A Review of Studies on the Acquisition of English Learners' Ditransitive Construction and the Dative Alteration Construction

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ABSTRACT

English ditransitive construction and dative alteration construction is a structure that English learners are bound to encounter on their way of learning. This paper finds that researchers nowadays mainly adopt the experimental method, corpus research method and experimental method combined with corpus research method to study the acquisition of this structure, as well as the factors affecting the acquisition of this structure are native language, second language level and language input. However, there are still certain problems in the current research such as, lack of comparison of acquisition of different native speakers, and insignificant differences in the level of variables.

Keywords: English learners; ditransitive construction and dative alteration construction; language acquisition

1. Introduction

Most languages have a ditransitive construction. It denotes the passing of an object or other thing between the actor and the recipient. It is a special argument structure, which involves three argument roles, namely the subject, the indirect object, and the direct object. The indirect object refers to the bearer of the action, which can refer to the person or the goal, and the direct object can refer to the thing that needs to be transferred. For example, "Marry gives me an apple". Most of the ditransitive construction can be transformed into dative alteration construction, and their meanings are similar to those of ditransitive construction, both of which represent the transmission of things, but the structures are different. The above example sentence can be transformed into "Marry gives an apple to me".

The English ditransitive construction is the most basic structure in the language, which is closely related to the dative alteration construction, so the learning of ditransitive construction will drive the learning of the dative alteration construction. Because these structures are the basic structures in English, it is difficult for English learners to avoid them in the process of learning English. Therefore, it is worth studying whether English leaner can finally acquire these structures, and what factors will affect the structure in the acquisition process.

2. Research Methods for the Researches on the English Learners' Acquisition of English Ditransitive Construction and the Dative Alteration Construction

Researchers in this field still adopt the following three research methods: experimental research method, corpus research method, and the combination of experimental and corpus. Each of the three research methods has its own merits.

2.1 The Experimental Research Method

Experimental research is a very common research method to study learners' acquisition of English ditransitive construction and dative alteration construction. For example, Ma and Chen (2018) study whether Chinese learners can acquire narrow-range constraints on dative alteration construction, like English native speaker and then distinguish between the English ditransitive construction pairs of the Tell class and the Whisper class, and the Throw class and Push class. The

experimental materials they selected for the experiment were all the above four types of verbs, and they used made-up verbs to reduce the interference from learners' experience. In addition, experimental research methods can force the experimental participants to output the target structure through their design. For example, when studying the priming effect of L2 structures, the researchers use a conversational model to interact with the participants. In this process, the participant would be able to hear the target constructions several times before outputting the language. In McDonough's (2006) experiment, the researchers used this method to force the participants to subconsciously use numerous dative alteration constructions that were heard previously in the experiment when describing the target concepts. In addition, the experiment conducted by Wang (2009) adopted a written sentence completion task, in which the structure required to complete the initiation sentence was already set, which then guided the participants to output the target structure.

However, the experimental research method also has certain drawbacks. Because the environment in the quasi-experiment is not the actual language application environment. It might cause the results of the experiment to be difficult to reflect the learners' real use of ditransitive construction and dative alteration construction.

2.2 The Corpus Research Method

Corpus research method can make up for the shortcomings of experimental research method to a certain extent because corpus research can reflect learners' authentic output of constructions. Hu (2007) adopted the corpus research method in his study of Chinese students' acquisition of English ditransitive constructions, examining the learners' real use of ditransitive constructions in context. He found out that most of the ditransitive constructions are constructed based on a few verbs, such as give and tell, regardless of the learners or native speakers. In addition, researchers can use the corpus research method to find out the developmental trajectory of learners' structure acquisition over time. Xu (2016) found out that there is a difference in the corpus based on the corpus study between beginners and advanced learners. When Chinese learners learn the English ditransitive verb give at an early stage, they would frequently use pronouns as indirect objects, and all the components of the structure are relatively short and have a single semantic categorization; whereas the corpus of the advanced learners shows that in the ditransitive construction, the length of the indirect object becomes significantly longer, and the semantic categorization covered is wider. It can be seen that learners' use of ditransitive constructions is becoming more complex. It would be time-consuming to study the development of scholars' language structure acquisition by actual observation. However, the use of corpus method can greatly solve the time cost of the study.

