

The Enlightenment of the Prototype Category Theory to the Acquisition of Prepositions--- in the Case of Preposition “in”

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Abstract :

Small as it is, preposition plays an important role in the English sentence construction. Whether the preposition is used properly in the sentence exerts great influence on the whole sentence. However, previous studies have demonstrated that learners’ acquisition of preposition, especially high-frequency preposition, is not as satisfactory as expected in general. And, previous researches also claimed that the prototype category theory pose great benefits on the acquisition of prepositions. As a result, this paper take “in” as an example to investigate how the prototype category theory help learners better acquire prepositions. After analyzing the prototype category theory, the polysemy phenomenon and various senses of preposition “in”, this paper finally concludes the enlightenment of prototype category theory to the acquisition of prepositions.

Key word: preposition; prototype category theory; senses; acquisition

1. Introduction

Preposition show great influence on the English sentence construction. In addition, preposition is endowed with abundant senses, which pose thorny problems to English learners. Traditional linguistics believed that various senses of preposition are independent. However, with the deeper understanding of cognitive linguistics, linguists gradually recognized that there do exist relationship among the multiple senses of preposition. They found that the prototype category theory can help explain that phenomenon. In addition, the master of prototype category theory and relations among various senses can assist English learners to grasp prepositions. According to the previous corpus studies based on the BNC and CLEC, the top five most frequently used prepositions are “in”, “to”, “for”, “on” and “at”. At the same time, the previous research has also shown that “in”, “at”, “on”, “to” and “for” are the five most frequently misused prepositions (Dai Lijia, 2010). In view of this, this paper, using “in” as representatives, attempts to explore the enlightenment of the prototype categorization theory to the acquisition of prepositions. This paper is divided into five parts. The first part is the introduction, which briefly introduces the background of the study, purpose and significance of the thesis as well as the organization of the thesis. The second part is the review of the related literature with the aim to lay a solid foundation for the following research. We review the previous studies from three aspects. The studies of preposition focusing on their semantic meanings and acquisition as well as studies on the enlightenment of the prototype category theory to the acquisition of prepositions are examined respectively. The third part is the detailed description of the methodology. The fourth part is discussion, which can be further divided into four sub-parts. The prototype theory, the polysemy phenomenon, semantic analysis of preposition “in” and the enlightenment to the acquisition of prepositions are discussed carefully. The last part presents the ultimate conclusion of the whole paper.

2. Literature review

This part covering three sub-sections provides an exhaustive review about the studies on preposition and the enlightenment of the prototype category theory to the acquisition of prepositions. The review inspires the current research and paves the way for further study.

2.1 Studies on the meaning of prepositions

Owing to the flourishing of cognitive linguistics, recent years have seen the spurt of studies on the meaning of prepositions.

Some studies were theoretically-oriented, for example, Huang Yuehua, & Bai Jiehong (2006) put forward a new research model combining synchronic and diachronic which attempted to provide a more reasonable research framework for the distinction and description of various senses, especially for the interpretation of the relationship between them.

Some studies aimed at making contribution to account for the polysemy phenomenon of preposition and finding out the relationships between the multiple senses. For example, Tyler and Evans (2003) claimed that multiple senses of a particular preposition are not isolated but related

with each other. Moreover, all multiple senses formed a semantic network. Formal linguistics (Ruhl, 1989; Pustejovsky, 1995) have proposed that polysemy is a surface phenomenon and comes from monosemy which relates to a single relatively abstract meaning from which other meanings are generated according to context, speaker intention and the interpretation of that intention according to the hearer (Evans & Melanie, 2006).

2.2 Studies on prepositions' acquisition

Studies on the meaning of prepositions mainly focused on theoretical aspects while studies on prepositions' acquisition and teaching paid more attention to the practical issues. Most researches of preposition acquisition were conducted with some tests.

