An Error Analysis of the Presence or Absence of Two Chinese Words in Chinese Prepositional Frames

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Abstract: The prepositional structure "zǎi+NP+directional words/localizer" is the most common in Chinese, in which the presence and absence of the localizer frequently perplex L2 Chinese learners, despite the fact that research on it is sparse. This study conducts an error analysis of the usage of "shàng" and "lǐ" in the specific frames, utilizing cognitive linguistics theory on spatial relations as a guide and particular examples from the HSK dynamic composition corpus. The study also investigated corresponding teaching strategies with the reference to these error scenarios, in order to help L2 learners better distinguish whether to use the localizer "shàng" and "lǐ" or not. There are implications for language teaching as well as an ontological semantic examination of this structure.

1. Introduction

"shàng" and "lǐ" are typical directional terms in Chinese that are frequently employed in prepositional frames and generally equate to the English meanings of "on" and "in" respectively. Their usage in Chinese, on the other hand, is more subtle, which might lead to errors among L2 Chinese learners. For example, in the context of "preposition+NP+directional words ("shàng" or "lǐ"), the directional words are frequently misused and sometimes lacking, leading to misunderstanding among certain learners.

He is in the house
The book is on the table

The directing terms "shàng" and "lǐ" are required in the two preceding phrases. However, in some prepositional frames, such as the sentences below, the directional words "shàng" and "lǐ" cannot be employed.

He is in the room
He is in China

In the sentence (3), there's no grammar mistakes whether "lǐ" is used or not, but(4) can not be translated to "tā zài zhōng guó lǐ " in Chinese expression.

Based on previous research, this work intends to investigate whether L2 Chinese learners make errors in the presence and absence of "shàng" and "lǐ" in current Chinese prepositional frames, and to examine each type of error. Furthermore, this research compares each circumstance using the NP classification and offers some instructional implications and solutions for both Chinese language learners and educators. [5]

2. Ontology of Directional Words such as "shàng" and "lǐ" in Chinese

To study the presence or lack of "*shàng*" and "*lǐ*" in Chinese, it is necessary to explore the ontology.

According to Dai (1993), in directional frames with two-syllable directional words, NPs operate as modifiers and the directional words are crucial. [3]

For example: zài hé zǐ lǐ miàn /zài hé zǐ lǐ biān (*In the box*)

These two lines attempted to communicate a spatial relationship by using "*lǐ miàn*" or "*lǐ biān*", indicating that the object is in the box rather than on or below the box. Although "*shàng*" and "*lǐ*" are monosyllabic directional words, they should be considered the center words from a semantic standpoint. According to Dai's conclusion, "*lǐ miàn*" or "*lǐ biān*" are both components of the reference object, but they belong to a certain zone of this reference object. In other words, reference objects restrict a broad zone while directional terms point to a more particular sub-zone inside it. Directional words can be characterized as the specifier in the relationship between target and reference items from a functional standpoint. Thus, Zhou [4] focused on the link between target and reference items, and explored the presence and absence of "*shàng*" or "*lǐ*" from a cognitive analysis standpoint. For example, the directional word "*lǐ*" indicates that the goal and the reference have an encompassing relationship. After Liu [16] introduced the idea of "prepositional frame," various academics began to investigate the rules governing the presence and absence of directed words in this frame. Chu [1], for example, focused on the interaction between NP and directional terms and divided nouns into three categories: common nouns, common place nouns, and specialized place nouns. He discovered that the directional word is required when the noun is a common noun but not when the noun is a specialized place noun. It makes no difference whether you employ directional words or not when it comes to common place nouns.

3. Methodology and Classification Framework

This study used 30 sentences from the HSK dynamic composition corpus created by English-speaking students who received a C on the HSK test to conduct the analysis. The sentences are chosen at random from a pool of L2 Chinese learners of varying ability levels.

In order to better identify the presence or absence of "shàng" and "lǐ", this paper focuses on the preposition of "zai" and specify the frame to "zài+NP+shàng/lǐ". It also examines each type of errors and situation of usage based on the nature of different noun phrases and the relationship of target and reference objects.

