Teaching and Learning *Bei*-Constructions: A Usage-Based Constructionist Approach

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Abstract: This article presents a pedagogical design based on corpus findings and shows the effects of a usage-based constructionist approach to teaching and learning second language (L2) Chinese *bei* passive constructions. I first conducted a corpus analysis and identified two high-frequency *bei* subtypes [*bei*-Verb-*le*] and [*bei*-Verb Complement-*le*] as well as high-frequency exemplars of verbs and verb complements that can enter the subtypes. I then used the corpus findings to inform the instructional design and prioritized the teaching of high-frequency constructional subtypes. 23 intermediate-level L2 Chinese learners were randomly divided into an experimental group and a control group. The two groups of learners were tested immediately after receiving instruction. The results show that the experimental group significantly outperformed the control group for both subtypes, indicating a positive effect of using the usage-based constructionist approach to teaching and learning the *bei*-constructions. The implication of this study is that the integration of theoretical linguistic research, corpus findings, and practical language teaching may improve L2 learning outcomes.

Keywords: usage-based constructionist approach, Chinese as a second language, grammar teaching, *bei*-constructions

摘要:本文介绍了基于语料分析的被字句教学设计，并展示了该设计在教学上的效果。从基于语言使用的构式语法理论出发，本文首先调查并确定了语料库中被字句的两个高频子构式[被-动词-了]和[被-动词-补语-了]，随后考察了可进入子构式的高频动词与动补结构。依据语料分析结果，课堂设计优先教授高频结构及高频示例，并组织交际型教学任务。两组母语为英语的中级汉语学习者接受了不同的教学指导，并参加了随堂测试。结果表明，接受本文教学设计的学生对两个被字构式的掌握都显著高于另一组学生。这说明基于语言使用的构式语法理论对被字句的教授与学习有积极效果。这项教学研究的意义是结合语言学理论、语料库研究和语言教学对二语学习有积极作用。

关键词:基于语言使用的构式语法，语料库研究，汉语教学，被字句

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1. Introduction

Grounded in Construction Grammar, constructionist approaches to language learning emphasize the acquisition of form-meaning/function pairs (Fillmore 1988; Goldberg 1995, 2006, 2019). Constructions can range from morphological and lexical units, e.g., *语言学* 'linguistics,' which itself is an example of the construction [N-*学*], over formulaic phrasal units, e.g., *便宜点吧* 'a little cheaper' and partially filled sentential units, e.g., [NP1 *被* NP2-V- *了*], to discourse units, e.g., [*不是我说你* 'I am not criticizing you', clause] (Jing-Schmidt 2015; Lang 2018). Using a longitudinal design, Taguchi, Li, and Xiao (2013) examined American learners' development of L2 Chinese formulaic constructions over a ten-week study abroad. They found that although learners had significant improvement in formulae production, some of them lacked lexical and syntactic knowledge to produce a native-like formulaic constructions. For example, when asking to try on a hat at a store, students may produce the ungrammatical *可以戴？* 'Can I put it on?' rather than the appropriate formulaic expression *可以试吗？* 'Can I try?' Their analysis of the lexical and syntactic errors (i.e., the misuse of the verb and the lack of sentence final question word) deserves attention from language instructors to draw on a constructionist approach to teaching L2 formulaic expressions such as [*可以* X *吗?*] 'Could I/you X?'

It is worth noting that constructionist approaches to language learning are usage-based (Goldberg 2013). Usage-based theories view second language (L2) acquisition as a cognitive process in which language structures emerge from language use in a socio-cultural context (Behrens 2009; Ellis 2015). As summarized by Jing-Schmidt (2019a), L2 grammar learning is prototype-driven, exemplar-based, and sensitive to the frequency of language use. At all levels of language learning, the frequency of language input plays a strong role and has an important impact on cognitive representation. Language users store high-frequency language patterns in memory

and retrieve them from previously experienced language usage events (Bybee 2006). Frequency effects in language processing occur at various input levels from phonology to formulaic language, and from syntax to language comprehension, all of which emerge from language use (Ellis 2002). This is evident in L2 acquisition when learners constantly encounter high-frequency utterances around them and are ready to produce them as unanalyzed wholes that reflect form-function mappings. In addition, human categorization ability enables language users to sort and produce novel utterances based on similarity to high-frequency exemplars (Bybee 2006). Repetition of these exemplars reinforces the connection between prototypical features and the category so that high-frequency exemplars are more rapidly recognized and utilized by language learners (Ellis 2002).

Usage-based constructionist approaches have been applied to L2 teaching and learning (see Tyler 2010 for a review) and found to be effective (Boyd & Goldberg 2009). However, this approach to L2 Chinese teaching and learning has only garnered attention from a few researchers (e.g., Jing-Schmidt, Peng & Chen 2015, Lu 2017). For example, Jing-Schmidt, Peng and Chen (2015) used corpus findings to inform teaching and learning of the multifunctional *ba*-constructions in a communicative context. They first searched *ba*-constructions in the Peking University Center for Chinese Linguistics (CCL) corpus and identified 17 constructional subtypes. They then identified high-frequency collocates that are functional prototypes for four highest frequency subtypes (i.e., locative, directional, resultative, and metamorphic). The findings suggest that these high-frequency subtypes should hold more pedagogical priority over other subtypes. Their proposed teaching plan also guides learners to first learn high-frequency exemplars of the four subtypes (e.g., *放到桌子上* 'put (it) on the table', *拿进来* 'bring in', *扔掉* 'throw away', *切*

成丝 'cut into shreds') in real-world contexts. Therefore, learners can reinforce and internalize form-meaning/function mappings through explicit and repeated usage events.