However, the corpus research method still has some disadvantages since task type and genre of text can have an impact on learners' construction output (Mostafa & Crossley, 2020). As a result, learners are biased towards specific types of verbs and structures in their output due to external factors, which in turn leads to the researcher not being able to obtain a full corpus of the target constructions from the corpus.

2.3. The Combined Experimental and Corpus Approach

The combination of both experimental and corpus methods can reduce the negative effects of using a single research method alone. Xu (2007) first analyzed a corpus (CLEC) and found that

Chinese EFL learners were inclined to use the relatively typical double-object verbs to create sentences. These verbs are mostly verbs for conveying information and verbs of the Give class and Take class such as ask. Chinese ditransitive constructions may have a transfer effect on the output of English ditransitive constructions. Subsequently, based on the corpus findings, the researcher used an experimental method to select typical verbs and ditransitive verbs that are not often used in Chinese learning, i.e., English specific ditransitive verbs such as back, knit, mail, etc., and tested them on the study participants. After comparison of the experimental results, it was found that the participants were found to have the worst mastery of the words unique to the English language. It can be seen that the study through the corpus can help the researcher to choose the appropriate experimental materials more accurately.

3. The Effects of Different Native Language Transfer on the Acquisition of Ditransitive Construction and Dative Alteration Construction

3.1 Japanese

As early as Inagaki's (1997) study, the researcher has found that mother tongue affects the transformation of English learners' ditransitive constructions and dative alteration constructions. Inagaki chose Chinese learners and Japanese learners for a comparative study, and found that the Japanese learners could differentiate between Throw-class and Push-class ditransitive constructions, but could not differentiate between Tell-class and Whisper-class constructions. However, the results for the Chinese learners were the opposite. This is because there is only one case of alternation with grammatical case in Japanese, which leads Japanese learners of English to rely less on their mother tongue when learning this structure, and tend to come to the meaning of the verb instead.

3.2 Chinese

In Chinese, there are differentiated semantic features of throw and push ditransitive constructions. However, the Chinese ditransitive constructions of these two types of words do not have differentiating features, so Chinese learners of English at low and intermediate levels are unable to differentiate between these two types of ditransitive constructions in English (Ma & Chen, 2018). It can be seen that some English ditransitive constructions that have no counterparts in Chinese are more difficult for some beginners to acquire. For example, the Chinese counterparts of write and show are not double transitive verbs, resulting in the fact that the learner cannot smoothly use the words as ditransitive constructions. However, there exists the same dative alteration construction as in English, which can be reflected as: *He wrote a letter to me*, with the corresponding dative alteration construction in Chinese as *他写了一封信给我*. In the study by Ma et al. (2016), it was found that for those English ditransitive constructions that could find their counterparts in Chinese, the usage rate of the researches' participants was significantly higher than that of other types of ditransitive constructions. The researchers attributed this to native language transfer, which could also explain Yang's (2013) corpus-based (SWECCL) finding that Chinese learners of English use dative alteration constructions more frequently than grammatical ones.

3.3 Korean

A similar phenomenon of negative native language transfer occurs in the English learning process of Korean learners. Since the grammatical structures of Korean and English ditransitive constructions are different but benefactive ditransitive constructions are similar, Korean learners' acquisition of English benefactive ditransitive constructions lags far behind that of goal ditransitive constructions (Oh, 2010). In addition, Kim and other researchers (2020) found that Korean learners of English accepted sentences with dative alteration constructions more than ditransitive constructions by adopting an acceptability judgement task. It was inferred that Korean learners preferred the use of dative alteration construction. The researcher hypothesized that this was because the Korean language favoured the use of dative alteration construction. In a follow-up study, the researcher found that the Korean learners' brains took longer to process the processing of ditransitive construction than the dative alteration construction, regardless of the learners' level of proficiency and whether the verbs were common or not.

4. The Effect of Second Language Level on the Acquisition of Ditransitive Construction and Dative Alteration Construction

4.1 Differences in the Acquisition of Ditransitive Construction and Dative Alteration Constructions of Learners with Different English Level

Foremost, English learners with low levels of proficiency are most affected by the negative transfer of their native language. Ma and other researchers (2016) used an experiment in the form of a questionnaire to test learners of different levels. The range of participants' learning levels was categorized into high and low levels, with the highest being the 3rd year level of English majors at Hunan University. Their experiment found that low-level English learners were most vulnerable to the negative transfer of their mother tongue and were unable to distinguish between Throw-class ditransitive constructions and Push-class ditransitive constructions. The high-level group, on the other hand, had longer and richer English learning experience and could distinguish between these two types of ditransitive constructions. Unfortunately, the study used only four categories of words for the experiment, and if the categories were richer, the findings would be generalizable.

