



## THE ACQUISITION OF THE GRAMMATICAL MARKERS *LE*, *ZHE*, AND *GUO* BY SLOVAK LEARNERS OF CHINESE

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### Abstract

The present study seeks to contribute to a deeper understanding of the error distribution in the written production of Slovak learners of Chinese at the beginner level in regard to the acquisition of the grammatical markers *le*, *zhe*, and *guo* used for specifying the state of an action. Despite the fact that their theoretical use is usually introduced in the initial phase of Chinese language study, mastering their accurate use in the target language is often challenging, especially for beginner learners of Chinese. Their language output tends to display its misuse, underuse, or overuse due to the learner's limited development of native speaker-like proficiency and absent language intuition in the target language. Error analysis of the textual material written by L1 Slovak learners of Chinese illustrates the distribution and typology of errors at the initial phase of study, based on the language data processed in the Chinese Learner Corpus of Slovak Students.

### Keywords

Chinese language acquisition, error analysis, grammatical markers, interlanguage, learner corpus

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### Introduction

The present article aims to explore the error types associated with the use of the Chinese grammatical markers *le*, *zhe*, and *guo* in the written production of Slovak learners. The error analysis was conducted using a learner interlanguage corpus comprising texts written by Slovak learners of Chinese, who had either majored in Chinese at university level or attended Chinese language courses at dedicated language institutes in Slovakia. Given the complex grammatical function of the markers *le*, *zhe*, and *guo* (cf. Liu et al., 2001) examined in this study, it is therefore important to deepen our understanding of the learners' interlanguage in order to identify potential challenges related to the accurate use of these markers in the learners' output.

The following section illustrates the basic structure and function which the studied markers fulfil in the target language. The marker *le* has two different functions, which also correspond to its different position in the sentence. In order to distinguish its function, examples below introduce perfective marker *le1* with a postverbal position denoting a completion of an action, and a sentence-final particle *le2* denoting a change of state or the realization of a new awareness by the speaker. Due to the complex nature of these grammatical markers in Chinese, which exceeds the scope of this study, the present analysis and examples used below will be limited to their basic functions and usage patterns as usually presented in the initial phase of Chinese language study. The examples 1 and 2 display the distinctive features of its use and sentence structure as follows:

- (1) 我 看 了 这 部 电影  
wǒ kàn le zhè bù diànyǐng  
I watch le1 this MW movie  
I watched this movie
- (2) 他 不 学 中文 了  
tā bu xué Zhōngwén le  
he NEG study Chinese le2  
He no longer studies Chinese

The use of marker *le1* in example 1 describes an action that was completed and the marker is placed directly after the verb *to watch*, whereas example 2 displays the sentence-final position of the marker *le2* used for expressing a



change of state. Similarly to example 1, the marker *zhe* is also found in the postverbal position and it denotes the duration of an action (see example 3):

- (3) 她 穿 着 外套  
tā chuān zhe wàitào  
she wear zhe coat  
she is wearing a coat

The last grammatical marker *guo* also shares the identical position in the sentence as *lel* and *zhe*. However, the distinguishing feature when comparing *lel* and *guo* is that the former stresses the completion of an action, whereas the latter emphasizes the previous experience (cf. Examples 1 and 4).

- (4) 我 看 过 这 部 电影  
wǒ kàn guo zhè bù diànyǐng  
I watch guo this MW movie  
I have seen this movie

### 1 Chinese learner corpora and interlanguage research

The creation of several large-scale Chinese learner corpora paved the way for interlanguage research with the aim of facilitating the identification of learners' errors in their language output with the help of computer-aided error analysis. Learner corpora equipped with error annotation constitute an efficient resource for the digital processing of language data and reduce the annotation overload associated with traditional error analysis. Findings derived from such corpora are supported by both quantitative evidence—based on statistical frequency counts—and qualitative evidence obtained through contextual analyses of selected linguistic phenomena. Nevertheless, current practice indicates that the design of error-annotated learner corpora is frequently shaped by the individual preferences and specific research objectives of corpus creators. Consequently, error taxonomies vary considerably across existing corpora (Díaz-Negrillo and Fernández-Domínguez, 2006), including those in Chinese, which limits the comparability of query options and research findings across different datasets (cf. the Global Chinese Interlanguage Corpus 全球汉语中介语语料库 *Quangiu Hanyu zhongjeyu yuliaoku*, 2019; the HSK Dynamic Composition Corpus HSK 动态作文语料库 *HSK Dongtai zuowen yuliaoku*, 2008; the Guangwai-Lancaster Chinese Learner Corpus, 2016). Taking this into consideration, the Chinese Learner Corpus of Slovak Students incorporated hierarchical error annotation (cf. Chang, 2016; Díez-Bedmar, 2015) based on the annotation tagset designed for the TOCFL Learner Corpus (*TOCFL xuexizhe yuliaoku* TOCFL 学习者语料库, 2006), to increase the comparability of the datasets across existing learner corpora. The hierarchical annotation is based on a two-fold error categorization: there are four target-modification categories, which classify errors according to the incorrect use (omission, redundancy, misuse, and wrong word order), and four linguistic categories, which consist of Chinese-specific and general linguistic error types (word level, grammatical function, sentence structure, and miscellaneous errors), therefore each error tag consists of two components, which define the errors from the perspective of the target-modification and linguistic categories.

