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Stage-Like Development of Morpho-Syntactic Structure of Do-S-V (O) in Iranian EFL Learners' Writing and Speaking: A Mixed-Methods Analysis

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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. Within the framework of Processability Theory (PT) and through analyzing the written performance of Iranian EFL learners, the present research focused on the acquisition of the morpho-syntactic structures of *"do- s- v (o)"* across five proficiency levels, from elementary to advanced and compared it with the stage-like development model of morpho-syntactic structures proposed by Pienemann (2005a). The study followed a mixed method design and the data were collected from 350 participants in five different proficiency levels from elementary, pre-intermediate, intermediate, upper-intermediate and advanced; furthermore, 45 pre-intermediate to advanced students were interviewed. The participants were asked to provide samples of their written performance on different tasks such as introduction task, habitual action task, story retelling task, picture description task, composition, and communication task; furthermore, they were interviewed on the same topics. The data in this research were analyzed both qualitatively to identify and classify the type and order of the morpho-syntactic structures in the written and oral data, and quantitatively through inferential statistics. The results of Kruskal-Wallis test revealed that "do-subject- verb was concordant with Pienemann's (2005a) model. This finding implies that PT is valid for Iranian EFL learners, considerably. The findings of this research can be of benefit for language teachers, learners, and syllabus designers.

Keywords: do-s-v(o), foreign language learning, morpho-syntactic structures, processability theory, stage-like development

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1. Introduction

Processability has been a major concern in second language acquisition research (SLA) since the 1990s with the pioneering efforts by Pienemann (2005a). The goal of SLA research has been to explain how the learners acquire a language based on the input they receive and to describe different patterns to show regularities and systematicity in the learning and use of second language (L2) (Ellis, 2008). Regardless of whether it is a first language or an L2, one can find a large amount of evidence in support of the notion that language learning for the speakers of any language is systematic (Doughty, 2003; Ellis, 2008, Pienemann, 2011).

As Doman (2012) pointed out, research conducted in various fields, such as speech processing, SLA, the study of language change and variation, and the study of pidgin and Creole languages, acknowledge contributions to the notion that language learning is systematic. Researchers strongly 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 SLA orders was originally proposed by Dulay and Burt (1973, 1974) and Bailey et al. (1974), inspired by the research by Brown (1973).

Up to the present time, several different studies concerning SLA have examined the validity of processability theory (PT) in a number of languages, including Swedish (Glahn et al., 2001 as cited in Pienemann, 2005b); (Håkansson, 2001, 2013); Arabic (Husseinali, 2006; Mansouri, 2000, 2005); Italian (Bettoni et al., 2009). Moreover, there are some studies done in this field in EFL and ESL contexts (e.g., Taki & Hamzehian, 2016). The results of these studies showed that morpho-syntactic structures were acquired following the fixed sequence predicted by PT. The above-mentioned studies have illustrated that PT has been a focus of research in recent decades. Meanwhile, it seems that the research on the developmental stages of second language learning is in need of more investigation, at least in Iran.

What is missing in the previous studies is that they investigated this stage-like development mostly on speaking skill and two cases on writing skill with the least number of learners and the least number of morpho-syntactic structures. Therefore, the present study aimed at investigating the stage-like development model of morpho-syntactic structures with more detail in EFL learners' writing and speaking performance at different levels from elementary, pre-intermediate, intermediate, upper intermediate, to advanced learners who studied English language during 42 terms. Therefore, the present research focused on the acquisition of the morpho-syntactic structure *do-s-v (o)* 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 mixed-methods design, the purpose was to find out whether the orders of emergence of these structures in the Iranian EFL learners' writing and speaking performances were compatible with the order presented in Pienemann's (2005a) model or not. To achieve this aim, the following research questions were explored:

1. Are there any statistically significant differences among the frequencies of the morpho-syntactic structure of "do- s- v (o)" in the Elementary to advanced EFL learners' writing performance?
2. Are there any statistically significant differences among the frequencies of the morpho-syntactic structure of "do- s- v (o)" in the pre-intermediate to advanced EFL learners' spoken performance?