2. Literature review

Chinese *bei*-constructions are typically used to describe adversative events. This negative semantic inheritance is not found in the English passive voice. Research on L2 Chinese acquisition has shown that *bei*-constructions are challenging for Chinese as foreign language (CFL) learners whose first language (L1) is English (Dai 2017, Huang et al. 2007, Wang & Xu 2015). Dai (2017) examined English-speaking CFL learners' acquisition of the *bei*-construction without an external argument. *他被批评了* 'He was criticized' is one example of the *bei* construction without an external argument because it does not indicate the agent of the action *criticizing*, whereas *他被老师批评了* 'He was criticized by the teacher' has the external argument *the teacher*. Dai found that learners initially tend to equate *bei* with *by* in English passives, and therefore they were unable to accept *bei*-constructions when the external argument was absent; however, higher-proficiency learners showed a higher ability to accept this type of *bei*-construction. Wang and Xu (2015) investigated the L2 acquisition of unmarked passives, e.g., *杯子打碎了* 'The cup was broken into pieces,' and marked passives, e.g., *杯子被(他)打碎了* 'The cup was broken into pieces (by him).' They found that learners produced more unmarked passives than marked passives. Huang, Yang, Gao, Zhang, and Cui (2007) investigated the acquisition of *bei* constructions by examining a corpus of CFL interlanguage. They also asked English-speaking CFL learners to make sentences using the *bei* structure and complete a grammatical judgment test. In the sentence-making task, action verbs (e.g., *踢门* 'kick a door') and verbs indicating results (e.g., *晒干衣服* 'dry clothes') were examined by asking learners to make Chinese sentences based on a given verb and a given noun (e.g., *打球* 'play a ball') for each sentence. The grammatical judgement test involved both

grammatical and ungrammatical sentences with different types of verbs. They found that the learners had difficulty in making grammatical *bei*-constructions, but their findings suggest that learners are aware of semantic restrictions of *bei*-construction: telicity and perfectiveness, which are realized by achievement verbs (e.g. *find*) and aspect markers (e.g. *le*) in the construction. Adopting a constructionist approach, Chen and Liu (2020) examined how L2 learners acquire *bei* constructions in a classroom setting without manipulating the input. They found that the learners were not yet able to associate the *bei*-construction with its prototypical meaning of adversity at an early stage; however, the advanced learners demonstrated the ability for form-meaning mapping in acquiring *bei*-constructions and were also able to use the construction in context appropriately. Their findings suggest that like many other constructions (e.g., Ellis & Ferreira–Junior 2009; Wulff et al. 2009), L2 Chinese *bei* passive constructions are also learned by acquiring form-function pairings.

To summarize, although English-speaking CFL learners have difficulty acquiring *bei*-constructions at early acquisitional stages, as they progress, they are able to accept more subtypes of *bei*-constructions, becoming more aware of semantic restrictions, and showing a stronger ability of form-meaning mapping. However, it has been unknown whether teaching interventions can facilitate the acquisition of *bei*-constructions at a lower-proficiency level. The goal of this study is to present a pedagogical plan designed for intermediate-level learners and report the effects of a usage-based constructional approach to teaching and learning *bei* constructions.

3. A preliminary corpus analysis of *bei*-constructions

In order to inform the instructional design and prioritize high-frequency *bei* subtypes in teaching, I collected corpus data and analyzed the concordance types. The analysis was based on contemporary language data from the Peking University CCL corpus. I first conducted keyword

expression searches for the construction [*bei*-V-*le*] where the lengths of the word between *bei* and *le* range from 1 to 2. This process retrieved a total of 721 tokens of *bei*-constructions containing one-syllable words and 742 tokens of those containing two-syllable words. I then imported the data into AntConc, a corpus analysis toolkit for concordancing and text analysis, and ran a KWIC (key word in context) search using the regular expression function. This process yielded a total of 236 collocate types for monosyllabic verbs and a total of 592 collocate types for disyllabic verbs.

Figure 1 presents the top 10 high-frequency monosyllabic and disyllabic verbs used in [*bei*-V-*le*]. It is worth noting that the disyllabic verbs also include Verb-Complement structures such as *打破* 'break (into pieces).' Figure 2 shows the top 10 types of [*bei*-V-Complement-*le*], as a subtype of *bei*-constructions, found in the corpus data. Both Figure 1 and Figure 2 have character, pinyin, and glossing of each type on the vertical axis, and their corresponding frequencies on the horizontal axis.

