and Persian are at least effective in the acquisition of English wh-clauses generally, and wh-embedded clauses specifically.

Method

Following the Processability Theory and through analyzing the written performance of Iranian EFL learners, the present research focused on the acquisition of “3 sg- s” and “Cancel Aux-second” across five proficiency levels, from elementary to advanced, and compared it with the stage-like development model of morpho-syntactic structures proposed by Pienemann (1998a).

Following a descriptive model of research and a post-hoc design, the purpose was to find out whether the order of emergence of “3 sg-s” and “Cancel Aux-second” in the Iranian EFL learners’ writing performance was compatible with the order presented in Pienemann’s model or not. These two variables were selected because they were absent in the first language of the participants

(i.e., Persian) and the least inter-language influence was expected in their acquisition. “3 sg-s” is singular marking on verbs, for example: “she speaks English language well”, and “Cancel Aux-second” describes the point that inversion of subject auxiliary in indirect questions does not apply, for example: “I wonder why he sold that car” or “I wonder what he is eating”. According to Pienemann’s PT model, “3 sg-s” occurs at the fifth stage of second language development and “Cancel Aux-second” occurs at the sixth stage of second language development.

Participants

This study included participants from different institutes from elementary to advanced levels and the researchers could not have random sampling from a pool of participants; therefore, they followed a non-random sampling based on availability. The research was administered in different branches of Safir English Language Institutes in Tehran. All of the branches follow the same syllabus. The participants’ proficiency level ranged from elementary to advanced (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. All of the participants were native speakers of Persian learning English through *Touch Stone* series from elementary to advanced. Each level was divided into 6 terms, and totally the learners belonged to 42 terms. The learners’ proficiency levels were determined by the use of institutional placement tests.

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, including picture description, habitual action, story writing, story retelling, audio-video retelling, communication, introduction, and composition. The construct validity of the procedure for eliciting the writing performance was approved by two TEFL professors. For the purpose of content validity, the researchers made sure that the topics chosen for the *writing* tasks were general enough and matched the topics covered through the courses.

The Adult English language course is designed for those aged 15 and over, and consists of two sections: beginner and intermediate (24 terms), and specialized and advanced courses (18 terms). *Touchstone* series are taught in Adult English and Middle English courses, and in specialized courses, *Viewpoint* and *CPE-Masterclass* series are covered. In addition, *Oxford Word Skills* books are used as side books at all levels. The “3ed sg-s” is taught and practiced at the elementary level and “cancel aux-second” is presented at the intermediate level (Safir Adult English Language Courses, 2019).

Procedure

The procedures followed in the present research included the following steps. First, the data were collected through different tasks including an introduction task, a habitual action task, a story retelling task, a picture description task, a composition, and a communication task. Next, the researchers focused on training two raters for the assessment of the participants' writings at different levels on the basis of 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 an inter-rater reliability of 0.83 was achieved. It is necessary to mention that intra-rater reliability was 0.96. In the following step, the writings were rated by the raters (score 1 for correct morpho-syntactic structures and 0 for absent or incorrect structures). Finally, the data analysis was accomplished.

Results and Discussion

The present study investigated the stage-like development of morpho-syntactic structures in the EFL learners' writing performance at different levels from elementary to 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 (by means of SPSS and analysis through cross tabulation, normality test and Kruskal-Wallis). In this part, the results of the data analysis are provided.

Results for “3 sg-s”

The first morpho-syntactic variable which was studied in this research was the processability of “3 sg-s” across the five mentioned levels from elementary to advanced.

Table 1.
Crosstabulation for 3 sg-s

	.00	1.00	2.00	3.00	4.00	5.00	6.00	8.00	9.00	10.00	13.00	21.00	22.00	Total
Elementary	25	13	9	7	2	1	1	1	1	0	1	0	1	62
Preintermediate	25	6	10	0	3	0	0	0	0	1	0	0	0	45
Intermediate	19	10	9	2	1	1	0	0	0	1	0	0	0	43
Upperintermediate	60	18	10	6	1	2	2	0	0	1	0	0	0	100
Advanced	22	8	26	14	12	6	4	5	1	1	0	1	0	100
Total	151	55	64	29	19	10	7	6	2	4	1	1	1	350

In Table 1, the lowest and highest scores and also the frequency for the scores with regard to language learners' performances for correct usage of “3

sg-s” have been illustrated. The next step for this variable is to show the graphic representation of the distribution of “3 sg-s” across five levels from elementary to advanced.