2. Literature Review

2.1. Background of Processability Theory

Researchers (e.g., Pienemann, 2011; Salleh, 2017), interested in appreciating how people acquire an 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 advanced L2 speakers?) (Hawkins, 2001).

PT's predictions have been found to be compatible with longitudinal results in bilingual and child English L2 acquisition, as outlined in the previous section. One study with contradictory findings is Charters et al. (2011) who claim that in some (exactly 5 out of 36) of the Vietnamese children tested by Dao, plural agreement seemed to appear before lexical plural marking. The study design is, however, cross-sectional and ignores the examined children's previous learning. Thus, the developmental claims may be regarded as not necessarily reliable (Di Biase et al., 2019).

The multidimensional model was proposed by Clahsen et al. (1981) based on further investigations of the morpheme studies to predict SLA sequence. In this model, two significant aspects of L2 development were highlighted: fixed development sequence, which is not affected by the individual and environmental differences, as well as variation 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.

The teachability hypothesis was proposed by Pienemann (1984, 1988) based on his application of the multidimensional model to German as a second language. According to the teachability hypothesis, instruction does not change an 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 universal speech processing constraints in order to explain the implicational order of SLA. This theoretical framework initiated a shift in research from the multidimensional to PT (Pienemann, 1998b). PT is a psychological approach toward language acquisition processes indicating that language acquisition is reliant on the acquisition of a set of procedural skills. The aim of PT is to solve the developmental problem of what causes the development of L2 competence to follow a describable route. The main 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, 2005a), one can identify the current states of learner's L2 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 an L2. In the first stage, learners develop a lexicon that is the basic element of 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 are brought together by intra-phrasal components such as conjunctions. Nevertheless, learners have no knowledge of 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, 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 processing of the former stages. As Pienemann (2005a) stated, the logic underlying PT 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" (p. 2). Therefore, new linguistic information can only be acquired if the prerequisites have been previously provided. It is consequently important to understand the architecture of the language processor and the way in which it handles an L2. 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 L2 development provides important insights into what learners are ready to acquire in the foreign/second language at any given point of time and this can support L2 learning both in natural and instructional settings (e.g., Kessler, 2008, Pienemann & Kessler 2007). Pienemann (1998a) claims that English morphology and syntax develop in six stages, including 6 stages of word/lemma, category procedure, noun phrase procedure, verb phrase procedure, sentence procedure, and subordinate clause procedure.

2.2. Lexical Functional Grammar

Processability theory is 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 simply, the process of feature unification ensures that the different parts that constitute a sentence do fit together. (Pienemann, 1998a). The original version was published by Kaplan and Bresnan in 1982 and consisted of three parts: a constituent structure(c-structure) component that generates surface structure constituents and c-structure relationships, a lexicon whose entries contain syntactic and other information relevant to the generation of sentences, and a functional component which compiles for every sentence all the grammatical information needed to interpret the sentence semantically.

The model was revised by Bresnan (2001) and contains additional features that were necessary to preserve the principle of typological plausibility. While the original version only accounted for the constituent structure, Bresnan (2001) included an argument and functional structure (a- and f-structure). These structures only appear in the extended version of PT since the original version (Pienemann, 1998a) was based on the early LFG. Pienemann's (2005a) choice for LFG 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 very important 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 2005a, p.18).

LFG also adjusts to PT because the grammar has proven to be typologically plausible. According to Pienemann (2005a), 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 the atoms of the syntactic structure, signifying that they are the smallest units of the language (Fabri, 2008).

2.3. Previous Studies

PT has been supported by numerous studies. Table 1 shows that the studies through almost two decades confirmed the PT. These studies have been done in different languages focusing on various morpho/syntactic features.

Table 1

Interlanguage Studies based on PT from 1996 to 2004 (Pienmann, 2005b, p. 61-65)

Researcher/Year	Language	Structure	Results
Fetter (1996)	English	Morphosyntax	Does not confirm PT as there are a lot of patterns missing in the implicational scaling
Pienemann & Håkansson (1999);	Swedish	Morphosyntax	Confirmation of PT
Bartning (2000)	French	Morphology and Syntax	Morphology is more systematic and develops in a predictable way, unlike syntax
Mansouri (2000)	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
Håkansson, 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)	Japanese	Morphosyntax	Confirmation of PT

Table 2 displays that most of the structures are acquired according to the schedule predicted by the PT.

