The Acquisition of English Grammatical Morphemes: A Case of Iranian EFL Learners

By Fatemeh Behjat & Firooz Sadighi

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Abstract

According to Hawkins (2001), in an unplanned, spontaneous production, language learners follow the same order of development in using English grammatical morphemes from copula and auxiliary *be*, to past tense, to 3rd person singular –s, plural –s and so on, with almost no account of the learners’ age, native language, and learning conditions and language background. As he proposed the L2 English verbal and nominal morphology constructing representations in a predetermined sequence, the present study was an attempt to investigate whether Iranian EFL learners at different ages and learning conditions follow the same path in their acquisition of grammatical morphology. For this purpose, a number of 70 language learners studying English at different ages and conditions, i.e. high school, junior high school, and university were selected as the participants. A grammaticality judgment test, the validity and reliability of which was proven to be acceptable, was administered. The participants were expected to judge the grammatical and ungrammatical sentences and make corrections on the ungrammatical sentences. The result of the analysis of the learners’ scores on the test revealed that
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Iranian EFL learners develop their knowledge of English noun- and verb-related morphology in the following way: copula be auxiliary be aspect (progressive) past tense plural -s 3rd person singular –s (subject-verb agreement) in the same way as Hawkins (2001) suggested.

Key Terms: second language acquisition, grammar morphology, EFL learner, sequence of grammatical morphology development

Introduction

It has long been suggested that the development of syntax in second language acquisition can be thought of as the consequence of building mental grammars subconsciously by language learners. The acquisition of English morphology as a second language has been under investigation by many researchers to come up with a descriptive generalization. Research has shown that there are some typical stages in the development of morphology and syntax (Lightbown and Spada, 2000). While there is a common belief on the difficulty of acquisition in English bound and free morphemes, in that free morphemes are acquired with a considerable ease compared to bound morphemes, and there is a general path for the acquisition and sequence of grammatical morphemes, there are some trivial disagreements on the precise order according to which grammatical morphemes appear. For example, while Brown (1973) stated that the plural marker (-s) is acquired before copulas and auxiliaries, Andersen (1978) mentioned that copulas and auxiliaries are acquired prior to plural making morpheme in English.

The present study takes Andersen’ (1978) study as the starting point, in which he looked at the performance of Spanish-speaking ESL learners of English. He analyzed the data on the acquisition of English grammatical morphemes into two syntactic classes of verb-related and noun-related morphemes. His subjects were 89 Spanish-speaking ESL learners at the age range of 17 to 19 years old and were at different proficiency levels. Thus, they were heterogeneous as far as their language background was concerned. For
data collection, he used the learners’ written compositions. He concluded that by organizing subjects’ performance on grammatical morphemes into verb- and noun-related classes, there is a degree of difficulty and language learners acquire these morphemes in a predetermined order.

**Objectives of the Study and Research Questions**

Following Andersen (1978) and Hawkins (2001), this study is an attempt to find out if Iranian EFL learners whose native language is Persian follow the same pattern of acquisition at different ages and learning conditions. Therefore, this study tries to find out if there is a scale of difficulty for Iranian language learners of English as far as grammatical morphemes are concerned. Or this purpose, the following research questions were raised:

Q - Do Iranian EFL students develop the acquisition of English grammatical morphemes in a predetermined sequence regardless of their age and learning conditions?

Q - Do the Iranian EFL learners follow the same patterns suggested by Andersen (1978) and Hawkins (2001)?

On the basis of the above-mentioned questions, two null hypotheses were formed:

H0 – Iranian EFL students do not follow the same sequence in their development of knowledge of English grammatical morphemes.

H0 – Iranian EFL learners follow a different order of acquisition for English grammatical morphology.

**Background of the Study**

Second language acquisition research has indicated language acquisition as a systematic process which is internally ordered and established by a set of general rules. Different lines of investigation have witnessed regularities in the developmental sequences of language acquisition (Wode, 1988). As Weist (2002) put it, “over 20 years ago, Wode asked the following questions: Is L2 acquired in a developmental sequence? Is there an ordered sequence of stages? And are the developmental sequences the same for L1 and
Wode answered the first two questions in the affirmative and the third in the negative. So far, a vast body of research has been done to answer such of these questions, the answers of which seem somehow the same while trivial differences have been observed in the acquisition of some grammatical morphemes over the others.