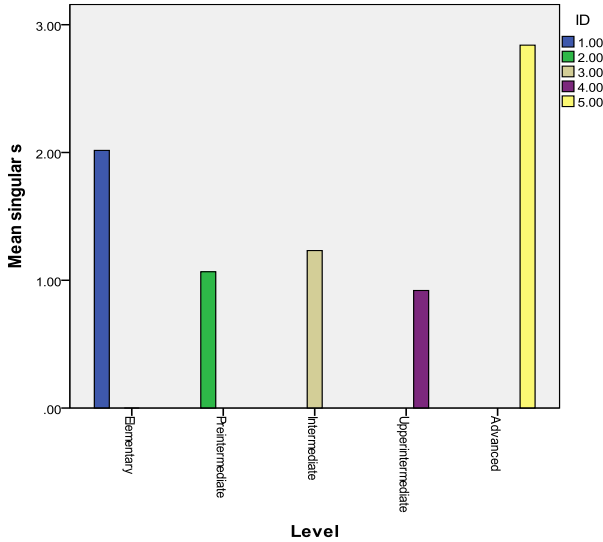


Figure 1. Frequency of the scores regarding language learners’ the correct usage of “3 sg-s”

In order to find out if there is any significant difference among the distributions of “3 sg-s” across the levels, a comparison of the means for each level was necessary. To choose the appropriate statistical test, the normality was checked.

Table 2.
Tests of Normality for 3 Singular-s

Level	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Elementary	.287	62	.000	.566	62	.000
Preintermediate	.279	45	.000	.615	45	.000
Intermediate	.250	43	.000	.662	43	.000
Upperintermediate	.313	100	.000	.620	100	.000
Advanced	.178	100	.000	.764	100	.000

Table 2 shows that the data is not distributed normally (sig. < 05). Therefore, Kruskal-Wallis Test was chosen to compare the distribution means of “3 sg-s” at each level.

Table 3.
Ranks for 3 Singular-s

	Level	N	Mean Rank
Singular s	Elementary	62	177.76
	Preintermediate	45	147.37
	Intermediate	43	161.13
	Upperintermediate	100	138.43
	Advanced	100	230.02
	Total	350	

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

Table 4.
Kruskal Wallis Test for Singular-s

Chi-Square	51.525
Df	4
Asymp. Sig.	.000

a. Kruskal Wallis Test

b. Grouping Variable: Level

According to Table 4, there is a statistically significant difference among the five proficiency levels in terms of their distribution of “3 sg-s” (sig. < 0.05).

Results for “Cancel Aux-second”

The next variable studied in this article was “cancel aux-second” usage across the levels.

Table 5.
Crosstabulation for Cancel-aux-2nd

		.00	1.00	2.00	3.00	4.00	5.00	Total
Level	Elementary	62	0	0	0	0	0	62
	Preintermediate	43	2	0	0	0	0	45
	Intermediate	38	2	3	0	0	0	43
	Upperintermediate	76	12	10	2	0	0	100
	Advanced	50	21	17	6	5	1	100
Total		269	37	30	8	5	1	350

In Table 5, the lowest and highest scores and also the frequency for the scores in regard to language learners’ performance for the correct usage of “Cancel Aux-second” have been illustrated. The next step for this variable is to show the graphic representation of the distribution of “Cancel Aux-second” across five levels from elementary to advanced.

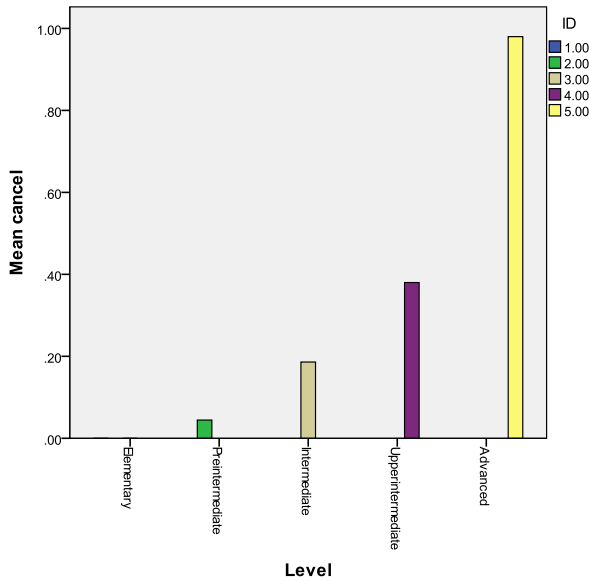


Figure 2. Frequency for the scores regarding the language learners' correct usage of "Cancel-aux-2nd"

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

Table 6.
Tests of Normality^b for Cancel-aux-2nd

Level	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Preintermediate	.540	45	.000	.212	45	.000
Intermediate	.517	43	.000	.376	43	.000
Upperintermediate	.454	100	.000	.564	100	.000
Advanced	.286	100	.000	.779	100	.000

a. Lilliefors Significance Correction

b. cancel is constant when Level = Elementary. It has been omitted.

Table 6 indicates that the data is not distributed normally (sig. < .05). Therefore, Kruskal-Wallis Test was chosen to compare the means of "Cancel Aux-second" distribution at each level.

Table 7.
Ranks for Cancel-aux-2nd

	Level	N	Mean Rank
cancel	Elementary	62	135.00
	Preintermediate	45	141.80
	Intermediate	43	155.13
	Upperintermediate	100	176.12
	Advanced	100	223.92
	Total	350	

Table 7 provides the mean rank of the participants at each proficiency level for their performance regarding cancel-aux-2nd.