Although the existing large-scale Chinese learner corpora, such as the Global Chinese Interlanguage Corpus (2019) and the HSK Dynamic Composition Corpus (2008) created at the Beijing Language and Culture University, as well as the Guangwai-Lancaster Chinese Learner Corpus (2016), created through collaboration between Guangdong University of Foreign Studies and Lancaster University, comprise texts written by speakers of various L1s and allow for the systematic and generalizable exploration of the learners' interlanguage, the predominant part of this data depicts the language output of L1 English learners and those originating from the region of Southeast Asia (Zhang and Cui, 2015). As a result, there is either very limited or completely absent data from L1 Slovak learners of Chinese available, so a specialized small-scale Chinese Learner Corpus of Slovak Students (2022) was used in the present study to shed new light on the use of the analysed grammatical markers *le*, *zhe*, and *guo* in the texts written by L1 Slovak learners at beginner level. Given the notable lack of existing large-scale datasets, this specialized corpus constitutes a valuable empirical resource and represents a necessary step toward documenting underrepresented L1 Slovak learner written output in Chinese. Moreover, the use of hierarchical error annotation enables a detailed analysis of error types across multiple categories and focus on a specific group of learners allows for more precise identification of learner-specific difficulties. Considering the exploratory nature of this study, its



primary aim is to identify recurring erroneous patterns in the learners' written production, and establish foundation for future research.

## 2 Characteristics of the analysed language data and methodology

The language data collected in the Chinese Learner Corpus of Slovak Students (2022) was used to analyse the error types linked to the use of Chinese markers *le*, *zhe*, and *guo*. Each text file comprises a set of metadata to store the basic information about the processed textual material and anonymized learner's background information with the following variables: unique text identifier, year, gender, degree in Chinese studies, experience of study exchange in China, language proficiency (beginner, intermediate, and advanced), passed HSK exam, learner's L1, text type (homework, examination, academic composition), and text length (in characters). Table 1 displays the basic characteristics of the language sample analysed in the present study. The student pool consisted of 44 subjects in total, 24 degree students and 20 non-degree students at the beginner level of Chinese. All the subjects were native speakers of Slovak studying Chinese at university level as degree students or taking Chinese language classes in regular courses offered at the designated institutions in Slovakia. The beginner subcorpus comprised 50 text files in total, of which 24 files (4370 characters, 39%) were examination compositions and 26 files were homework compositions (6885 characters, 61%).

Table 1 Basic characteristics of beginner subcorpus

	No. of students	No. of text files	No. of characters	Text type ratio (%)
Degree students	24	24	4 370	examination (39%)
Non-degree students	20	26	6 885	homework (61%)
Total	44	50	11 255	

The study specifically examined the error types linked to the use of the grammatical markers *le*, *zhe* and *guo*, which was possible thanks to the corresponding error tags from the grammatical function category. The hierarchical error annotation in the corpus further categorized errors according to four target-modification categories: omission (M), redundancy (R), misuse (incorrect selection S), and wrong word order (W). As a result, each error tag consists of two components, the first component defines the error from the perspective of the target-modification category, while the second component is assigned from the relevant linguistic category. In addition to erroneous utterances, the score of their correct use was included as well in order to deepen our knowledge of the rates of accuracy using these markers in the subcorpus of beginner learners..