Berko (1956) studied English plurals, verb tense markers, and possessives to see if preschoolers and the first graders possess morphological rules. The subjects’ answers seemed to be orderly, and he found that children operated with clearly delimited morphological rules. He stated that the rule for the formation of third person singular and possessive was better learned or earlier than the rule for the formation of noun plurals. Of the verb forms, the best performance was with the present progressive. Where they provided inflectional endings, their best performance was with those forms that were the most regular and had the fewest variants. His next finding was that boys and girls did equally well on the acquisition of the above-mentioned items. He concluded that factors that influence other aspects of language development may have no effect on morphological acquisition.

Newfield and Schlanger (1968) conducted a research on the acquisition of English morphology by two groups of learners: normal and retarded children. They found that the order of acquisition of morphology by the retarded children paralleled that of the normal children even though there was an undefined time lag between the correct production of English morphological inflections in both groups, indicating the knowledge of morphological rules.

The first longitudinal study on the development of linguistic knowledge in language acquisition was done by Roger Brown (1973) who focused on three children. His study was based on a careful examination of the subjects’ utterances which led to later establishment of empirical generalizations on how any language is acquired. He
concluded that there is a natural order of acquisition of morphology in English as a foreign language. He suggested that the sequence is the acquisition of progressive form (-ing), to plural marker (-s), then copulas (am, is, are), auxiliaries (to be verbs, have, has), and finally third person singular marker (-s) and possessive form (‘s). He stated that naturalness regulates the acquisition of English morphology.

Another early empirical study on the acquisition of grammatical morphemes in second language development was conducted by Dulay and Burt (1974) on two groups of learners in California and New York City. The conclusion they obtained from the subjects’ productions was that some grammatical morphemes in English are more difficult to acquire than others. They also stated that this relative difficulty is not affected by length of exposure. After experimenting with different groups of subjects with different first languages, they came to the same results, meaning that some morphemes are more difficult regardless of different L1s.

Andersen (1978) collected data from the written productions of Spanish-speaking ESL learners and analyzed the data based on the use of English grammar morphology. He divided the morphemes into noun- and verb-related ones and concluded that degree of difficulty can be a feature of syntactic properties that the morphemes realize, than the morphemes themselves. He said that the scale of difficulty of verb-related morphemes can be characterized as copula, aspect, past tense, and subject-verb agreement.

Makino (1980) also used an elicitation technique for English language learners in Japan. Based on the results of his study, it seemed that there was a similar accuracy profile in young and adolescents in L2 English grammatical morphology. He said that this similarity was independent of length of exposure and L1 background.

To compare the acquisition of bound and free morphemes, Hatch (1983) mentioned that the acquisition of bound morphemes was much more difficult than free morphemes. Later he said that phonologically stable morphemes were easier to acquire than those which
were pronounced differently. And affixes which had semantic functions were acquired sooner than those which only had grammatical function. Regarding the functional approaches to language acquisition, the Aspect Hypothesis claims that “first and second language learners will initially be influenced by the inherent semantic aspect of verbs in the acquisition of tense and aspect markers associated with or affixed to verbs” (Andersen and Shirai, 1994, p. 133). Taking into account the role of semantic function of grammatical morphemes being acquired, Pawlak (2008) declared that one reason why third person singular marker or any other grammatical morpheme is hard to acquire is related to the fact that it is not being essential to understanding the meaning of utterances, and it is often perceived as semantically redundant and having little communicative value.

According to Pinker (1999), behavioral and neuro-functional evidence suggest that there is dissociation between rule-based knowledge of irregular past tense and lexical knowledge. An interaction between frequency of occurrence and regular past form was observed by Birdsong and Flege (2001) who stated that computation of regular verb past tense is a matter of rule-based processing, and knowledge of irregular pasts involves access to the items that are stored in the learners’ mind.

Akande (2005), analyzing the data obtained from Nigerian secondary school pupils for morphological errors, pointed out that Nigerian learners’ competence in English morphology was very low, and the errors were caused by factors such as the inconsistency in the morphological rules of English, overgeneralization of rules, misapplication of rules and the interference of the subjects’ mother tongue on English.

Sharwood-Smith and Truscott (2006) suggested an account of crosslinguistic influence in second language acquisition as it occurs in the case of the development of English past tense. They said that it is a matter of natural acquisition and not simply transfer from L1 grammar. Crosslinguistic effects are treated as simply the inevitable result of two
linguistic systems coming to coexist. It is following Lardiere’s (1998) study on an English learner. Lardiere argued that in second language acquisition the feature values of functional categories develop independently of morphophonology, and when problems occur with the latter, they are in the mapping between the abstract categories and their overt realization.

