The order of morpheme acquisition in Uzbek language (examples of Chinese students learning Uzbek as a second language)

I. A. Azimova1*, K. M. Mavlonova1, O. I. Saidaxmedova1, R. K. Atamuratov1, and O. Abdullayeva1

1 Tashkent State University of Uzbek Language and Literature named after Alisher Navoi, 100100 Tashkent, Uzbekistan.

Abstract. The process of acquiring morphemes is one of the most interesting issues in psycholinguistics. Language acquisition is related to the first language and explains a certain order of acquisition of sounds, words, grammatical signs, sentence structure. This procedure serves as a basis for learning the language as a foreign language. The article shows how the hypothesis of natural order works in the Uzbek language, that is, an experiment was conducted on the acquisition of a certain morpheme earlier than other morphemes in the systematic acquisition of grammatical forms in the Uzbek language. It shows that an experiment was conducted with 14 Chinese language learners studying Uzbek as a foreign language. Experiments were conducted in China, in an environment where Uzbek is not the native language, and the results were generalized. The participants of the experiment were asked to put the necessary morpheme in the blank spaces and to translate the given sentences from Chinese to Uzbek, and to evaluate the experiment carried out by them. From the obtained result, the order of accuracy level of grammatical additions in Uzbek was determined and compared with the order of morphemes obtained in the acquisition of Uzbek as a first language.

1 Introduction

The study of universal linguistic principles in the process of language acquisition has become one of the leading directions in certain scientific fields such as linguistics and psycholinguistics since the 1960s. Particular attention has been paid to determining the order of morphemes in the studies of L1 and L2 acquisition earning the priority. In linguistics, language acquisition is studied mainly from a behavioral, nativism, cognitive point of view. It is undeniable that language acquisition is a complex and multifaceted process. Investigation of different processes occurring in language acquisition and language learning i.e. identification of the vital conditions for language acquisition to be successful, the mechanisms involved, the relationship between perception and production, processes in the acquisition of morphemes in learning particular L1 and L2, clear conclusions to come.
up with through scientific analysis of the morpheme order is one of the current tasks of linguistics. The natural order hypothesis is the acquisition of grammatical rules and units in a certain order. In acquiring the first language, one affix is acquired earlier than another. For example, in English, the present tense morpheme -ing, the plural morpheme -s, and the definite article -s are acquired earlier than the third person morpheme.

S. Krashen brought the “Natural Order Hypothesis” into L2 field. According to this hypothesis, grammatical structures are acquired in a systematic order, and the order is independent of the language learner’s age or his native language [1]. The hypothesis proposed by the scientist had a significant impact on research in the field of second language teaching. And the invariance of the acquisition of grammatical morphemes in English in the late 1970s proved that this hypothesis has a strong basis. H. Dulay and M. Burt emphasized that the issue of natural order also applies to learning a foreign language [2]. Researchers have tested English as a second language and found that the grammatical structure of native and second language learners is very similar. A. Fathman conducted this test with children and teenagers. On the basis of the SLOPE (Second Language Oral Production Exam) test, through 20 different structures, it was proved that the acquisition of a foreign language by children and especially teenagers is similar to the acquisition of grammatical indicators as in the native language [3]. Thus, a number of studies related to this hypothesis have arisen in the field of first and second language acquisition.

A number of studies have been conducted in order to determine whether the set of morphemes identified in the acquisition of the first language is common to the acquisition of the same language as a second language or vice versa. The main part of the research is devoted to the study of morpheme acquisition in English as a second language, and the order of morpheme acquisition was determined based on various methods. Early research in this field belongs to H. Dulay and M. Burt [4]. They investigated the order of acquisition of morphemes based on the method used by J. Villiers and P. Villiers with 151 children living in America aged 5-8 whose native language is Spanish. The order determined as a result of the study is very similar to the order of 14 morphemes noted by R. Brown. Based on the experience, it was concluded that the mechanism of innate syntactic structure in children is also available for second language acquisition. A year later, the researchers experimented with 60 native Spanish and 55 native Chinese American children learning English as a second language. As a result of the experiment, it was found that the order of morphemes in groups with different first language is similar and this order is consistent with the order obtained as a first language. Thus, the view that there is a universal order of learning morphemes was born.