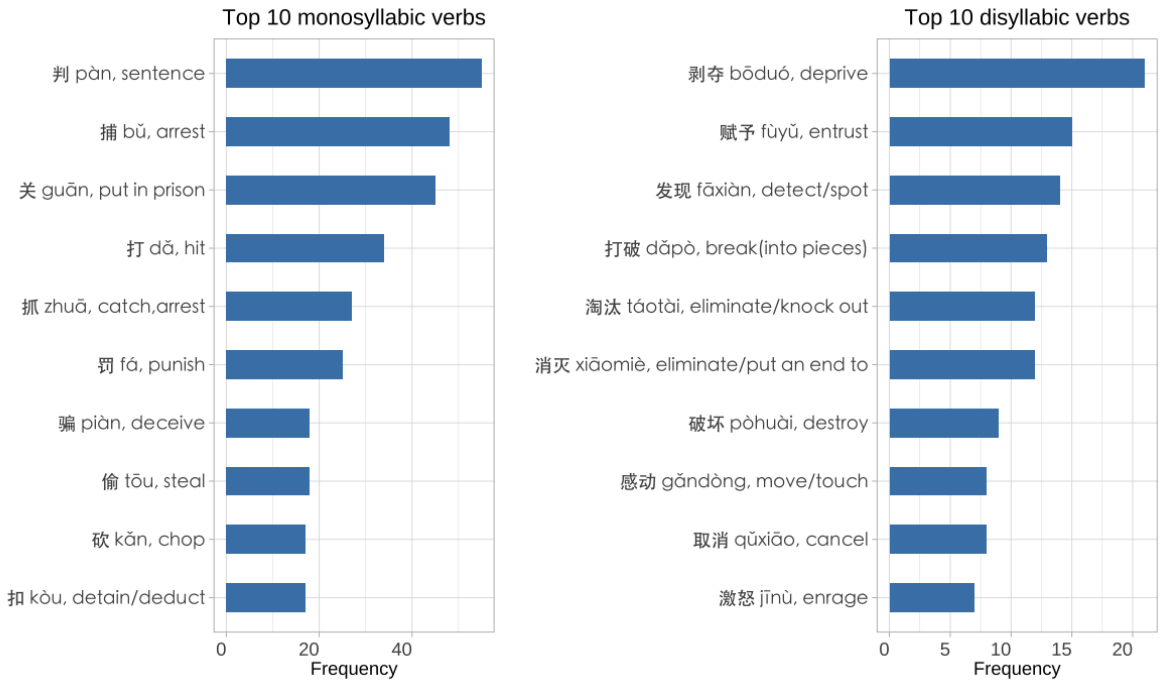

Figure 1. Top 10 types of monosyllabic verbs (left) and top 10 types of disyllabic verbs (right) in Subtype 1 [*bei*-V-*le*] ranked in token frequency

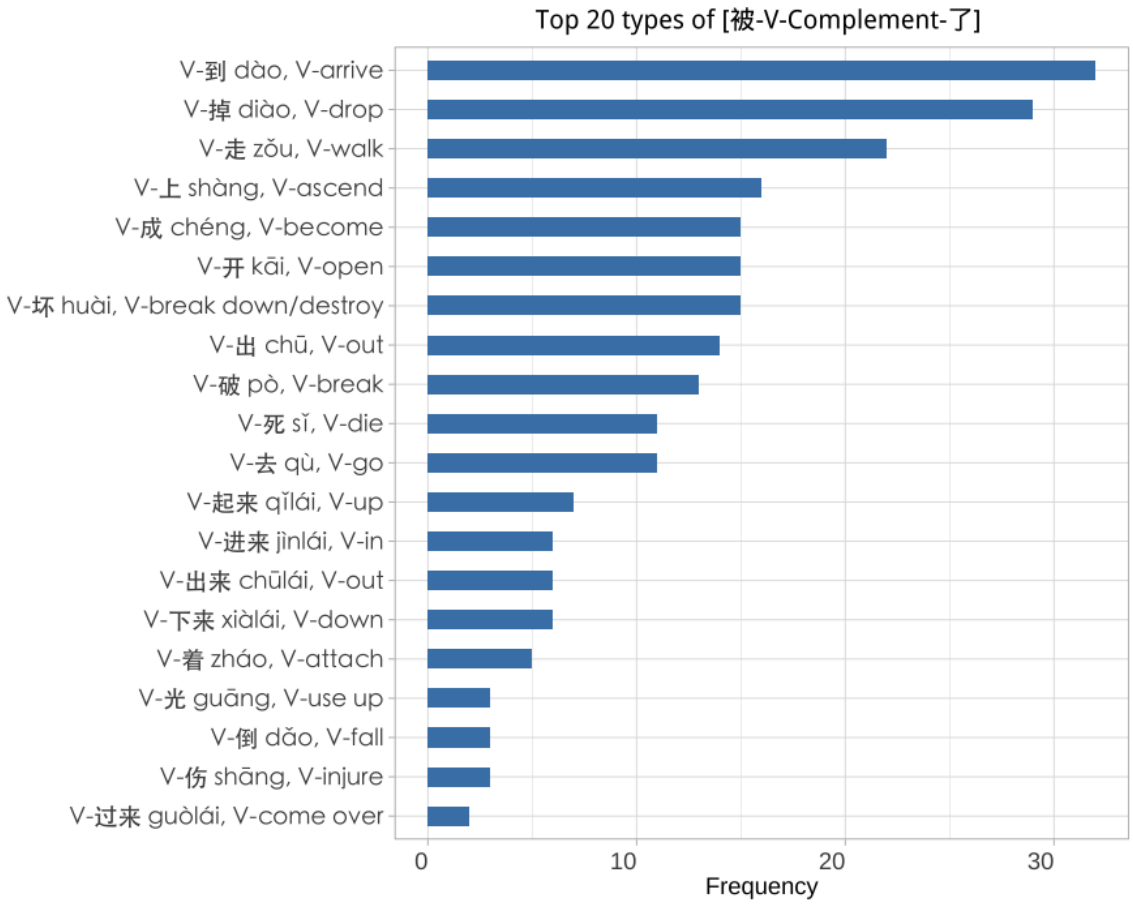

Figure 2. Top 20 types of complements in Subtype 2 [*bei*-V-Complement-*le*] ranked in token frequency