Second, with the improvement of second language proficiency, the meanings of English ditransitive constructions produced by Chinese students show a tendency to spread from the central to the marginal meanings (Hu, 2007; Zhou & Yan, 2015). In a study by Qiu & Peng (2024), it was found that as the level of second language improves, learners will rely less on concrete vocabulary and finally slowly form abstract syntactic representations. Even if the central vocabulary is different, it can have a priming effect. Therefore, learners with higher bilingual proficiency can use ditransitive construction with non-centre words flexibly. Hu (2007), based on the corpus of Chinese Learners' Written Corpus (CLEC) and the Corpus of Native Speakers' Written Corpus (LOCNESS), found that the developmental pattern of English ditransitive constructions by Chinese students is similar to the acquisition process of the construction by native-speaking children. Typical ditransitive constructions with central meanings were the main output of low-level students, while the meanings of ditransitive constructions produced by high-level learners gradually spread to the marginal meanings. Zhou and Yan (2015), based on a corpus of Chinese students' spoken and written language, found that ditransitive verbs belonging to the central

meaning, such as give, were used most frequently by the low-level group of students. In addition, low-level English learners used more central meaning constructions and less marginal meaning constructions, which echoed the findings of Hu's study. The study also found that although the percentage of ditransitive constructions with marginal meanings was higher in the high-level learners than in the low-level learners, the high-level learners did not output ditransitive constructions with more meanings than the low-level ones. However, in Xu's (2016) corpus-based (CLEC) study, it was found that learners output more richly meaningful ditransitive constructions as their second language level increases. It can be seen that different corpora each have their own focus, but it also leads to incomplete coverage of the corpus collected by the corpus, thus contradicting the results of the studies based on different corpora.

4.2 Similarities in the Acquisition of Ditransitive Construction and Dative Alteration Construction of Learners with Different English Level

Although the improvement of second language level promotes the acquisition of constructions, in some aspects, there is no significant difference between learners of different levels. In a study by Ma and Chen (2018), although high-level learners could discriminate between Throw-class ditransitive constructions and Push-class ditransitive constructions of true words, they had difficulty in applying the underlying semantic rules to semantically oriented judgments of generative words. This is the same as the low-level learners, who are unable to acquire any rules of narrow-range constraints of dative alteration construction at the semantic and subconscious levels as native speakers do. In addition, in Xu's (2013) study on the recognition and judgment of constructions with meaning of "transfer" and "role", different levels of second language proficiency of English learners performed more or less the same, but the difference in the English level of the participants in this study was not particularly sharp, i.e. the difference between undergraduate and graduate students of non-English majors in the same university, which may make it difficult to detect the ability of different groups of people to recognize the meaning of constructions.

5. The Effect of Language Input on the Acquisition of Ditransitive Construction and Dative Alteration Construction

5.1 The Priming Effect on the Output of English Learners' Ditransitive Construction and Dative Alteration Construction

Structure priming, also known as syntactic priming, refers to the tendency of people to speak using recently heard syntactic constructions. Initiating construction can help children acquire and reinforce syntactic structures that have not yet been fully acquired (Huttenlocher et al., 2004). McDonough (2006) investigated whether structure priming occurs in the output of English ditransitive constructions by Chinese English students in the United States through a conversational interaction experiment with six test questions, and found that structure priming only occurs in the output of dative alteration construction, and concluded that learners' use of ditransitive constructions is not affected by structure priming. However, the results of a study by Wang (2009) were the opposite, as the author conducted an experiment with subjects using 15 test questions. It was found that under the ditransitive construction initiation condition, the frequency

of participants' use of ditransitive constructions increased dramatically. Previous research has found that the structure priming effect is enhanced by an increase in the number of test questions (Wang, 2009), so the findings of Wang's study, which used 15 test questions to simultaneously control for the priming effect of the selected verbs, are relatively more convincing.