K. Hakuta followed the speech of one 5-year-old girl, and later I. Koike, three (5-year-old girls and 2 boys 7-10 years old) living in America, who were native speakers of Japanese, and recorded their random speech. According to the results of the experimental observation, all children mastered the plural form and articles late [5]. Only a 7-year-old child formed a strong correspondence with the order determined by R. Brown. Researchers believe that first language influences second language acquisition [6]. Errors involving the use of adverbs occurred as a result of children’s transposition and generalization of morphemes in Japanese.

M. Sasaki observes the development of morpheme acquisition of a 9-year-old Japanese girl living in America and compares it with the results obtained by K. Hakuta and I. Koike. According to him, the universal order applies only to some morphemes, and other morphemes are ordered under the influence of the native language [7]. The morpheme pattern identified in children’s acquisition of English as a second language has prompted similar studies in other languages. The development of the order of morphemes was also observed for a year in a 7-year-old child whose first language is...
English and who is learning Japanese under natural conditions. The child was in an English-language environment at home and Japanese-language environment at school, and no additional language training was provided in the Japanese school. He studied the same material as Japanese children. As a result of the study, it was found that the order of morphemes acquisition in children is very similar to that of adults and is consistent with the order of morphemes in the first language. It is emphasized that the age factor is not important in the acquisition of a second language [8].

The speech of an American child learning Spanish under natural conditions was also studied. The identified order was consistent with the acquisition of Spanish as a first language. However, it has been observed that there are many errors related to dropping the morpheme at the end of the word. Researchers assess this situation as the influence of the first language, that is, the arrival of a morpheme at the end of a word is not typical for English, in Spanish grammatical indicators mainly come at the end of the word [9].

N. Bailey, K. Madden, S. Krashen, 73 17-55-year-old native speakers of America living in the United States, in order to examine the presence or absence of the order of morpheme acquisition in the second language, whether this order is consistent with the morpheme order in children’s first language and second language acquisition experiment with adults who are The results of the experiment are similar to the results of the experiments conducted by H. Dulay and M. Burt with children, and they conclude that there are common strategies for the reception and production of linguistic information at any age [10].

T. Makino also conducts a one-time written question-and-answer test with 777 college students studying English in Japan, and the results obtained are the same as those of N. Bailey et al. According to him, these factors do not affect the formation of the morpheme order, regardless of the different teaching programs and additions in the English language at different times, the order remains the same both in natural conditions and when it is acquired by learning the language (in the classroom) by adults [11].

A year later, Y. Nuibe also conducts a written Japanese-to-English translation test with 123 second-year Japanese students studying English at the university 4 times for 6 months. According to the collected data, it is similar to the results of K. Hakuta’s experiments with children, that is, later acquisition of articles and plural forms is evident. Y. Nuibe argues that ordering by a one-time experiment based on the amount of average length of the expression used by J. Villiers and P. Villiers creates an artificial “natural order” [12].

Experiments on order recognition were also conducted with the participation of 40 Korean test takers aged 25-38 who were learning English. In contrast to the ordinal sequence in the native language, the demonstrative form occurred at an early stage of acquisition in these subjects. The acquisition of the plural form is observed at the last stage, and it is concluded that the acquisition of the language as a second language is different from the acquisition of the first language, and the reason for this is knowledge of the first language [13].

Studies on the order of morphemes have been carried out in other languages. In particular, an experiment was conducted with 50 American students studying Chinese in the classroom. The experiment reflected the issue of compatibility of 8 lexical morphemes with the order in the native language. The researcher determined the order according to the answers given orally and in writing, and expresses his opinion that there is a natural order in language acquisition, that the “innate mechanism” also exists for second language acquisition. The transfer observed in the speech of language acquirers interprets a specific morpheme in the native language not as a copy of a specific morpheme in the second language, but as a completion of missing knowledge in the second language [14].

An experiment was also conducted with 111 native Korean language learners of Japanese and English [15]. The experiment was conducted by recording subjects’ oral
The result of the experiment showed that the phenomenon of language acquisition itself is a multi-faceted process, that there is no general order in the acquisition of Korean as a first language and as a foreign language.