The corpus results reveal that, from the action recipient's perspective, over 90% of the events indicated by the *bei*-constructions are negative, while only less than 10% of the events are positive or neutral, suggesting that the central meaning of *bei*-constructions is more often to indicate an adversative event to the recipient of the action. The corpus findings shown in Figure 1 and Figure 2 are twofold. First, monosyllabic verbs tend to be more frequently used than disyllabic verbs in the *bei*-constructions. Second, the subtype [*bei*-V-Complement-*le*] is less frequently used than [*bei*-V-*le*], indicating that Subtype 1 [*bei*-V-*le*] should be taught earlier than Subtype 2 [*bei*-V-Complement-*le*]. However, we should bear in mind that learners might not be exposed to certain

types in [*bei*-V-*le*] (e.g., *判* 'sentence,' *捕* 'arrest,' *剥夺* 'deprive,' *赋予* 'entrust') as frequently as native speakers, and thus these words could be difficult to learn. Language teachers should take into consideration the frequency and difficulty of these words used in the constructional subtypes before teaching. Considering the prototypical verbs that are more commonly seen in daily life as well as the proficiency level of learners, I selected *打* 'to hit, to beat' and *偷* 'to steal' and *发现* 'to find, to discover' from Figure 1 and incorporated them into the instructional design for Subtype 1 [*bei*-V-*le*]. Other high-frequency verbs such as *批评* 'criticize,' and *骂* 'scold' were also selected. For Subtype 2, the Verb-Complements were selected from Figure 2 to raise learners' awareness that the complements are required in this type of *bei*-construction to indicate results of the action.

4. Instructional design

4.1 Participants and settings

The instructional plan was designed to teach a 50-minute intermediate Chinese language class at an American university. This university offers Chinese language courses from Elementary Chinese to Advanced Chinese. 23 learners from Intermediate II Chinese participated in this study. They were randomly divided into two groups. One group was assigned as the experimental group and the other the control group. The experimental group consisted of 12 learners who received the instructional intervention, whereas the control group had 11 learners who did not receive the same intervention, but instructions and exercises offered by the textbook they were using (Appendix I). As reported by the instructors of the participants, the learners had already learned Verb-Complement structures (e.g., directional complements and resultative complements) as well as basic *ba*-constructions.

4.2 Teaching intervention procedures

This usage-based constructionist teaching intervention was only implemented in the experimental group. The major objectives of the teaching intervention include the following items:

(1) Major functions of *bei*-constructions: Students will understand that *bei*-constructions mainly describe typically adversative events to the subject/object.

(2) Form-meaning/function mapping: Students will learn two high-frequency subtypes of *bei*-constructions [*bei*-V-*le*] and [*bei*-VC-*le*]. Students will be able to properly produce *bei*-constructions.

A PowerPoint presentation was created to be used as the teaching intervention material with the experimental group. Detailed teaching procedures are listed in Table 1.

Table 1. Lesson plan

Time	**Procedures**			
	Activity and objectives	**Step-by-step description**	**Inter-action**	**Materials**
7 mins	**Activity:** S work in groups to figure out the form, meaning, and function of *bei*-constructions	1. T shows Ss pictures and the corresponding Chinese sentences with *bei*-constructions. Note that English translations are not provided to the Ss in this section. (1)  *他被车撞了。* (2)  *这个孩子被爸爸打了。*	T-Ss Ss-Ss (group work)	Pictures, PPT

	Objective: Introduce the major form, function & meaning of *bei*-construction.	(3)  *我的作业被狗吃了。* (4)  *她的手机被偷走了。* 2. Ss work in groups to figure out the form, meaning and function of *bei*-constructions: (1) the similarities of these events, (2) the reasons for using *bei* in the sentences, (3) the generalization of forms/structures (e.g. how S, V, O and *被* are structured in the sentences) 3. Ss to report their findings 4. Based on Ss' findings, T confirms that: (1) This is **a passive construction** (2) Unlike English, this construction is used when **the event is adversative to the subject**. (3) Form generalization: S1+*被*(+S2)+V+*了* (V typically shows a bad event. S2 can be omitted)		
7 mins	**Objective:** Introduce Subtype 1 and the most commonly	5. T confirms the form of Subtype 1: [S1+*被* (+S2)+V *了*] Action Verb (transitive verb) 6. T shows Ss:	T-Ss	PPT

	used verbs in Subtype1.	Verbs (Group1): some high-frequency verbs in spoken Chinese *偷，打，咬， 抓，骗，撞，吃，喝，杀，骂，批评，发现* Verbs (Group 2): some commonly used verbs. Most of them are used in written Chinese *拒绝，取消，打破，打败，淘汰，感动，吸引* (Note that *感动* and *吸引* are not used to denote bad events) - Example sentences containing words in Group 1 are shown with pictures. - Verbs in Group2 will be introduced in the next class sections, not this section.		
4 mins	**Activity:** Pictures prompt output of *bei*-constructions **Objective:** Review the newly learned verbs in Subtype1.	7. After Ss learned this structure and most commonly used verbs, T shows pictures to prompt students to use the correct words in the sentence. Ss work in pairs to fill in the blanks or describe the pictures. For example:  *他_____。* (Answer: *被(大家)批评了*)  *学生上课玩手机_____。* (Answer: *被(老师)发现了*)	Ss-Ss Pair work T-Ss	Pictures, PPT