5.2 The Effect of Input Frequency on the Acquisition of Ditransitive Construction and Dative Alteration Construction

According to the theory of usage-based language acquisition, every time one is exposed to a certain language structure, traces of the structure and the context in which it occurs are left in the human brain. With more exposure to this structure, learners can extract patterns of language use from it (Ellis et al., 2014). Thus, the more frequently a given construction occurs, the easier it is for the learner to understand and acquire it. Kim et al. (2017) conducted a reading activity for one month and analyzed the output of ditransitive construction after the reading activity. It was found that typical examples of English ditransitive construction, such as give and show, appeared frequently in the reading reports of the participants, who were beginners in English. Zhang's (2015) study found that for the beginners to learn new verb constructions, the language input of the typical exemplars as "learning companions" means that they focus on the typical exemplars before gradually introducing other atypical exemplars. The typical example was first emphasized, and then other atypical examples were gradually introduced. In contrast, the "learning companion" approach, in which equal emphasis is placed on the different examples, is more effective for beginners. Both sets of studies are in favour of skewed input, i.e., typical examples are more beneficial to learners' second language acquisition.

It is undeniable that skewed input, i.e., high-frequency input of a particular verb construction, does promote acquisition with that verb construction (Goldberg et al., 2004). However, Year and Gordon (2009) conducted an experiment over several weeks, in which participants were given a specific frequency of input for eight weeks. The participants in the experiment were all first-grade students in Korean public secondary schools with relatively lower levels of English proficiency. The results of the study found that the experimental group that received balanced input (similar to the dissimilarity paradigm "study partners") performed better in acquiring English ditransitive constructions and dative alteration constructions than the experimental group that received skewed input. Similarly, McDonough and Nekrasova-Becker (2014) took an experimental approach to compare the efficiency of skewed and balanced input on the acquisition of ditransitive constructions and dative alteration constructions using native Thai-speaking university students as participants. It was found that balanced input can also assist English learners in acquiring the target structure, and at the same time, it can also assist learners in forming an inclusiveness of other verb categories, to abstract and generalize a universal pattern from many independent ditransitive constructions with different verbs, but there are some flaws in their study, namely, the participants' English proficiency is relatively high, and it is possible that some of them have already acquired the target structure, which may have a finding of the study to some extent. Therefore, which approach, balanced input or skewed input, is more conducive to learners' learning actually needs to be further explored. It is possible that in short-term practice, skewed input will make learners learn the paradigm faster. However, eventually, balanced input may help learners to be exposed to a more diverse range of paradigms, making the learners themselves more inclusive.

Secondly, it remains to be explored by scholars whether the years of English education of the participants had an impact on the acquisition of the types of constructions, which led to the differences in the results of different studies.

6. Conclusion

According to the present research, it can be found that there are three main research methods for the acquisition of this structure: taking the experimental method, the corpus research method and the experimental method combined with the corpus research method, which have their own merits. The experimental approach can regulate the input and output of language learners through variable control. However, it is difficult to truly reflect the output of learners in real discourse. The corpus research method can make up for this deficiency. However, specific task types can lead to a clear bias towards certain types of English double-object constructions. Therefore, the combination of the two approaches can largely compensate for the shortcomings of both.

In addition, there are many factors affecting the acquisition of the construction, such as the negative transfer of native language, English language level, and language input. For the native language factor, although of the existing studies on this factor, there are fewer cross-language (native language) comparative studies, mostly focusing on the acquisition of a particular native language learner. However, we can also find that English learners of different mother tongues have more or less unique negative native language transfer situations in the process of learning. Many of these negative transfer situations can be overcome by improving second language proficiency, but some of the problems cannot be solved by simply improving language proficiency, such as the dative alteration with narrow-range constraints. However, for the factor of second language proficiency, it is sometimes not possible to accurately differentiate learners' English proficiency based on their age or academic qualifications alone.

Finally, if we look at the structure from the perspective of language input, we can find that experimental studies on the priming effect of the structure require a certain amount of input for the priming sentence, and too little input will lead to biased results. Secondly, for skewed and balanced input, researchers need to reduce the effect of the English level of the subjects on the results of the study, for example, by selecting subjects with low education. In addition, the question of which form of input is more effective in acquiring the structure appears to be inconclusive and deserves to be explored further by researchers.

Conflicts of Interest

The author declares that there is no conflict of interest regarding the publication of this Article.

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