There are some case studies, which means that they only take one preposition as the target word. For example, Boers&Demecheleer (1998) examined the French-speaking English learners' acquisition of preposition "beyond". Students who understand the core sense of "beyond" outdo students who have learned the whole senses of the word through a dictionary in understanding its metaphorical sense.

There are studies using several prepositions as objects. Guided by the principled polysemy network, Li Jia and Cai Jinting (2008) conducted a study of the acquisition of prepositions "above", "over", "under" and "below" for Chinese EFL learners. The test included forming sentences, filling in the blanks with proper prepositions, judging similar senses and interview. The results stated that English-speaking learners have a deeper understanding of various senses of those prepositions than Chinese EFL learners who have a better grasp of the core sense than the marginal sense of the above prepositions.

2.2 Studies on the the enlightenment of the prototype category theory to the acquisition of prepositions

Based on the prototype category theory and metaphorical cognitive mechanism, Li LeYan(2007) discussed the psychological process of learning various senses of preposition. She put forward that we should attach more attention to the acquisition of basic spatial sense of preposition and give more preference to metonymy and metaphor, so that students' learning interests and teaching quality can be improved. Huang Haiyan& Wang Xiaocun(2017) took preposition "for" as example to investigate the effects the posed to the acquisition of preposition. At last, he found that on the one hand, the y help learners have a deeper understanding of senses of preposition, which enable them construct a cognitive structure of the whole senses, on the other hand, the adoption of prototype category theory can not only arise students' interests on English learning but also improve their efficiency.

3. Methodology

This paper mainly adopt literature research method. It include five basic parts: establish the purpose and questions of the research; search the literature; sort out the literature; analyse the literature; complete the literature review.

First and foremost, we set the research purpose and research questions, which not only play the leader role in the whole course but also determine the other following parts. This paper aims to encourage English learners use the prototype theory to acquire prepositions. Then, we collect a wide range of literature papers. This process include two parts. Firstly, we set the scale for the literature we collect. We determine to collect data form masters' thesis and prestigious journal. The content involve the prototype theory, acquisition of polysemy words and the enlightenment of the prototype theory to the acquisition of preposition. Then according to the proposed aim, questions and scale, we start to collect data. The main way is searching on Zhiwang. And we adopt the method of taking notes to analyse and compare data, which can not only save time but also improve efficiency. The following part is sorting out the literature. The literature obtained originally is equivalent to the raw material, which can not be used untilbeing handled. Under the principle of simplification and systematization, we divide the literature into three parts, the studies on the meaning of prepositions and studies on prepositions' acquisition as well as studies on the the enlightenment of the prototype category theory to the acquisition of prepositions. Finally, according to the analysis of those literature, we finalize this paper.

4. Discussion

4.1 The prototype theory

4.1.1 Categories and Categorization

Category is a collection, in which all the items share some similar features. It is the general reflection of human thinking on the object entities. Thus, we can come to the conclusion that category is the product of the human social practice, which in turn serves as an instrument to understand and transform the world. F.Ungerer & H.J.Schmid argued that category is the product of the mental process of classification. They can be understood as mental concepts stored in our mind. Zhao Yanfang believed that category is classification of things in cognition.

In terms of categorization, it equals with the process that people classify various entities in the world. F.Ungerer & H.J.Schmid claimed that categorization isthe mental process of classification. And its products are the cognitive categories. Categorization is something that underlies the mental processes of language comprehension and language production. Vyvyan and Evans stated that categorization is our ability to identify perceived similarities and differences between entities and thus group them together.