In their study, Bean and Gergen (1990) calculated percentages of accuracy in eleven morphemes: progressive, noun plural, copula, auxiliary, modal auxiliaries, third person singular, possessive, regular past, and two regular auxiliaries. As they were trying to find fossilized and acquired morphemes, they concluded that there is a universal feature for the sequential development of morphemes.

In the acquisition of English morphology, a number of connectionist models have been offered. These models have been successful in finding regularities in past tense and plural making and their development. They strongly support the idea that acquisition of morphology is a result of simple associative principles operating in a natural sequence (Ellis, 2005).

Method

Participants
The participants of the present study were 70 EFL learners studying English in a Junior High School, the Iran Language Institute, and Abade Islamic Azad University. The first group, studying in Junior High School were at the age range of 11 to 15 years old; the second group who were the ILI (Iran Language Institute) students were at the age range of 16 to 21 years old; and the last group were Freshmen at the age range of 22 to 26. The subjects were all female students and were selected quite randomly; they learned English grammar under quite different conditions – using different books, having different teachers who were following different methodologies in teaching English grammar. Table 1 is a description of participants in the study:
Instrumentation

A number of 40 sentences were written for grammaticality-judgment purpose. The test consisted of 12 grammatically correct English sentences. Other items were ungrammatical regarding each of the following verb- or noun-related English morphemes: copula *be*, auxiliary *be*, past tense –*ed*, aspect –*ing*, 3rd person singular marker –*s*, and plural marker –*s*. The distribution of number of items for each of these cases was from four to six. The subjects were required to show the grammatically correct sentences using a tick mark ( √ ), and use a cross ( x ) to show the ungrammatical sentences. They were also required to supply the correct form for the incorrect sentences. The test was piloted twice for reliability. The result showed that the test enjoyed a good level and thus was reliable; then, it was given to two language professors to be reviewed for content validity. Having been proved to be valid as far as its content was concerned, the grammaticality-judgment test was then used as the instrument for collecting data for the study. Table 2 represents item specifications in the newly-developed grammaticality judgment test:

Table 2

<table>
<thead>
<tr>
<th>group</th>
<th>learning setting</th>
<th>number</th>
<th>age range</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>junior high school</td>
<td>22</td>
<td>11-15</td>
</tr>
<tr>
<td>2</td>
<td>Iran Language Institute</td>
<td>20</td>
<td>16-21</td>
</tr>
<tr>
<td>3</td>
<td>University (freshman)</td>
<td>28</td>
<td>22-26</td>
</tr>
</tbody>
</table>
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<table>
<thead>
<tr>
<th>Type of item</th>
<th>Number of items</th>
</tr>
</thead>
<tbody>
<tr>
<td>correct item</td>
<td>3, 6, 9, 14, 19, 22, 26, 29, 33, 34, 35, 37</td>
</tr>
<tr>
<td>incorrect (copula)</td>
<td>36, 38, 39, 40</td>
</tr>
<tr>
<td>incorrect (auxiliary)</td>
<td>1, 11, 20, 23, 30</td>
</tr>
<tr>
<td>incorrect (past –ed)</td>
<td>2, 13, 16, 25</td>
</tr>
<tr>
<td>incorrect (progressive –ing)</td>
<td>4, 10, 18, 24, 28</td>
</tr>
<tr>
<td>incorrect (plural –s)</td>
<td>7, 8, 21, 31, 32</td>
</tr>
<tr>
<td>incorrect (3rd person sing –s)</td>
<td>7, 8, 21, 31, 32</td>
</tr>
</tbody>
</table>

**Procedure**

As the purpose of the present study was to find out whether the Iranian EFL learners at different age ranges and learning English under different conditions could develop the acquisition of vernal- and nominal-related English morphemes in the same way or not, a cross-sectional study was conducted. The participants were selected randomly from those at the age range of junior high school, high school and university students. They learned English grammar under quite different conditions – using different books, having different teachers who were following different methodologies in teaching English grammar.

Following Hawkings (2001), a grammaticality judgment test was then developed consisting of 40 items. The item specifications are represented in Table 2 above. The subjects were required to distinguish grammatical and ungrammatical sentences and provide the correct form for the grammatically wrong sentences for the researcher to make sure that they had found out the area of problem correctly. The newly-developed test was then piloted twice for reliability. The result showed that the test enjoyed an acceptable level ($r = 0.7$) and thus was reliable; then, it was given to two language professors to be reviewed for content validity. Having been proved to be valid as far as its content was concerned, the grammaticality-judgment test was then used to collect data.
The test was administered to all subjects. The test was first given to a Junior high school in Abade and administered to grades two and three Junior high school students who were all female and at the age range of 11 to 15 years old. Then the same test was administered in an ILI (Iran Language Institute) class in Abade at the level of Elementary One. They were again all female students at the age range of 16 to 21 years old. The third group who took the test were a number of 28 female freshmen at the age range of 22 to 26 years old. After the test administration, the scores for each item were obtained. Collecting the data, a new program was written for the computer software Exell to be employed for data analysis. The scores were entered into the computer and each individual performance on every item was obtained, along with the total score of each subject, and the percentage of correct answers given to each item by three groups.