The present study was concerned with the error tags *le1*, *le2*, *zhe* and *guo* that belong to the grammatical function errors from the Chinese-specific linguistic category in combination with all four target-modification categories to enable the examination of error types across these categories. Following the sequence of the target modification categories, the examples below are used to illustrate the annotation taxonomy that was used for the error analysis. Example 5 illustrates the first error type: omission (M). The error was marked by two independent tags to achieve the minimal disruption of the original as well as to distinguish its multifaceted nature. In addition to the underuse of the marker *le1*, there was a redundant use of particle *de* (得), which either represents a complement marker or can be used in degree-result constructions with an evaluative character to express a way of doing something.

(5)\* 咱们 已经 看 得[Rde3 | Mle1] 一个半 小时 的 画儿 了  
*zánmen yǐjīng kàn de yī ge bàn xiǎoshí de huà er le*  
 we already look de one MW half hour de painting le2

Intended meaning: We have been looking at the painting for an hour and a half now

Corrected version:

咱们 已经 看 了 一个半 小时 的 画儿 了  
*Zánmen yǐjīng kàn le yī ge bàn xiǎoshí de huà er le*

As shown by example 6, the redundancy error (R) describes an additional use of the particle *le2* in the structure, which results in the incorrect formulation of the intended meaning. Similarly to the previous example, more than one error tag was needed in order to reconstruct a correct formulation of the original. The second error tags



indicates that instead of using *le2*, there was an incomplete *shi...de* (是...的) structure, which is used for emphasizing a past event due to the omission of *de* at the end.

- (6)\* 他 是 什么 时候 回家 来 了[Rle2 | Mde1]  
*tā shì shénme shíhou huí jiā lái lái le*  
 he be what time return home come le2  
 Intended meaning: When did he come back home  
 Corrected version:  
 他 是 什么 时候 回家 来 的  
 he be what time return home lái de

Example 7 displays misuse error (S), which is characterized as the incorrect replacement of the particle by another linguistic feature, often having similar grammatical properties. This example illustrates the confusion between *le1* and *le2* since the change of state need to be expressed by the sentence-final particle leading to the ungrammatical formulation:

- (7)\* 妈妈 现在 可以 了[Sle1] 工作  
*māmā xiànzài kěyǐ le gōngzuò*  
 mother now can le1 work  
 Intended meaning: Mother can work now  
 Corrected version:  
 妈妈 现在 可以 工作 了  
 mother now can work le2

The last category is formed by incorrect word order errors (W) depicting the wrong placement of linguistic elements in the sentences. Example 8 displays an error caused by the misplacement of the past experience marker *guo* before the verb. Moreover, it is important to note that the verb *to swim* (游泳 *yóuyǒng*) represents a verb-object compound (separable verb), so the marker *guo* has to be placed between the morphemes.

- (8)\* 他 从来 没 过[Wguo] 游泳  
*tā cónglái méi guo yóuyǒng*  
 he always NEG guo swim  
 Intended meaning: he has never swum  
 Corrected version:  
 他 从来 没 游过 泳  
 he always NEG swim guo swim

### 3 Results

Following the error taxonomy provided by the Chinese Learner Corpus of Slovak Students (2022), a total of 92 errors were identified through the quantitative analysis of the grammatical markers *le1*, *zhe*, *guo*, and sentence-final particle *le2* in the beginner texts. Figure 1 displays the distribution of error types across four target-modification categories. The predominant errors were found in the omission category (46%, 42 errors) followed by incorrect word order (20%, 18 errors), incorrect selection (18%, 17 errors), and redundancy errors (16%, 15 errors). As can be seen from the figure below, the most prominent error type was represented by the underuse of the markers analysed, which were required for achieving accuracy in the learners' language output.