4. Analysis of Each Type of Errors and Reasons Omission of "shàng" or "lǐ"

The sentences have a missing of "lǐ" or "shàng," which causes the meaning of the statements to be incomplete. According to Lv [2], in the Chinese frame of "prepositional words + NP + directional words," prepositional words are not always required, but directional words are. The NPs in the prepositional frames of some phrases relate to the category of dimensional places. As a result, "lǐ" or "shàng" functions as a localizer and cannot be omitted.

When it comes to citing specific text in a book as we all know, such as Bible, "*lǐ*" must be used to identify a text range, indicating that the statement is from the Bible. In the sentence of "I joined the baseball team in the past six years"*, Six years* is a time span, and "*lǐ* " can clearly convey that the behavior of *Joined the baseball team* occurred inside this time span. Learners rely on certain regular and habitual structural usage of their home language when learning a second language. During the early stages of learning, the phenomenon of negative transfer of grammar rules in learners' native language happens frequently. In English, for example, "preposition + noun" is used to describe

direction, as in "on the table," which translates to "zài zhuō zǐ shàng" in Chinese. Because there are two components in English but three in Chinese, native English speakers frequently forget the postposition "shàng" and use the incorrect "zài zhuō zǐ". [6][7]

Overuse "shàng" or "lǐ"

Based on analyzing the data collected from HSK dynamic composition corpus, it can be found that overuse "lǐ" or "shàng tends to appear in the sentences containing place nouns. For example, *Hometown* and *Countryside* belong to the same category as cities and nations, which are not three-dimensional and cannot be followed by directional words. *Travel Agency* is an institutional word that works in a subservient connection with people rather than focus or reference items. As a result, the word "lǐ" is overused in this statement.

When second language learners lack a sufficient understanding of the target language's grammatical structure and linguistic system, they will construct analogies based on the rules they have already learned, resulting in grammatical rule negative transfer within Chinese. They may even overstate or overgeneralize their usage, resulting in transitional generalization. For example, based on the sentence *Books are on the table*, students will wrongly believe that they can add a directional word after any NP, such as *I am in China inside*, which leads to unnecessary repetition. [8]

5. The Situation of Presence/ Absence and NP Classification

When considering the existence and absence of directional words in the context of "zài+NP+directional word," there are three types of scenarios.

A. Forced Appearance

Keys, files, and the cat are target objects in these sentences, while table, computer, and sofa are reference objects that fall under the category of object nouns. In a sentence, these two sorts of nouns imply a positional relationship. When there are object nouns in the prepositional frame, "lǐ" and "shàng" must be used. When "lǐ" and "shàng" are absent, the spatial link between the focus and reference objects cannot be articulated, resulting in semantic inadequacies.

This kind of NPs include: *Tables, chairs, floors, sofas, beds, windows, bookshelves, trains, planes, boats, kitchens, living rooms, houses, yards, bathtubs, carpets,* etc.

According to Zhou's [4] study, they are various items that are directly tied to human activity, and the area in which they are placed is relatively imprecise, unstable, and unspecific. When these common place nouns are used as near-reference objects, the words "lǐ" and "shàng" must be used to identify the exact spatial area where the object is located.

B. Forced Omission

To begin with, there is an intrinsic comprehensive tie between "The Forbidden City" and "China", "Terracotta Warriors and Horses" and "Xi'an", and "He (the teacher)" and "Peking University". As a result, there is no need to emphasize their relative positions with the directional words "lǐ" or "shàng," which leads to semantic redundancy.

To classify this kind of NPs, they are abbreviations of place names and institutional names, such as *Beijing, Japan, USA, Hong Kong, Peking University, Tsinghua University,* etc. They are not true geometric objects, hence there are no dimensions, and they cannot be followed by directional words like "lǐ" and "shàng".