The results are presented in the next section.

Results and Data Analysis
As mentioned before, after the administration of the test and collecting the raw data, the researcher used an EXEL program to analyze the data. The data were entered in separate sheets for each group, and the percentage of correctly identifying the grammatically correct and incorrect items was obtained. The results are represented as follows:

Table 4
The percentage of identifying correct and incorrect items by the participants in different groups

<table>
<thead>
<tr>
<th>groups</th>
<th>correct items</th>
<th>incorrect items</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>32.083</td>
<td>29.464</td>
</tr>
</tbody>
</table>
As it is revealed through the table above, 32.83 percent of the participants who were junior high school students were able to identify the twelve grammatically correct sentences out of forty items, and 29.464 percent of them were able to identify the twenty eight grammatically incorrect items. In case of the second group, 62.879 percent of the participants who learned English at the Iran Language Institute and were at high school students’ level were able to identify the correct items and 59.172 percent could recognize the grammatically wrong items correctly. As for the third group, 95.83 percent of the freshman students at the university found the correct items and 78.95 percent identified the wrong items correctly.

According to the table, the university students were able to do the grammaticality judgment test correctly with a higher percentage than the other two groups. In fact, there is a tendency of percentages of identifying items correctly to be higher from junior high school level to university level. This, however, can not be only the result of increase in age or going to a higher level of learning since other factors such as the materials used, teacher’s methodology and other factors have not been taken into account.

Focusing on the research question and hypothesis, then, the researcher analyzed the participants’ answers to the grammatically wrong items. As it was explained before, the participants were expected not only to recognize the ungrammaticality of the items, but they were also required to supply the correct form. According to table 1, there was more than one item related to each grammar point. For example, the number of items in which the focus was on progressive form (-ing) was five. Therefore, the mean for the percentage of correct answers to each group of related items was computed, and the final percentages were tabulated as follows:

Table 5
The percentage of the first group participants’ performance in the grammatically wrong items

<table>
<thead>
<tr>
<th>copula</th>
<th>past (-ed)</th>
<th>progressive (-ing)</th>
<th>plural (-s)</th>
<th>3rd person sing (-s)</th>
<th>auxiliary</th>
</tr>
</thead>
<tbody>
<tr>
<td>50.62</td>
<td>36.87</td>
<td>27.50</td>
<td>14.00</td>
<td>12.50</td>
<td>41.00</td>
</tr>
</tbody>
</table>

According to table 5, the highest percentage is for items in which copula *be* was under question, which means that 50.62 percent of the students in the first group were able to identify and correct the ungrammatical items in which copula *be* was used incorrectly. The next highest percentage is related to auxiliary *be*, that is 41 percent. Then comes regular past form (-ed), progressive form (-ing), plural marker (-s), and 3rd person singular marker (-s) with percentages of 36.87, 27.50, 14.00, and 12.5 respectively. The table reveals that the order is from copula *be*, to auxiliary *be*, to past tense marker (-ed), progressive form (-ing), plural marker (-s), and 3rd person singular marker (-s).

Table 6 below represents the percentages of the second group’s performance to incorrect items:

<table>
<thead>
<tr>
<th>copula</th>
<th>past (-ed)</th>
<th>progressive (-ing)</th>
<th>plural (-s)</th>
<th>3rd person sing (-s)</th>
<th>auxiliary</th>
</tr>
</thead>
<tbody>
<tr>
<td>75.56</td>
<td>62.50</td>
<td>57.72</td>
<td>50.45</td>
<td>47.27</td>
<td>65.45</td>
</tr>
</tbody>
</table>

Table 6
The percentage of the second group participants’ performance in the grammatically wrong items
Based on the percentages shown in table 6, the participants who were learning English grammar in the Iran Language Institute were able to diagnose the incorrect items with the following percentages: 75.56 for copula *be*, 65.45 for auxiliary *be*, 62.5 for past tense (-ed), 57.72 for progressive (-ing), 50.45 for plural (-s), and 47.27 for the third person singular marker (-s). What can be understood from the comparison between the percentages in tables 5 and 6 is that even though the participants in the second group who were at the level of high school students were able to achieve higher percentages compared to the performance of junior high school students, the order was exactly the same from copula *be* to third person singular marker (-s).