Table 8.
Kruskal Wallis Test for Cancel-aux-2nd

Chi-Square	72.713
Df	4
Asymp. Sig.	.000

a. Kruskal Wallis Test

b. Grouping Variable: Level

According to Table 8, there appears to be a statistically significant difference across proficiency levels regarding the distribution of “Cancel Aux-second” (sig.< 0.05).

Discussion

This study basically aimed to explore whether there was any systematicity and regularity in the learners’ use of their Interlanguage in different proficiency levels and to compare it with the model presented by Pienemann (1998a). To this end, the learners were asked to provide samples of their written performances on different tasks such as introduction tasks, habitual action tasks, story retelling tasks, picture description tasks, compositions, and communication tasks. In this regard, the present research focused on the acquisition of “3 sg-s” and “Cancel Aux-second” across five proficiency levels, from elementary to advanced. The findings of this study showed significant differences in the distribution of “3 sg-s” across different levels. First, the use of “3 sg-s” in the writing performance of language learners was explored at all levels. The findings showed that “3 sg-s” was a morpho- syntactic feature, which emerged earlier than expected in the Interlanguage of the language learners possibly as a formulaic feature. Since in Persian, there is not such a structurally manifested subject-verb agreement, its emergence in the interlanguage so early cannot be attributed to L1 transfer. The other piece of evidence for the claim for its use as a formulaic structure is that, through the next proficiency levels, the use of this morpho- syntactic feature dropped significantly and once more gained strength in the interlanguage considerably. Naturally, the results showed that the com-

petence of the learners grew stronger in concern with this structure in the highest proficiency level. This finding is somehow different from Pienemann's model who concluded that this structure emerges in the fifth stage of second language development. This is because, some EFL students may be more familiar with writing tasks than with speaking tasks and they may display their language ability better through writing (Michimoto, 2015a).

Moreover, Mohammadkhani et al. (2011) concluded that elementary level learners are less accurate in providing and recognizing the right structure, are less developed and are in lower levels of Interlanguage development; while intermediate learners are more developed. They concluded that no significant impact was found on the order of acquisition and use of language through instruction. According to what is mentioned in Multidimensional Model and Processability Theory, only if learners are at the right level of Interlanguage development, are they able to provide the grammatical structures (Pienemann, 1998a, 2003).

The second variable studied in this research was "Cancel Aux-second". The results revealed that there was a significant difference in the distribution of "Cancel Aux-second" across different levels. The use of "Cancel Aux-second" was observed in the writing performance of language learners at all levels except at the elementary level. The lowest frequency was observed in the pre-intermediate and inter-mediate levels. Of course, this is not surprising as, according to language competence and also Pienemann's order, the subordinate clauses appear in the upper levels of proficiency. Therefore, this feature, which is related to this kind of sentences, is observed in higher levels more often and not in pre-intermediate and intermediate levels. Meanwhile, it was viewed that the higher the level of proficiency, the more the use of "Cancel Aux-second". Likewise, the competence of the learners with respect to this variable grows stronger through the higher proficiency levels. The findings of this study are in agreement with those obtained by Johnston (1993) whose evidence strongly supported the specific sequence in the acquisition of English morpho-syntax. However, he discriminated between all the structures of the hierarchy except for Cancel Aux-second.

On the other hand, the finding of this study is somehow different from Pienemann (1998a), who concluded that this structure emerges at the latest (6th) stage, while in the present study, it was observed earlier from the pre-intermediate to the advance level. This minor difference may be due to L1 transfer or it could be attributed to the low cognitive complexity of these structures, so they emerge sooner than it is expected. In line with this claim, Ellis (2005) also believes that their low cognitive complexity rather than their developmental complexity is the reason for the presentation of such items.

Therefore, based on the results, it is concluded that Iranian EFL learners pass through definite stages in the processing of second language development. They have a hierarchically progressed development. These stages are passed through cumulatively in the order that Processability Theory predicted. The above assumptions behind the theory face no counterevidence. The findings of

this study generally concord with the predictions made by the Processability Theory. In other words, the Processability Theory generally seemed valid for Iranian EFL learners.

Conclusion and Implications

According to the results of this study, the existing models for the illustration of stage-like development of morpho-syntactic structures in the development of second language are in general appropriate for the prediction of language learners' progress. Meanwhile, some minor differences were observed between the results of this study and the suggested models, suggesting that some fine tuning is needed for the models, which should be done through local considerations considering variables related to the language learners, including their first language, their cultural background and the context of their learning the second language.

The present study can have implications for language teachers and learners and also material developers. The teachers can benefit from the findings in that they can provide appropriate input to their learners. They can evaluate the syllabi 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. There are also some implications perceivable for language learners. 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 will be less discouraged and can also 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. The results may also benefit material developers, since they can develop the standard materials based on the natural order of language development, since if the path of second language development is known, important insights are provided in regard to what learners are prepared to acquire in the foreign/second language at any given point in time. Therefore, second language learning is supported in both instructional and natural settings.

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