Table 2

The Latest Interlanguage Studies based on PT

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
Håkansson & Norby (2007, as cited in Håkansson, 2013)	Swedish	Written and oral production	Confirmation of PT
Philipsson (2007)	Swedish	Question and verb morphology	the structures testing declarative knowledge, unlike procedural, are not acquired according to the predictions of PT
Ellis (2008)	English	Grammatical structures	the structures testing declarative knowledge, unlike procedural, are not acquired according to the predictions of PT
Jensen (2008)	German	Cross-sectional study of German word order	Confirmation of PT
Rahkonen & Håkansson (2008, as cited in Håkansson, 2013)	Swedish	Lexical morphology Phrasal morphology Inter-phrasal morphology	The structures emerge according to the predicted order, lexical and phrasal morphology emerge first, followed by the word order in subordinate clause
Doman (2012)	English	Syntax (relative clauses)	Confirmation of Pienemann's Teachability 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 testing
Zhang & Lantolf (2015)	Chinese	Topicalization in Chinese language	It is possible to artificially construct a developmental route different from the one predicted by developmental sequences
Salleh, R. T. A. M. (2017).	Malay/ English	plural expressions	Confirmation of Pienemann's Teachability Hypothesis
Vahdat et al. (2018)	Iranian	Right- and Left-Brain Dominance	No Confirmation of Pienemann's Hypothesis
Tabatabaee et al. (2021)	English	negation	Confirmation of Pienemann's Teachability Hypothesis

Furthermore, as shown in Tables 1 and 2, it is possible to predict the path of an L2 by applying PT not only to English but also to other languages as well. PT has been supported by a number of empirical studies, which have mainly targeted learners' oral performance (e.g. Baten, 2011, Kawaguchi, 2009; Dyson, 2009). Recently, the learners' production as well as the reception skills have been tested using the PT framework (Spinner, 2013; Buyl & Housen, 2015). 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 performance based on PT has not been sufficiently studied yet. The 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. Michimoto (2015a) discusses how to establish a suitable method for designing writing tasks. In his current study, a reanalysis was done for the data from Michimoto (2015a) by separating morphology and syntax in accordance with 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, Håkansson and Norby (2007) 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 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: 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, Mohammadkhani et al. (2011) tried to find a relationship between L2 instruction and learners' productive use of 3rd 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 were in lower levels of development based on PT (Pienemann, 1998a, 2003) while advanced and intermediate learners were in higher levels of processing capacity and could provide the grammatical structures systematically.

Vahdat et al. (2018) ran an investigation into the syntactic development of right-brain and left-brain dominant Iranian EFL learners based on PT. Iranian university students, who took part in this study, received a demographic questionnaire, the hemisphere dominance inventory (DHI), a validated researcher-made grammar test designed based on the stages of PT. To analyze the data classical item analysis was used. The results of the research questions revealed that the stages predicted by PT did not account for the Iranian left and right-brain dominant EFL learners in learning syntax. Results of this study indeed showed that the difficulty level of different grammatical structures presented by Pienemann's PT did not match the difficulty order obtained in this study by Left and Right-Brain Dominant EFL respondents.

Also, Tabatabaee et al. (2021) studied the acquisition of copula inversion and negation across five proficiency levels, from elementary to advanced, and compared it with the stage-like development model of morpho-syntactic structures. They found that the competence of the learner grew stronger in concern with these variables through the higher proficiency levels. They concluded that PT is valid for Iranian EFL learners' stage-like development of morpho-syntactic structures.

As it is evident, there are very few studies testing PT on EFL learners, and in other countries, PT has been supported by a number of 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 tries to address this gap by focusing on the acquisition of *"do- s- v (o)"* across five proficiency levels, from elementary to advanced on EFL learners' writing and speaking performances and comparing it with Pienemann's (2005a) stage-like development model of morpho-syntactic structures.