An experiment was conducted with 46 students aged 18-38 who are native English speakers, have been learning Turkish as a second language for a year, and who came to Turkey for summer school. The experimental materials were collected over two months. They were asked to write texts on various topics for the experimental material. In addition, their written homework was also used to determine the order. Although there is some variability in the order of acquisition of some affixes, the general order of morphemes is found to be consistent with the order of affixes found in the native language.[16]

Based on the above, it can be observed that different conclusions have been reached about the order of morpheme acquisition. Many researchers have used different methods to determine whether order exists in both children and adults learning a language as a second language. Morpheme order long-track data or percentages for each morpheme once or twice were pooled across all children, averaged, and ranked. A non-significant effect of first language and a slight effect of age on morpheme sequence were observed in second language learners.

In other studies, the method of summing the percentages for each morpheme once or twice across all children and ranking the average is not considered valid. Attention is paid to the fact that only information obtained by observing the process of language acquisition can determine the order of morphemes. Other studies have concluded that the order of morphemes is common to both children and adults learning a second language, but differs from the order found in the native language.

Research in recent years has also shown that the overall sequence of morpheme acquisition by second language learners is strong. At the same time, in any analysis, there is no information about the perfect correlation between the order of morphemes in the first language and the second language, that is, various differences may occur in the acquisition process, but this aspect does not mean that the order does not exist.

2 Research methods

The order and factors affecting the order of acquisition of morphemes in the Uzbek language as a native language were determined based on the experience. We aimed to check whether this applies to Chinese students learning Uzbek as a second language.

While determining the order of adverbs in the acquisition of Uzbek as a second language, we aimed to highlight the specific features of second language acquisition, aspects affecting the order of adverbs in language acquisition, general and specific aspects in the acquisition of adverbs as a native and foreign language of Uzbek.

A task consisting of 36 sentences and a translation test were used for the experiments. In addition, since language acquisition is a process that requires long-term observation, interviews with examinees, online lessons recorded by teachers who teach them, written and oral homework materials, and feedback from examinees on various topics were used. Chinese students studying Uzbek as a foreign language took part in the experiment.

Table 1. Order of morphemes and Factors that affect the order

<table>
<thead>
<tr>
<th>№</th>
<th>Morpheme</th>
<th>Expression form</th>
<th>Semantic meaning</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>aniki</td>
<td>Noun</td>
<td>Possessive</td>
<td>High frequency</td>
</tr>
<tr>
<td>2</td>
<td>da</td>
<td>Noun</td>
<td>Locative</td>
<td>High frequency</td>
</tr>
</tbody>
</table>

Table 1. Order of morphemes and Factors that affect the order
The fill-in-the-blanks task and the translation test require the examinee to perform two different tasks. During the task, the examinee's attention is focused on the need to understand the content of the sentence and to put an addition that complements this content.

In the translation test, the examinee focuses on understanding and translating a sentence in the native language. Its main goal is to convey the content of the sentence, and attention to adverbs falls into the background, that is, adverbs mastered by the examinees are expressed in speech, adverbs that have not been mastered or are in the process of being mastered are omitted, used incorrectly or elsewhere.

Participants of the experiment: 14 students studying in the 2nd year of the Uzbek language department of the East European and Central Asian Language Institute of the People's Republic of China in the 2019-2020 academic year.

The results of the experiment were first statistically analyzed. Accordingly, it was graded according to the use/non-use of the adverb and the correct/incorrect use of the adverb. 0 points if there is no required addition in the required place; 0.5 points if there is a supplement, but it is used incorrectly (in another place); an addition was present and scored 1 if it was used correctly. The accumulated points were divided by the total number of translations of the supplement and multiplied by 100.

The results of the task of putting the necessary morpheme in the given places and the translation test were determined according to whether the examinees used the morphemes correctly, whether the morpheme was omitted or another morpheme came in its place.

From the table above, it can be observed that the experienced Chinese test-takers made fewer mistakes in the plural and past tense forms, and the most errors were related to the...
The overall result is shown in the diagram below.

Table 2.