		 _____。 (Answer: *他的手机被偷了。/ 小偷偷手机被老人发现了。*) 8. Ss report their answers. 9. T gives Ss immediate corrective feedback.		
5 mins	**Activity:** Describe pictures using *bei*-constructions **Objective:** Introduce Subtype2	10. T introduces Subtype 2: (1) Ss describe the following pictures using *bei*-constructions:      Ss may produce some errors (e.g. not using resultative complements) *(2)* T shows Ss correct sentences: *汽车被压坏了。 老人被撞倒了。*	T-Ss S-Ss	Pictures, PPT

		她被气死了。　　他的帽子被(风)吹走了。 *学生的手机被(老师)拿走了。* (3) T asks Ss to notice the difference between their answers and the correct ones in order to emphasize the necessity of using resultative complements to show results of the action in Subtype 2.		
3 mins	**Activity:** Group work: Generalize the form of subtype 2 **Objective:** Introduce the form of Subtype 2	11. Ss work in pairs to generalize the structure of the second subtype of *bei*-construction. 12. Based on Ss' answers, T confirms the form of Subtype2: S1+*被*+(S2)+Verb Complement+ *了*	Ss-Ss T-Ss	PPT
5 mins	**Activity:** Brainstorm: What VC can be used in Subtype 2? **Objective:** Introduce high-frequency VCs in Subtype 2.	13. Ss work in pairs to brainstorm all the possible Verb Complements (VCs) that can be used in this structure and write down their answers 14. T introduces and groups some high-frequency VCs: - V-*到* (e.g. *找到/买到/听到*) - V-*掉* (e.g. *吃掉/喝掉/用掉/花掉/擦掉/撕掉*) - V-*走* (e.g. *带走/拿走/偷走/借走/吹走/开走*) - V-*死* (literal:*打死* ; hyperbole: *吓死/气死/吵死/烦死*) - V-*坏* (e.g. *压坏/撞坏/玩坏/弄坏/用坏*)	Ss-Ss T-Ss	PPT

8 mins	**Activity:** Watch and describe **Objective:** Review the form-meaning pairs of Subtypes 1 and 2 in context	15. T shows Ss a short video clip of Tom and Jerry and describe what happened (https://www.youtube.com/watch?v=UaX3hvrZDJA) For example, *苹果呢？→ 苹果被 Tom 吃了。* *肉呢？→ 肉被 Jerry 拿走了。* *他的牙呢？→ 被打掉了。* *Tom 怎么了？→被 Tyke 打了。* *Jerry 呢？→被 Tom 和 Tyke 气死了。* *合同呢？→合同被 Tyke 撕掉了。*	T-Ss	Video
10 mins	**Activity:** Kahoot game **Objective:** Assessment	16. Ss answer questions using *Kahoot* (See 4.3 for detailed information) 17. T gives corrective feedback	T-Ss	Kahoot website & App
1 min	Summary, homework	18. T reminds Ss of the major function (describing bad event) and the form of Subtype1 and Subtype 2 of *bei*-constructions to reinforce the form-meaning/function mapping. 19. Homework: Ss work in group to make a video entitled "Not his/her lucky day" to show someone's bad experiences using *bei*-constructions.		

4.3 Classroom assessment

Immediately after the teaching section (usage-based constructionist instruction in the experimental group and a traditional approach in the control group), the two groups of participants respectively received an in-class assessment on *Kahoot*, an online game-based learning platform that offers multiple-choice quizzes. I used *Kahoot* as an assessment tool for two reasons. First, it allows the

teacher and students to immediately see reports of how many correct and incorrect answers learners gave for each question. The teacher can gain a picture of how learners understand and produce the target construction and adjust their teaching based on the correct rate. As such, students can learn from the corrective feedback and explanation given by the teacher. Second, as an interactive tool, *Kahoot* creates a relaxing and positive learning atmosphere as well as reduces test anxiety in the classroom.

To test learners' ability to correctly use *bei*-constructions, I included seven target sentences of *bei*-constructions, with three sentences using Subtype 1 [*bei*-V-*le*] and four sentences using Subtype 2 [*bei*-VC-*le*]. The quiz was designed with pictures to prompt students' production in the form of multiple choices (See Appendix II). For example, learners were presented with Figure 3 with four options and only one option was correct. Learners were given one minute to think and select a proper sentence for each picture.

A. 他被老板批评了。
B. 老板被批评了。
C. 他批评了老板。
D. 老板被他批评了。

Figure 3. An example of picture prompts and multiple choices in the assessment

5. Results

The assessment reports were saved on *Kahoot* and downloaded for analysis. Statistical analysis and data visualization were conducted in *RStudio* (Version 1.3.1056). The assessment included a

total of seven questions with each correct answer worth one point[2]. Figure 4 shows that the accuracy ranges from 1 to 7 with a mean score of 3.45 in the control group and ranges from 4 to 7 in the experimental group with a mean score of 5.58 in the experimental group. The overall mean accuracy for the experimental group was 79.76%, whereas the overall mean accuracy for the control group was 49.35%. A t-test for independent samples was conducted to test whether the mean accuracy in the two groups was equal. The level of significance was set at $p = .05$. It shows that the 12 participants who received the teaching intervention ($M = 5.58$, $SD = 1.08$) significantly outperformed the 11 participants in the control group ($M = 3.45$, $SD = 2.25$) for both subtypes, $t(14) = -2.85$, $p = .01$, indicating a positive effect of using the usage-based constructionist approach to teaching and learning *bei*-constructions.