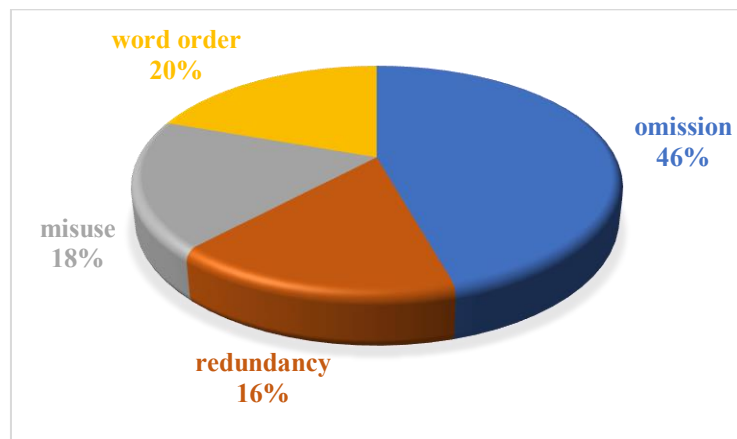


Figure 1 Error types

In addition to the overall distribution of errors according to learners' incorrect language utterance categories, Figure 2 provides a micro-perspective on the error rates identified for each marker individually. Regarding the use of the perfective marker *le1*, the predominant number of errors were found in the word order (13 instances) and omission (12 instances) categories followed by misuse (8 instances) and redundancy (5 instances). In comparison to *le1*, the distribution of predominant errors for the sentence-final particle *le2* differs in the increased ratio of omission errors (22 instances) followed by comparably lower number of errors in the incorrect selection (9 instances), and redundancy (6 instances) categories. There was only one error found in the wrong word order category. Concerning the durative marker *zhe*, the overall number of errors was relatively low (see Table 2), and the most predominant error types were found in the omission and redundancy categories with four instances respectively. The lowest number of errors was identified in the wrong word order category (2 instances). As for the past experience marker *guo*, it represented the least used marker among the studied group and it constituted the lowest number of errors found in two categories: four omission errors and two word-order errors.

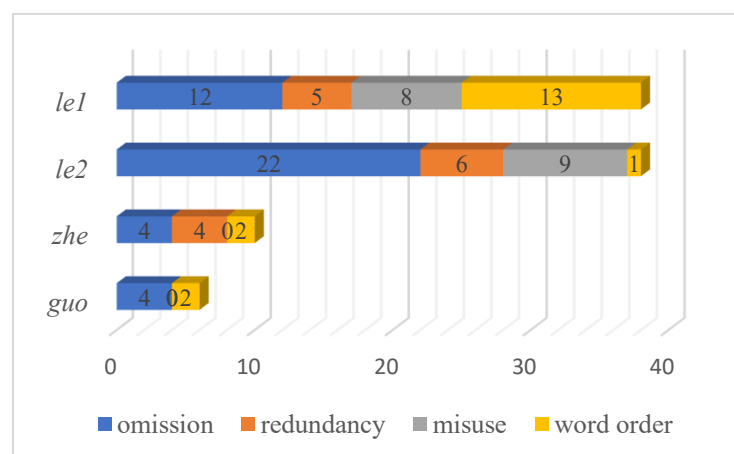


Figure 2 Error distribution

In order to gain a better understanding of accuracy rates when using the studied markers, Table 2 and Figure 3 provide an overview of the scores for the correct and incorrect use of each marker individually. The summary of the overall rates of their correct and incorrect use in Table 2 proves that the ratio of the correct use of the markers, with 201 instances, reached 69 %. Considering the individual markers, an identical number of errors in total was found in the use of *le1* and *le2* (38 instances respectively). Nevertheless, the rates of accuracy when using the particle *le2* in the sentence-final position was higher, 119 instances of correct use in total, when compared to perfective marker *le1* in the postverbal position (58 instances). As indicated by Figure 2 in the previous section, the total production as well as the number of errors in the use of the markers *guo* and *zhe* was significantly lower in comparison to the previous markers (cf. Table 2). The durative marker *zhe* was found in 25 sentences in total, ten erroneous formulations and 15 correct uses, whereas the past experience marker *guo* accounted for the least frequent one in the learners' production with 15 instances in total, six errors and nine correct utterances.



Table 2 Grammatical markers – total production

	Incorrect use	Correct use
<i>le1</i>	38	58
<i>le2</i>	38	119
<i>zhe</i>	10	15
<i>guo</i>	6	9
Total	92 (31%)	201 (69%)

Figure 3 illustrates the overall score of the correct and incorrect use of the markers. Interestingly, the markers *le1*, *zhe*, and *guo* share an identical accuracy rate of 60% of correct use, whereas the particle *le2* reached a slightly higher accuracy rate of 76% of correct use (cf. Table 2).