<table>
<thead>
<tr>
<th>Morphemes</th>
<th>Error</th>
<th>Omitted</th>
<th>Not in place</th>
<th>Error</th>
<th>Omitted</th>
<th>Not in place</th>
</tr>
</thead>
<tbody>
<tr>
<td>lar</td>
<td>4%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>di</td>
<td>8%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>niki</td>
<td>10%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>n-pr.</td>
<td>10%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>yap</td>
<td>25%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>da</td>
<td>28%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a/y</td>
<td>33%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>dan</td>
<td>37%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ning</td>
<td>47%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ni</td>
<td>53%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>poss.</td>
<td>68%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ga</td>
<td>74%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Fig. 1. Results of experiments with Chinese students (as a percentage)

3 Discussion
As a result, the plural form -lar is used correctly almost everywhere. From the experience and the collected materials, the formation of the plural form -s, quantifiers and quantity numbers was recorded. In some places, it was observed that the plural form of -lar was dropped in the expression.

In one place, plural nouns are also added -s. In the sentence People went to the mountain to get firewood, the addition of the plural form to the word firewood indicates ignorance of the fact that this word itself is in the semantic plural. In the Uzbek language, the word firewood is one of the plural nouns, and it is understood as plural. The Chinese understood the word tested as a singular, and as a result added a plural form to it in the expression. The understanding of the word "wood" in the singular is related to the input, that is, the fact that the word is plural in content was not paid attention to in language classes, or the word was translated from Uzbek to Chinese in the singular in translation dictionaries.

It was observed that 8% of errors were made in the use of the past tense, 25% in the use of the present tense, and 33% in the use of the present-future tense. According to the results of the analysis, the time indicators change in the order of past, present and present-future tenses. In the analysis of tense additions, a situation of alternating use of one tense form with another tense form was observed, the tense indicator was not dropped anywhere.

There are two cases of time perception and expression: the testee perceives the time when the action was performed, but the error is expressed, the next case is the incorrect perception of the time, as a result of which the wrong expression occurs.

The most common case of using tenses interchangeably is the use of the past tense instead of the present-future tense, and continuous action is defined as completed action. The use of the past tense in the content of the present-future tense is related to the incorrect perception of time. Pronouns expressing the meaning of time and compounds such as modern boys and modern youth were not taken into account in the expression, or the connection of time with these words was not correctly perceived.

There is a case of using both the past tense and the present-future tense instead of the present tense action. For example, the sentence My computer is not working in the translation test is translated as My computer did not work / does not work, the present tense is perceived as past tense or present-future tense. The sentence given for translation does not use any word or time unit other than a tense adverb, and the examinee may be referring to a situation related to his computer when translating the sentence.

In some places, the use of the present-future tense was observed instead of the past tense:

The past tense is perceived in the sentences, but an error is made in expressing it. There is an imbalance between the reception and expression of the event. In the sentences, a different tense is perceived and the tense morpheme is also used incorrectly.

The acquisition of the past tense form -di earlier than other tense forms also depends on its perceptual salience. Consistent acquisition of morphemes is related to their structure and expression [18]. The easier the structure of the addition is to hear and understand, the faster it is acquired [19]. Attention is paid to the number of phonemes in the morpheme, the fact that they can consist of voiced sounds and only vowels. Clear representation of consonant phonemes and the presence of a vowel phoneme in the morpheme cause the morpheme to be acquired more quickly.

When the verb is marked with tense and person-number morphemes, the past tense morpheme and person-number are expressed together in one syllable (keldim), and in the other tense forms, the tense form and person-number are reflected in separate syllables (kelyapman, kelaman). Ease of expression also affects earlier acquisition of the past tense.
Formative complexity determines the later assimilation of the present-future tenses compared to other tenses. It was noted that among the Chinese students who are learning Uzbek as a second language, there are cases of adding morphemes -a and -y to one root at the same time:

Маслахатнинг унга берса-da, та’симайди, чунки у фақат о’зига изонайди ва босхаларни (га) шуба билишдан зилмайди;

Бугун мен иш топдим, бирга ресторанга (да) овқат ёйамиз;

Бугун нима дейман деб о’yladi. -нiki is the characteristic form of the noun and the forms characterizing the noun to the participle are on the 3rd and 4th place of the order. When using additives, testers made a 10 percent error.

According to the order, the place-time agreement is in the 6th place, the exit agreement is in the 8th place, and the locative case is at the very end of the order. In the course of the analysis of adverbial morphemes, in addition to their use in the required place, there were cases of replacing each other, omitting the morpheme, or overusing them in an unrequired place.