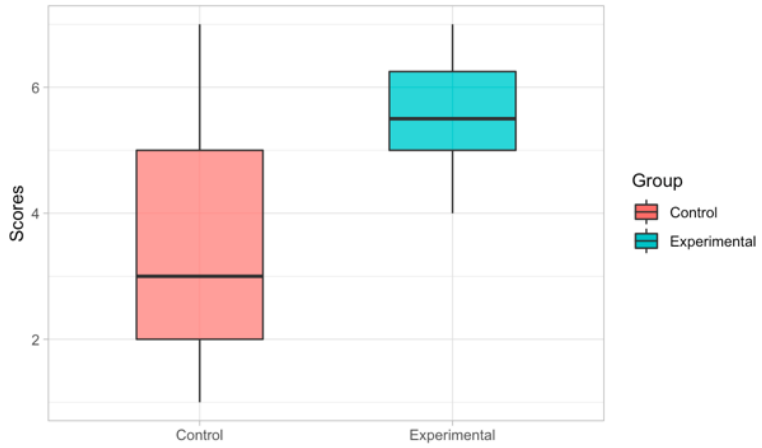

Figure 4. A boxplot of scores of the control group and the experimental group

[2] This study did not adopt *Kahoot* scoring system where accuracy, speed and answer streak determine the final score. Because speed and answer streak are not the focus of this study, I only included accuracy when assessing student learning outcomes.

Two subtypes of *bei*-constructions were tested in both groups. Subtype 1 is the highest frequency *bei*-construction [*bei*-V-*le*], and Subtype 2 [*bei*-VC-*le*] contains Verb-Complement structure. Figure 5 shows the mean percentages of correct answers given by the experimental group and the control group by subtypes. The experimental group had similar percentages of correct answers for both subtypes, with Subtype 1 receiving 1.5% more correct answers than Subtype 2, whereas the control group performed better for Subtype 2 (M = 2.18, SD = 1.25) than Subtype 1 (M = 1.27, SD = 1.19), but the mean difference was not significant $t(20)$= -1.75, p = .10. When observing the performances between groups, I found that the experimental group (M = 2.41, SD = .90) performed significantly better than the control group (M = 1.27, SD = 1.19) in choosing correct answers for Subtype 1, $t(19)$= -2.58, p = .02. The experimental group (M = 3.17, SD = .72) also significantly outperformed the control group (M = 2.18, SD = 1.25) for Subtype 2, t (16) = -2.29, p = .04. The findings suggest that the usage-based constructionist teaching intervention was effective for students to learn high-frequency subtypes of *bei*-constructions.

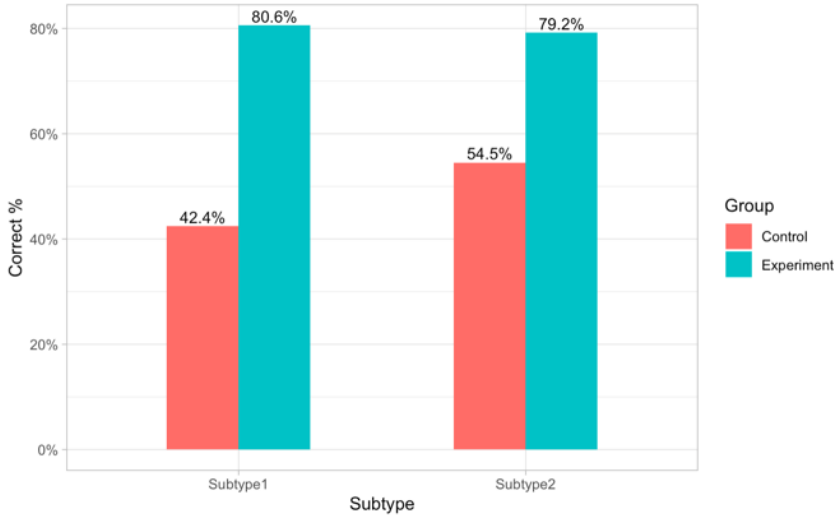

Figure 5. Performance of the control group and the experimental group in choosing correct *bei*-constructions by subtypes

Figure 6 presents the percentage of correct answers for each question given by learners in the experimental group and the control group. It shows the experimental group outperformed the control group for all questions. Among the seven questions, the correctness for Q2 by the experimental group (M = .92, SD = .29) was significantly higher than that by the control group (M = .27, SD = .47), $t(16)$= -3.94, p =.001. Figure 6 also shows that Q1 and Q6 received lower ratings in the experimental group, while the control group had trouble answering more questions (e.g., Q1, Q2, Q5, and Q6) with Q2 receiving the lowest scores.