3. Methodology

Following a descriptive model of research, and a mixed data collection procedure of writing and speaking performance, the purpose of this study was to find out whether *do- s- v (o)* in the Iranian EFL learners' writing and

speaking performances was compatible with the order presented in Pienemann's (2005a) PT model or not. Accordingly, *do- s- v (o)* is a morpho-syntactic feature, which does not emerge very early in the interlanguage of the language learners' performance and emerges in the third stage of L2 development.

3.1. Participants

Since the study included participants from different institutes from elementary to advanced levels and the researcher did not afford random sampling from a pool of participants, the researcher followed a non-random and availability sampling. The research was administered in different branches of a language institute, located in the city of Tehran. The proficiency level of participants ranged from elementary to advanced (i.e., 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 ages ranged from 18 to 55 years old. They were all native speakers of the Persian language, learning English through the Touchstone series from elementary to advanced levels. The learners' proficiency levels were determined using institutional placement tests.

3.2. Corpus

The corpus, utilized in this study, consisted of learner corpora output, collected from the EFL learners studying in different branches of a language institute in Tehran. The corpora were 350 writings from the five levels of the elementary, pre-intermediate, intermediate, upper-intermediate, and advanced learners. The writings were elicited through different writing tasks, such as picture description task, habitual action task, story writing task, story retelling task, audio-video retelling task, communication task, introduction task, and composition.

Furthermore, the second part of the corpus in this research was the recorded interviews of 45 students chosen based on availability circumstances: 10 students from the pre-intermediate level, 15 students from the intermediate level, and 20 students from the advanced level. They were interviewed on topics with such tasks as picture description task, habitual action task, story writing task, story retelling task, audio-video retelling task, communication task, introduction task, and composition.

3.3. Procedure

The procedures followed in the present research included the following steps. Initially, the data were collected through different tasks including an introduction task, habitual action task, story retelling task, picture description task, composition, and communication task. Then, the raters were trained for the assessment of the participants' writings and recording interviews at different levels based on the model presented by Pienemann (1988, 2005a) related to the type and frequency of morpho-syntactic structures at different stages, Finally, the writings were rated, (i.e., 1 for correct morpho-syntactic structure and 0 for each absent or incorrect structure).

3.4. Data Analysis

Analyzing the data via Statistical Package for the Social Sciences (SPSS) version 22, the written and spoken data in this research were analyzed qualitatively in order to identify and classify the type and order of the morpho-syntactic structures. The quantitative data were analyzed using cross tabulation, normality test, and Kruskal-Wallis test.

4. Results

4. 1. Results for "do- s- v (o)" in participants Writings

The variable studied in this dissertation was *do- s- v (o)* usage across the levels, from elementary to advanced and the purpose was to analyze the performances based on the stage-like development model of morpho-syntactic structures proposed by Pienemann (2005a).

Table 3

Crosstabulation of Do-Subject-Verb by Levels

Count

		Do-Subject-Verb				
		.00	1.00	2.00	3.00	Total
Level	Elementary	62	0	0	0	62
	Preintermediate	45	0	0	0	45
	Intermediate	42	0	0	1	43
	Upperintermediate	98	2	0	0	100
	Advanced	87	6	2	5	100
Total		334	8	2	6	350

In Table 3, the lowest and highest scores and the frequency for the scores in regard to language learners' performance for true usage of *do- s- v (o)* have been illustrated. The next step for this variable is to show the graphic representation of the distribution of *do- s- v (o)*across five levels from elementary to advanced. In order to find out if there is any significant

difference among the distributions of *do- s- v (o)* 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
Tests of Normality[b,c] for Do-Subject-Verb

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Level	Statistic	df	Sig.	Statistic	df	Sig.
Do-subject-verb	Intermediate	.537	43	.000	.140	43	.000
	Upper-intermediate	.537	100	.000	.123	100	.000
	Advanced	.504	100	.000	.383	100	.000

a. Lilliefors Significance Correction
b. do-subject-verb is constant when Level = Elementary. It has been omitted.
c. do-subject-verb is constant when Level = Pre-intermediate. It has been omitted.

Table 4 shows that the data is not distributed normally (p <05). Therefore, Kruskal-Wallis Test was chosen to compare the means of distribution of *do- s- v (o)* at each level.