C. Flexible Appearance or Omission

According to Chu's research, the word classroom, kitchen and street are all belong to the category of general location, and the semantic structure of the sentence is unaffected by the presence or absence of the directional terms "lǐ" and "shàng". In sentences a. and b., nouns denote human activity places with defined roles. For example, *Kitchen, school, post office, parlor, library, study,* etc. It is the special function that maintains the confined relationship between the individual and the NP, determining the

dimensional orientation of the human and objects. As a result, these functional nouns are already available for use as near-reference objects, allowing "*lǐ*" or "*shàng*" to be removed. However, because these words have inhabited a specific space with distinct dimensional qualities, they can also be followed by the directional terms "*lǐ*" or "*shàng*".
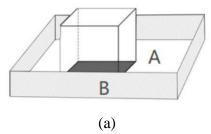
When evaluating NPs in sentences c. and d., such as *Beijing City, Chang'an Street, Hong Kong Island, Tai Shan, Tsinghua Garden, Peace Hotel, Zhongshan Park,* etc, it is required to compare them to their counterparts in category B. For example, *Beijing* is not dimensional, but the phrase *City* after it makes the frame space-limited and dimensional, allowing it to be followed by a directional word. From another angle, nouns like *Street* and *Hotel* are interacting with humans, which can likewise serve as reference objects. As a result, there are no semantic mistakes when they are used without directing terms. [9] [10]

6. Teaching Implications

Zhou [11] proposed "language blocks" instruction. A language block is a larger unit than a word that serves as a sentence formation unit. Chinese blocks are classified into three types: common word combinations, idiomatic phrases, and sentence structure connecting parts. The most prevalent combinations and collocations should be found using Chinese textbook search statistics. The remaining combinations are utilized as "substitution and extension" or "vocabulary association" training resources. Based on the study of NP classification with the presence and absence of "*shàng*" and "*lǐ*", it is an effective technique to teach their usage with the three types of words or noun phrases, allowing students to make a better comparison. Teachers, for example, can advise learners that they cannot change the combination of *on the table, in the computer", in hometown, in Beijing, in China,* etc., to avoid omission or overuse.

The visual diagramming method is suitable for teaching the frame of "*zài……shàng/lǐ*". Yang [14], Liu [12], Sun [13] and Chen [15] investigated that diagrammatic method can effectively reduce the error rate of international students' acquisition. Teachers can create an appropriate diagram using basic symbols and lines based on the position of the target and the reference object.

For example, while debating whether or not "*lǐ*" is required, the image (a) can be utilized to graphically convey the position that target item A is quite in reference object B, and they suggest an inclusive relationship. As a result, "*lǐ*" serves as a localizer and cannot be deleted.

(a)

The visual diagramming method can also be used in conjunction with situational instruction. Teachers can set the scene for beginning learners by asking simple questions like *Where's your book? Where are we now?*; or use pictures to guide the students: *Look, where is he buying the tickets?* When teaching advanced learners, teachers have to utilize more language and abilities to set up situations for them since they must grasp noun phrases with various abstract meanings, such as *On the basis of theory, in the silence, in the laughter, in his songs*. The NPs of *silence*, *laughter* and *songs* can be used to represent scenarios involving the teacher's performance.

The frame of "*zài* X *shàng* " and "*zài* X *lǐ* " are the most common mistaken used prepositional collations, especially for native English-speaking L2 Chinese learners. Native English speakers are bound by the established conceptual patterns of VPP sequences in English VO languages, making it

more difficult for them to understand and employ Chinese PPV sequences, resulting in sequential errors. In addition to semantic and syntactic variables, their acquisition of "*zài* X *shàng* /lǐ /*zhōng* /*xià*" frame prepositions is influenced by sequence typology and conceptual transfer from their mother language. This paper made an error analysis of these two frames and explored corresponding teaching strategies, but still lacks a deeper analysis of semantic features and syntactic distributions. Meanwhile, comparative comparison of English and Chinese orientation nouns is highly beneficial to L2 learners' cognitive comprehension, and it is worth further investigation and exploration.

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