4.1.2 The introduction to the prototype theory

The prototype theory serves as an explanation for linguistics divide categories. Aristotle is the first scholar to systematically expound the category of philosophy in western history. The classical

prototype category he put forward argued that all the categories are defined by a group of fully and necessary characteristics that are common to members of the category. Those characteristics are binary and contrary to each other. In other words, if an object has all the important features of a category, it can be regarded as one member of that category, and if it doesn't have all those features, it can't be included in that category. That is, there exists clear borderline between different categories. Also, the classical prototype category theory believe that all the members of a category enjoy equal status. However, with the expanding knowledge of cognitive linguistics, Wittgenstein stated that there was no fixed limit for categories, and as new things emerges, the category can be expanded. In addition, members of a category don't share common features but have similarity in many ways, which can be called family resemblance. Furthermore, members of each category don't have equal status. On the basis of that, Labov and Rosch published the results of investigation about natural category, which proved that Wittgenstein's family resemblance theory can apply to many categories in nature. They saw those nature categories with family resemblance as prototype category, which means that the prototype category must have a prototype. And, that's the establishment of prototype category theory.

The prototype category theory have four characteristics. Firstly, the borderline of two categories is ambiguous, and the neighbouring categories overlapping and interlacing with each other. For example, in color category, the typical red and yellow can be easily detected. However, when it comes to purplish red, people can not judge correctly whether is belongs to red or purple category. The factor lies that the borderline of color categories is continuous, and purplish red is in the intersection of red and purple. Then, the prototype share the most common characteristics with the members of its own category and the least with other categories. The marginal members enjoy less common features with its category, and more with other categories. That means prototype of different categories have the greatest difference. In addition, according to the number of features it involve, members of a category have different prototypicality. As a result, different members have different status. And the prototype is the most typical member. Furthermore, the structure of a category is radiate. The prototype sit at the center of the structure. What's more, most categories are polycentric structure rather than monocentric structure. That is, some categories have various prototypes. For instance, both pear and peach are all prototype of category of fruit.

4.2 The polysemy phenomenon

4.2.1 The definition of polysemy

Polysemy is a term used to refer to a lexical item which has a range of different senses. It came into being in the 1860s and was put forward by Breyer, founder of semantics. Polysemy has two processes of development. One is radiation, a semantic process, in which the primary meaning stands at the centre and the secondary meaning radiates out of it. Though all the secondary meanings are independent of one another, they can all be traced back to the primary meaning. The other is concatenation. It is the semantic process in which the meaning of a word moves gradually away from its primary meaning in succession so that the present meaning seems to have no

connection to the primary meaning.

4.2.2 Polysemy in the scope of Prototype theory

Cognitive linguistics holds that the lexical senses of words can be a category. The basic sense is the prototype of this category, and the extended sense is the term that is generated by means of metaphor, metonymy. There exists core sense and marginal senses in each category. The central meaning, that is, the prototype, is one of the first and the most representative forms in the semantic category, and the marginal sense is the meaning radiating around the prototype, so that a number of mutually associated sub-items are formed. Therefore, with the deeper understanding of the category and its members, the new meaning will be derived continuously, and polysemy words are the inevitable phenomenon in human cognitive process.

4.3 Semantic analysis of preposition “in”

Langacker once set the criteria for judging the prototype meaning of polysemy word. It includes five parts. (1) The prototype sense must developed at first. (2) It dominate in the semantic category. (3) It can be compound with other words. (4) It can form a contrastive relation with other locative words. (5) It can deduce other extended senses. According to the above guidance, we believe that the prototype sense of “in” is “used with the name of a container, place, or area to say where someone or something is”, which represent spatial relations. In terms of the extended senses, we analyse it from five typical aspects.

4.3.1 The time

The concept of time and space are closely related. The time spend on passing through the object linked with that object. Lakoff& Johnson argued that time is a container. That metaphor is based on the relationship between the motion of the object and the time the motion used. The basic spatial sense is “on a point within a certain range of things”. When the spatial sense reflected to time sense, the spatial scale transformed to time scale. So, the sense “ within a certain time” is produced. For example, she made great progress in last six months.

In addition, some actions took place over a period of time, when that period of time passed, the action completed, as a result, preposition “in” has the sense: after a complete period time. For example: I will be ready in a week.