The incorrect use of the conjunctions is related to the meaning of the place, and when defining the meanings of direction to the place, being in the place, and leaving the place, the agreements -ga, -da, -dan are used interchangeably.

Cases where the place-time agreement is used instead of the locative case. In the researched materials, there are many errors in which the locative case is used instead of the locative case, and these errors are not in the sense of place, but person-directed action is perceived as person-directed action.

The most common mistake in interchangeability is to use a receipt agreement when a locative case is required, and vice versa.

Verb tense can also affect the incorrect use of verbs. For example, in the sentence Ўқидан мени имтіхонни таъюрламий узун зиёд к’о’п мутолаа қилдим, the verb to prepare requires that the word it joins be in the accusative case. The testee’s use of a verb in the definite article instead of a word in the singular led to the wrong construction of the compound, and the use of the agreement of receipt instead of the agreement of departure.

47% of the total number of demonstrative agreement errors are marked, most of these errors are related to the dropping of the agreement in speech.

Testees mainly used possessive morphemes to express ownership. The nominative relationship, that is, the absence of nominative agreement in expressing to whom or what something belongs to, means that this syntactic device, or rather, nominative agreement, has not yet been mastered. Chinese test takers learning Uzbek often used possessive morphemes to express ownership. This aspect shows that the input frequency of possessive morphemes is high, that is, the situation of “shadow” and “obstacle” has occurred. When learning two morphemes that are close in function or form, the high-frequency and phonetically easy morpheme “overshadows” the acquisition of the second morpheme, that is, it “blocks” the acquisition of the second morpheme [20]. The high-frequency of possessive adverbs in expressing the meaning of possession has led to the “overshadowing” of the demonstrative agreement form denoting possession. In addition, the complex syntactic nature of the demonstrative case in speech causes the adverb to be dropped from speech. It can be observed that there are several types of errors in the expression of possessive morphemes. Possessive morphemes differ in person and number, besides, depending on the base of the word, one of the morphemes in the case beginning with a vowel or a consonant is added. The main error related to possessive morphemes in the written speech of the Chinese examinees is the use of the singular form instead of the plural forms of possession and the omission of the possessive morpheme in the third person singular. For example, in the translation test, almost 80% of the test takers
used the 2nd person or 3rd person singular form of the possessive when translating the sentence "Sizning opangiz va ukangiz bog‘da ishayapti. Opang va ukang bog‘ida ishayaptilar."

The omission of possession in the third person singular indicates that the test takers have not yet fully mastered the syntactic structure. A number of tasks, such as choosing mutually compatible words, sorting them in person-number, and forming a compound with a focus, showed the occurrence of the following errors in the relationship between the focus and the subject.

4 Conclusion

The results obtained from the experiment—observation process were summarized. According to experience and observation, in the acquisition of Uzbek as a second language, factors such as semantic and formal complexity, frequency of input, first language only in certain places affect the order of additions. In the specified order, morphemes are added first to the noun and then to the verb. The fact that the categorical meanings of the noun are simpler compared to the categorical meanings of the verb influenced the formation of the order. Semantic complexity is also important in the acquisition of Uzbek as a second language. Most of the first five morphemes in the sequence are semantically simple morphemes. Simplicity of semantic meaning causes them to be assimilated earlier than other morphemes.

From experience and observation, it is known that the morpheme-lar is acquired first by test takers with different first languages. According to the meaning of-lar, it means plural, it can be added to all types of nouns. In Chinese, there is no special morpheme to express the plural, formally it is represented by the singular form, the plural is understood through the general content of the sentence. However, the Chinese test takers only used the-lar form correctly 96% of the time.

Semantic complexity explains some of the differences in native and second language acquisition. Generally speaking, adults who are learning a second language can acquire morphemes in a language faster and easier than children who are learning that language as their first language. Hierarchical differences in language acquisition can also be explained in terms of older language learners’ cognitive knowledge of linguistic forms.

From the results of the experiment, it became known that in the acquisition of the Uzbek language as a second language, plural and past tense forms are first perceived, and then possessive and accusative. It was found that the successive assimilation of conjugations, tense forms, and adverbs expressing dependency are mutually similar.

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