Table 5
Ranks for Do-Subject-Verb

	Level	N	Mean Rank
dosubjectverb	Elementary	62	75.00
	Preintermediate	45	75.00
	Intermediate	43	76.74
	Total	150	

Table 6
Kruskal Wallis Test for Do-Subject-Verb

	Do-Subject-Verb
Chi-Square	2.488
df	2
Asymp. Sig.	.288

According to Table 6, there is no statistically significant difference among the distribution of *do- s- v (o)* across language learners' levels of language proficiency.

4. 2. Results for Do- S- V (O) in Interview Data

After running normality test for the interview results, it was noticed that the data is not distributed normally. Therefore, Kruskal-Wallis test was run to find the answer to the second research question.

Table 7
Kruskal-Wallis Test for Do- S- V (O) in Interview Data

	Level	N	Mean Rank	Chi-Square	df	Sig
Total degree	preintermediate	10	27.55	1.568	2	.457
	Intermediate	15	21.87			
	Advanced	20	21.58			
	Total	45				

Table 7 displays the findings regarding the *do- s- v (o)* in participants' interviews. The table indicates there is no statistically significant difference among the distribution of *do- s- v (o)* across language learners' level of proficiency, X^2 (2, n=45) = 1.568, p = .457

5. Discussion

The findings of this study showed no significant difference in the distribution of *do-s-v (o)* across different levels. First, the results showed that the use of *do-s-v (o)*was not observed in the writing and speaking performance of language learners in the elementary and pre-intermediate levels but in the intermediate, upper intermediate, and advanced levels with the gradual increase in the language proficiency level. The findings imply that *do-s-v (o)* is a morpho-syntactic feature, which does not emerge very early in the Interlanguage of the language learners' performance. However, the competence of the learner grows stronger in concern with this variable through the higher proficiency levels. The findings of this study are in line with Pienemann (1998a) who concluded that this structure emerges in the third stage of L2 development. The findings of the present study are generally consistent with the predictions made by PT. Generally, PT was shown to be valid for Iranian EFL learners.

The findings of this research are in line with Tabatabaee et al. (2021) focusing on the acquisition of copula inversion and negation. They found that the competence of the learners grew stronger in concern with their chosen variables through the higher proficiency levels. They implied that PT is valid for Iranian EFL learners, as well. Meanwhile, the present study was different

in findings from Vahdat et al. (2018) whose study did not fit into Pienemann's (2005a) suggestions. They concluded that the difficulty level of different grammatical structures presented by Pienemann (2005a) in PT did not match the difficulty order obtained in this study by Left and Right-Brain Dominant EFL respondents.

6. Conclusions and Implications

According to the results of the study, it is concluded that Iranian EFL learners pass through definite stages in the processing of L2 development. Their development is progressed hierarchically. These stages are acquired cumulatively in an order predicted by PT. Systematicity in language acquisition is certainly a substantial consideration and this has given rise to theories such as the one proposed by Pienemann (2005a). PT is intended to explain why L2 learners follow a similar path in the development of morpho-syntactic structures (Plag, 2008). It paved the way for scholars to theoretically predict the order of acquisition for L2 grammatical skills. Processability theory has then shed new light on SLA studies. The findings of this study are hoped to have both theoretical and practical implications. Meanwhile, variability ought not to be neglected since it can shed light on idiosyncratically and socially motivated variations in language learning.

The results of this study reveal that the existing models for illustration of stage-like development of morpho-syntactic structures in the development of an L2 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 an L2. 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 material developers. 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 SLA provides important insights into what learners are ready to acquire in the foreign/second language at any given point in time. Therefore, this can support L2 learning both in natural and instructional settings. The teachers will benefit from this study in a way that they can provide appropriate input to their learners. They can evaluate the syllabuses in terms of their adaptation with the natural order language development as suggested by the relevant models. They can also choose the best materials from among the available textbooks. Furthermore, they can have a better view in 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. Furthermore, it is important to describe and determine developmental stages in advance 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 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 an L2. 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 L2 and they are indicators of progress.

There are also some implications perceivable for language learners. The process of language learning can be discouraging for the 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.

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