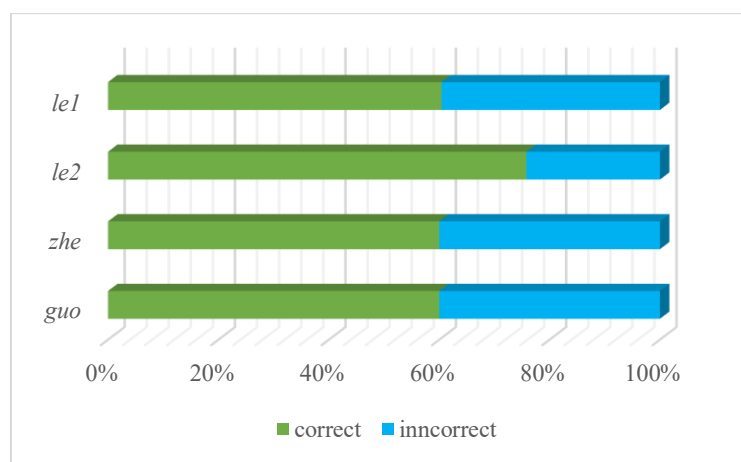


Figure 3 Comparison of correct and incorrect use

Lastly, Figure 4 displays a frequency-based comparison of the postverbal markers *le1*, *zhe*, and *guo* with a distinct frequency hierarchy. Although *le1* represents the most frequently used marker with 96 instances in total, accounting for 71% of all occurrences across the three markers, it also exhibits a relatively high number and diversity of errors among all four target-modification categories. In contrast, the markers *zhe* and *guo* occur less often in learner production, yet they display fewer errors overall and less diversified typology of errors when compared to *le1* (cf. Figure 2). The marker *zhe*, which appears 25 times in total, represents 18% of the dataset, whereas *guo* is the least frequent marker, with only 15 instances represents 11% of the overall grammatical marker distribution in the subcorpus.

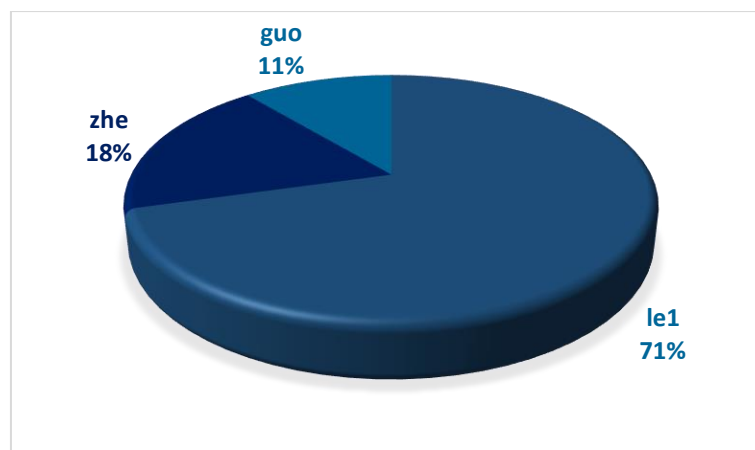


Figure 4 Comparison of frequency use



#### 4 Discussion

The study of the overall error distribution demonstrated that the most frequent error type was identified in the omission category, followed by less evident differences of the error distribution in the remaining three categories (redundancy, misuse, and word order). This distribution suggests that learners mainly have difficulties with the identification of the required use of the markers in their language production rather than their redundant or incorrect use, which might be caused by the challenge posed by the correct encoding of their grammatical functions in the target language. As for the beginner learners, it is not surprising that the wrong word-order errors represented the second most salient error type. Nevertheless, it is predicted that the difficulties related to the syntactic positioning of the markers will be eliminated at the higher proficiency levels.

The analysis focused on the individual markers revealed the differences among the error types linked to the incorrect use of *le*, *zhe*, and *guo*. The most prominent error categories for the perfective marker *le1*, which is used in the post-verbal position, were found in the word order and omission categories with an almost equal number of errors (13 and 12 respectively). The less significant difference between the remaining two categories, and a relatively equal distribution of errors in total reflected the most diversified inaccuracy rate of *le1* use. These partial results indicate that beginner learners might encounter difficulties with the identification of its obligatory use in the target language, its correct syntactic position, and possible confusion with the particle *le2* leading to its misuse and overuse. Considering *le2*, the number of omission errors was considerably higher in comparison to the remaining three categories, which suggests that learners encounter difficulties in acquiring its grammatical function in the case of expressing a change of state and its use does not pose morphosyntactic challenge for them since there was only one word-order error. The durative marker *zhe* together with the past experience marker *guo* displayed a comparatively lower number of errors in total. Comparably to error distribution in the use of *le*, omission errors represented the predominant category for both markers with minor difficulties in the word order with two errors respectively, and redundancy errors in the case of *zhe*. This relatively low number of errors in the learners' output indicates that overuse of *zhe* is rarely mistaken for expressing the duration of a state in a stative context. The least diversified error types were found in the use of the marker *guo*. In addition to the omission category, there were only two incorrect word-order errors.