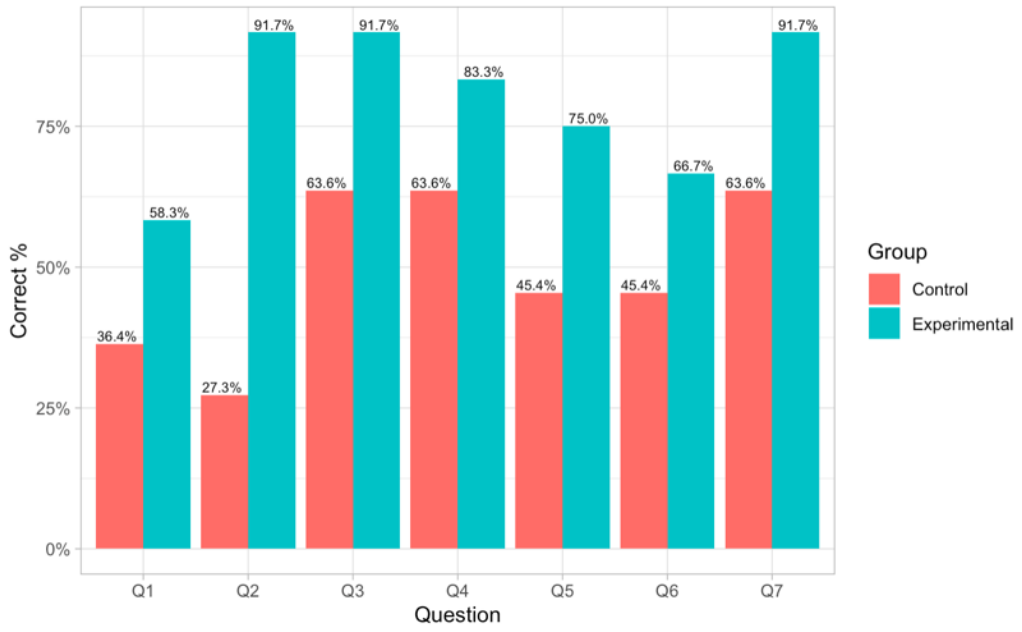

Figure 6. Performance of the control group and the experimental group in choosing correct *bei*-constructions by questions

6. Discussion

The usage-based approach to teaching and learning Chinese as a foreign language (CFL) has not been widely studied. By exploring whether a usage-based constructionist teaching intervention

affects CFL learning of *bei*-constructions, this study filled a gap in the literature. This instructional design focused on two high-frequency subtypes of *bei*-constructions containing prototypical lexical terms, the forms of which are mapped onto the constructional meaning of negative semantic inheritance: indicating adversative events. The teaching intervention emphasized this form-meaning mapping and introduced high-frequency patterns and prototypical examples to assist learning. In the practicing section, learners were able to interact in a communicative context so that the constructional schema was strengthened and the L2 production was increased. By contrast, learners in the control group who received the instruction and exercises offered by the textbook focused more on the form and failed to develop the form-mapping ability. While the textbook emphasized on the negative connotation conveyed by the passive-voice structures, the presentations did not provide high-frequency exemplars in real-world communication. More importantly, the exercises (i.e., translation from English to Chinese) failed to provide context of use. Without context, learners do not know when and where to use the constructions in real-world language use (Jing-Schmidt 2015, 2019b). The findings show that learners who received the usage-based constructionist intervention performed significantly better than those who did not receive it in selecting correct *bei*-constructions to describe corresponding pictures. The results suggest that the teaching intervention using a usage-based constructionist approach provided in Section 4.2 yielded a positive learning outcome with regard to the two high-frequency subtypes of *bei*-constructions.

While the usage-based constructionist teaching intervention was effective compared to form-focused teaching methods, learners in the experimental group have not yet reached a perfect level of nativeness in terms of the accuracy of production. This could be due to the complexity of the interface between forms and semantics of *bei*-constructions, which impacts the cognitive level

of L2 processing. First, in the *bei*-constructions, the recipient is usually included while the agent can be either omitted or added. For example, Q1 in the assessment received the lowest ratings by the experimental group for the target answer *他被老板批评了*'He was criticized by the boss.' The correct answer included both the recipient *他* 'he' and the agent *老板* 'boss,' while the teaching intervention might have focused on more examples of the pattern where the agent was omitted and the learners might have paid less attention to this low-salience form. As pointed out by Ellis (2006), the process of L2 associative learning can be affected by salience. It is reasonable to first introduce the form of high salience (i.e. the less complex pattern without an agent) before presenting the form of low salience (i.e. the more complex pattern with an agent). However, if the low salience cue did not attract sufficient attention from learners, it could cause learner confusion in terms of whether and when the agent should be added. Therefore, future instructions should allow learners to notice forms of low salience and raise their awareness that both including and omitting the agent in some subtypes of *bei*-constructions are grammatical. When students are introduced to more subtypes such as [*bei*-V transformation] (e.g., *被选为总统* 'was elected president'), the instructor should point out that the agent here is most likely to be omitted.

Second, a wide variety of Verb Complement (VC) structures can enter the subtype [*bei*-V-C-*le*] to indicate the result caused by the action. This requires learners to have prototypical examples of VC structures in their repertoire before they learn *bei*-constructions. Among the four target VC structures in the assessment, *气死* 'angry to death' received the highest ratings, followed by *吹走* 'blow away', *压坏* 'crush' and *拿走* 'take away.' It is highly possible that CFL learners first learn V *死* 'death' before other VC structures because V *死* 'death' conveys a hyperbolic meaning and is frequently encountered in daily life (e.g. *饿死了* 'hungry to death' and *热死了* 'hot to death'). This is probably why Q7 (*气死* 'angry to death') received the highest ratings in

both groups. Other VC combinations, such as V 走 'away' and V 坏 'broken', might not be systematically learned and therefore are less familiar to learners. The unfamiliarity of basic structures impedes learners from acquiring complex structures, which can be viewed as misconnections as described by MacWhinney (2012). He observed that short connections process similar items sorted into clusters, while long-distance connections between separate items result in navigating towards the L1. However, proceduralization and chunking can restrain misconnections. Proceduralization provides flexible variations by transferring new knowledge into the operating procedure, whereas chunks are processed as unanalyzed wholes by soldering items into a single unit. In addition, repeated practice and faster speed of lexical access can boost fluency. This suggests that VC structures, as important constituents in notoriously difficult constructions such as *ba*-constructions and *bei*-constructions, can be learned in chunks. The chunks should also be repeatedly presented so that learners can process them faster and produce them with ease. All of these should gain sufficient attention starting from lower levels of Chinese learning and teaching.