4.3.2 The rate

When the spatial sense reflected to number sense, the spatial scale transformed to number scale. In space domain, it’s a common scene that the smaller object is contained in the bigger object. Similarly, in number domain, the contrast of smaller number and bigger number formed the concept of ratio. For example: One in ten choose to apply for that position.

4.3.3 The condition

“In” can also be reflected to condition domain. When it reflect to condition domain, the space scale transformed to condition or situation. And the condition sense is: the person or thing is under certain circumstance. Tyler, A. and Evans, V Through recurring instance of a particular emotional state being experienced in a specific locale, the correlation between location and emotional and/or physical state becomes established. This correlation gives rise to conceptual associations such that we conceptualize and hence lexicalize states in terms of location. For example: If you go out in the rain, you’ll get wet.

4.3.4 The segmentation

Tyler, A. and Evans, V stated that “An important and frequent implicature associated with the prototypical sense of *in* involves the interpretation that bounded LMs effectively partition and segment that which is inside from that which is outside.” The extended senses of “in” in the segmentation domain mainly transformed through image scheme. And the senses it produced included: block something; wearing something; talk about the shape, arrangement, or course of something or someone. For example: The rock is in my way; He looked very handsome in his uniform; I want you all to stand in a circle.

4.3.5 The motion

The sense “enter into something” is the only one in that cognitive domain and it is the result of metaphor that the destination being replaced by the motion path. For example: put the boo in the bag.

4.4 The enlightenment to the acquisition of prepositions

First and foremost, learners should acquire the prototype. The prototype sense is the most basic and core sense of polysemy word. And other senses are produced as a result of metaphor, metonymy and other mechanisms. There were report suggested that people's acquisition of category begins with the central members and extends gradually to the marginal members. In this process, people’s cognitive scope becomes wider and deeper. Therefore, English learners should attach great importance to the core sense of the polysemy word and acquire the key explanations before learning other marginal senses.

Then, learners should also grasp other senses. Sweetser (1990) points out that metaphorical and metonymic thinking directly associates new meanings with source meanings. Knowledge about the route and theory of the sense expansion should be acquired by learners and the semantic network chart should also be provide for easier restoration and recalling of various senses. On the other hand, they can also improve both short-term and long-term memory effect, so that the word teaching efficiency can be enhanced too.

In addition, learners should also form a semantic network. The degree of word meaning networking is an important dimension of vocabulary competence. According to prototype category

theory, there is a more typical prototype meaning in the semantic network of polysemy. The rest of the meanings are derived from the semantic prototype, and the derivative paradigms are linkage derivation, radial derivation, comprehensive derivation.

Last but not least, in the course of learning, learners should gradually find the relationships among various senses and know the the process of metaphor. By acquiring the metaphor process, learners can get into the metaphor system of the target language and enjoy similar mental process with native speaker, which help learners acquire polysemy word more easily, naturally and fully.

5. Conclusion

This research concerning the various senses of the preposition “in” from the perspective of prototype theory is feasible and reasonable. In traditional view, the senses of a preposition are arbitrary. However, cognitive linguistics combines human experience with their conceptual system. Therefore, it offers an effective approach to the meanings of prepositions.

This thesis presents the prototype theory, the polysemy phenomenon and semantic analysis of preposition “in”. By analyzing those basic phenomena, we come into the conclusion that prototype theory help learners better grasp the preposition. Also, we provide multiple ways for learners to acquire better.

Despite the important insights to such accounts, two big problems still remain in the study. Firstly, only the most frequently employed extended senses of “in” have been analyzed from the perspectives of spatial and non-spatial semantic extension in this thesis, other more comprehensive and inclusive analysis is expected. Then, only one preposition been investigated which may overlook information to accurately explaining other prepositions.

In future studies, full analyze of preposition “in” can be included and the comparison between two different prepositions may exert a more convincing result.

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