The accuracy rates across the analysed markers showed that *le1*, *zhe*, and *guo* share an identical success rate in their use accounting for 60% of correct instances, whereas *le2* accounted for a 76% accuracy rate for its correct use, which indicates a relatively stable acquisition and incorporation of the grammatical markers analysed in learner production. The comparison of frequency use pattern of the markers *le1*, *zhe*, and *guo* suggests that the lower occurrence rates of the durative *zhe* and the experiential *guo* might be attributed to their less prominent productive use or a certain degree of avoidance at the beginner level when compared to the perfective marker *le1*. On the other hand, the lower variability of error types in case of *zhe*, and *guo* can be attributed to their relatively transparent grammatical function in Chinese and more accessible cross-linguistic mapping (e.g., comparison with English continuous and perfect tense formation), making them easier to acquire than more complex grammatical marker *le*.

Despite the exploratory nature of the present research and insights generated, following limitations should be acknowledged when interpreting the findings of this study. Due to the limited availability of L1 Slovak learners' output, the generalizability of the research findings is subject to the dataset processed in the specialized Chinese Learner Corpus of Slovak Students. While cross-corpus comparability may be limited because of the underrepresentation of the data in existing large-scale learner corpora, the hierarchical annotation scheme as employed in second language acquisition research (cf. Ellis 1994; James 1998), incorporating target-modification categories, enhances consistency of error classification, allows for systematic categorization of errors, and facilitates replicability within the same scope of research. Considering the homogenous nature of the analysed data comprising written production, it is important to note that the results of the present study were subject to investigating learners' ability to apply their grammatical knowledge while maintaining the possibility of consistent categorization of errors across the analysed text files.

#### Conclusion

The findings of the present study contribute to the understanding of an underexplored area of Chinese language acquisition by L1 Slovak learners with a particular focus on the grammatical markers *le*, *zhe*, and *guo* in written production. The overall predominance of omission errors suggests that learners fail to identify the obligatory use of grammatical markers. In contrast, redundancy errors remain comparatively limited, which suggests that learners are more hesitant to use these markers than prone to overuse them, reinforcing the interpretation that grammatical markers are incorporated into their language production to a limited extent. The comparatively lower number of



errors and less diversified error types in the use of durative *zhe* and experiential *guo* suggest that markers with a more straightforward grammatical function in the target language can be acquired more easily as a result of possible cross-linguistic mapping drawn from associations with other Indo-European languages, such as English. Although their formation is not structurally identical, it might facilitate the acquisition process since these markers are less demanding for learners in terms of their sensitivity to the speaker's perspective and intended meaning.

These findings contribute to a more refined understanding of the acquisition of grammatical markers in Chinese by learners from a typologically distinct linguistic background and provide a foundation for future research in the field of Chinese as a foreign language with a particular focus on Slovak learners. The advantage of using the dataset available in the Chinese Learner Corpus of Slovak Students was the presence of the hierarchical error annotation based on the target modification categories, which correspond to the well-grounded categorization of errors employed in interlanguage research. Moreover, this study also highlights the importance of standardized annotation frameworks in the field of Chinese learner corpus research to facilitate cross-corpus study and increase comparability of the results in further research to enable large-scale quantitative evaluation of the error distributions combined with qualitative contextual analysis to achieve a more nuanced understanding of error types from the perspective of structure-based and discourse-based errors.

Regarding pedagogical implications for teaching Chinese grammatical markers to Slovak learners at the beginner level, the predominance of omission errors indicates that instruction practice could positively benefit from providing a higher number of contextualized examples demonstrating the practical use of these markers to support learner's recognition of contexts of their obligatory use. Given the relatively high frequency of wrong word order and misuse errors—especially in case of *le1*—the incorporation of explicit contrastive explanations and structured practice aimed at the marker's functional differences and syntactic positioning between markers such as *le1* and *le2* that can be easily confused by learners. Lastly, the comparatively lower error variability associated with the use of markers *zhe* and *guo* indicates that the markers with more distinct grammatical function may be acquired more easily, therefore an appropriate sequence of incorporating these markers in the instruction practice could positively support learning progression and learners' output. The study represents an important step toward addressing an empirical gap in Chinese language acquisition by Slovak learners and contributes to further development of subsequent research as well as teaching practice by underscoring the importance of corpus-supported pedagogy and integration of learner corpus data fostering the anticipation of common learner difficulties.

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