Finally, limitations of the study and ensuing suggestions for future research and teaching need to be considered. First, the instructional plan was designed to teach only two subtypes of *bei*-constructions based on a preliminary search and analysis of corpus data from written language use; further work involving colloquial usage of *bei*-constructions with more quantitative corpus-based evidence is required to uncover more subtypes of *bei*-constructions and more real-life examples to inform CFL teaching. Second, ideally, the assessment should elicit learner written or oral production rather than an answer from multiple choices in a test containing a small set of questions. Therefore, future assessment design should include more questions involving various lexical items and new sentences that were not presented to learners in the teaching intervention to better test learners' form-meaning mapping ability. Third, the teaching intervention was only implemented

to a small size of learners. Future studies should recruit more learners to test robustness of the findings. Finally, the objectives of the instructional plan might be too ambitious to achieve within a 50-minute class. Future teaching plans might as well use a whole class section to engage students to learn and practice only one subtype. The next subtype can be taught when learners have mastered the previous subtype and when they are ready to learn more form-meaning pairs.

Despite the limitations, this study and the teaching plan make a meaningful empirical and pedagogical contribution to CFL research and teaching practices. The significance of this paper is situated in the demonstration of how L2 Chinese learning benefits from the integration of linguistic theories into CFL teaching. More pedagogical plans using a theoretical approach are needed, and the teaching and learning outcomes should be evaluated. In concluding this pedagogical report, I join Jing-Schmidt (2015) and Tao (2016) in calling for more empirical studies that integrate theoretical linguistic research and practical language teaching.

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Appendix I

Textbook presentations and exercises for the control group:

A sentence in the passive voice can be constructed with *被/叫/让* as follows:

Receiver of the action + *被/叫/让* + agent of the action + verb + other element (complement/le, etc.)

1. *我的功课被/叫/让狗吃了*。My homework was eaten by my dog.

2. *你买的那些书被/叫/让你的女朋友拿去了*。The books that you bought were taken away by your girlfriend.

3. *糟糕，你的网球拍被/叫/让我压坏了*。Oh gosh, your tennis racket was crushed [by me].

4. *你看，我的梨被/叫/让你的西瓜压坏了*。Take a look. My pears were crushed by your watermelon.

In Chinese, the passive voice is not used as often as it is in English. It often carries negative connotations and usually appears in situations that are unpleasant for the receiver of the action, or in situations where something is lost. As in the ba structure, the verb is usually followed by another element, such as a complement or le. In a passive-voice sentence with 被/叫/让, the agent of the action does not always have to be specified. If the agent of the action is someone that is not identifiable or need not be identified, it can be referred to simply as 人.

5. *我的信用卡被/叫/让人拿走了*。My credit card was taken away.

6. *同学们在教室又唱又跳，他快被吵死了。* His classmates are singing and dancing in the classroom. The noise is driving him to distraction.

被 sometimes can be used in a positive sense, but we will not discuss it in detail here.

In the textbook and workbook exercises, students are asked to translate the following English sentences into Chinese using passive voice structures.

His homework was eaten by his dog. → _____

His coffee was drunk by his sister. → _____

His credit card was taken away from him by his mother. → _____

His car was driven to school by his brother. → _____

The birthday gift that he was going to his friend was crushed by the sofa. →

_____

A: How come my tennis ball is not round anymore? → _____

B: I am sorry. It got crushed by the sofa. → _____

Appendix II Assessment Questions

Q1: Which sentence can correctly describe this picture?

A. 他被老板批评了。
B. 老板被批评了。
C. 他批评了老板。
D. 老板被他批评了。

Q2: Which sentence can correctly describe this picture?

A. *孩子被骂了。*
B. *妈妈被骂了。*
C. *妈妈被孩子骂了。*
D. *孩子骂妈妈了。*

Q3: Which sentence can correctly describe this picture?

A．*老人撞了。*
B．*车被撞了。*
C．*老人被撞了。*
D．*车被撞了。*

Q4: Which sentence can correctly describe this picture?

A. *他的帽子吹了。*
B. *他的帽子被吹走了。*
C. *他的帽子被吹了。*
D. *他被帽子吹了。*

Q5: Which sentence can correctly describe this picture?

A. *他被车压了。*
B. *他的车压了。*
C. *他的车被压坏了。*
D. *车被他压坏了。*

Q6: Which sentence can correctly describe this picture?

A．*学生的手机被拿走了。*
B．*老师被拿了手机。*
C．*学生被手机拿走了。*
D．*学生的手机被拿了。*

Q7: Which sentence can correctly describe this picture?

A．*她被气了。*
B．*她被气死了。*
C．*生气被她了。*
D．*她被生气。*