Table 7 represents percentages of correctly identified wrong items by the third group:

<table>
<thead>
<tr>
<th>copula</th>
<th>past (-ed)</th>
<th>progressive (-ing)</th>
<th>plural (-s)</th>
<th>3rd person sing (-s)</th>
<th>auxiliary</th>
</tr>
</thead>
<tbody>
<tr>
<td>95.98</td>
<td>81.25</td>
<td>76.42</td>
<td>73.92</td>
<td>63.21</td>
<td>86.78</td>
</tr>
</tbody>
</table>

On the basis of the percentage representations in table 7, one can discover that the participants in the third group identified and corrected the grammatically wrong items in the following way: 95.98 for copula *be*, 86.78 for auxiliary *be*, 81.25 for past tense (-ed), 76.42 for progressive form (-ing), 73.92 for plural (-s), and 63.21 for third person singular marker (-s). This reveals that although the percentage of identifying and correcting each wrong item group was higher than the other groups, due to some factors not under the control of the researcher, the order according to which correct answers have been given from the most easily detected item, i.e. copula *be*, to the least detected one,
Discussion

Referring back to the research questions and hypotheses, one can conclude from the results of the present study that the first research hypothesis stating the Iranian EFL students at different levels with different language backgrounds and learning conditions do not follow the same sequence in their development of knowledge of English grammar morphology is rejected here. Reordering the items in the above-mentioned tables (tables number 5, 6, and 7) and synthesizing them into one, the tabulated representation would look like the following:

Table 8
The synthesis and reordering of representation of percentages for all participants’ performance in the grammatically wrong items

<table>
<thead>
<tr>
<th>Grammatical morphemes</th>
<th>copula</th>
<th>auxiliary</th>
<th>past (-ed)</th>
<th>progressive</th>
<th>plural (-s)</th>
<th>3rd person sing</th>
</tr>
</thead>
<tbody>
<tr>
<td>group</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>50.62</td>
<td>41.00</td>
<td>36.87</td>
<td>27.50</td>
<td>12.50</td>
<td>14.00</td>
</tr>
<tr>
<td>2</td>
<td>75.56</td>
<td>65.45</td>
<td>62.50</td>
<td>57.72</td>
<td>47.27</td>
<td>50.45</td>
</tr>
<tr>
<td>3</td>
<td>95.98</td>
<td>86.78</td>
<td>81.25</td>
<td>76.42</td>
<td>63.21</td>
<td>73.92</td>
</tr>
</tbody>
</table>

As it is represented here in table 8, the second research question stating that the Iranian EFL learners follow a different order of acquisition for English grammatical morphology is rejected since the same order suggested by Hawkins (2001) can be observed in this study. This order, therefore, suggests a scale for the difficulty level for the acquisition of both noun- and verb-related grammatical morphemes in English for language learners.
On the basis of the participants’ performance in the grammaticality judgment test, a scale of difficulty level can be drawn as follows:

Table 9
The schematic representation of the difficulty level of English grammatical morphemes from the easiest to the most difficult

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>easiest</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>most difficult</td>
</tr>
<tr>
<td></td>
<td>copula</td>
<td>auxiliary</td>
<td>past (-ed)</td>
<td>progressive</td>
<td>plural (-s)</td>
<td>3rd person sing</td>
</tr>
</tbody>
</table>

**Conclusion and Pedagogical Implications**

This study was intended to find out whether Andersen (1978) and Hawkins’ (2001) proposal on the similarity of the sequence in the development of knowledge of English grammar morphology for different language learners at different ages and learning English under different conditions could be generalizable for Iranian EFL students or not. Administering a grammaticality judgment test and analyzing the results, the researcher showed that Iranian EFL students are no exceptions: they follow the same order of development in their acquisition of English grammar morphemes. Therefore, this study supports Hawkins’ representation of grammar acquisition in a predetermined sequence. The order of acquisition comes as the following:

copula *be*, auxiliary *be*, aspect (progressive), past tense –ed, plural –s, 3rd person singular –s (subject-verb agreement).

The results of the present study can be used in materials development programs and syllabus designing as developers can observe the order of acquisition of English grammar and present them in successive lessons in junior high school and high school books. The results are also useful for university teachers who plan to present English grammar in a systematic way in their EFL classes. If language learners know that the acquisition of
English grammar develops in a predetermined order, they can take advantage in their grammar self-study, too.

References


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