

Recasting and its repair effects on L2 Chinese pronunciation

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Abstract

This study investigates the repair status of one type of corrective feedback (CF), namely recasts in beginning L2 (second language) Chinese drill classes. The investigation includes two parts: CF distribution patterns and classroom interactions. Nine 50-minute beginning-level drill classes were transcribed and coded. The CF distribution analyses showed an overwhelming tendency for teachers to use recasts to correct phonological errors. The descriptions of classroom discourse relied on longer stretches of classroom interaction, as opposed to only three moves, including error, feedback, and uptake. These classroom interaction analyses empirically demonstrated the complexity of immediate repair of recast in response to phonological errors: (1) a single repair alone following recast does not necessarily indicate true repair status and (2) students' lack of repair does not negate recast effectiveness. Taken together, the results enhance our understanding of recasts in correcting phonological errors in L2 Chinese classrooms. The results suggest that the effects of immediate repair could be better observed and interpreted through longer stretches of classroom interactions within a single class or across sequential classes with a similar theme.

Keywords: corrective feedback; L2 Chinese; recasts; repair; uptake

1. Introduction

Teacher corrective feedback (CF) on student errors in the area of second language (L2) acquisition and foreign language (FL) education is an extensively researched topic. There are various types of feedback, including explicit correction, recasts, clarification requests, metalinguistic feedback, elicitation, and repetition (Lyster & Ranta, 1997). Among CF studies, recasts have generated considerable interest. A large body of research in the last two decades has focused on the effectiveness of recasts in various L2/FL settings, such as English as L2/FL (Panova & Lyster, 2002), primary-level French immersion (Lyster & Ranta, 1997), Japanese and French immersion (Lyster & Mori, 2006), and elementary Spanish classes (Oskoz & Liskin-Gasparro, 2002). Fewer studies focus on L2/FL Chinese classroom settings. The studies noted above each examine particular language(s); therefore, the findings may not apply to the L2/FL Chinese classroom setting. In addition, for different instructional settings (e.g., primary, secondary, and higher classrooms) and various proficiency levels of language classes (e.g., beginning, intermediate, and advanced levels), learning environments differ and classroom discourses vary. Correspondingly, definitions of recasts, distributions of recasts in classes, and recast effectiveness might differ across environments. For example, elementary French immersion classes are usually characterized by implicit focus-on-meaning recast moves, whereas the beginning college-level L2/FL Chinese classroom might feature explicit recasts and consist of focus-on-form moves. Here, the focus-on-form moves refer to the classroom interactions used for practicing language form, such as grammatical structures and phonetic systems. Therefore, the findings about recast effectiveness in particular classroom settings might not apply to certain Chinese classroom settings.

The purpose of this study is to examine recast and its effectiveness in the very beginning L2/FL Chinese classes at the college level in the US. The very beginning classes consist of students who have approximately one month of Chinese learning experience. The difference between Chinese and English makes teaching and learning at this phase unique and necessitates classroom interactions and recast moves that have somewhat distinctive features. Chinese and English are not cognate languages and, therefore, are very different from each other. At the very beginning level of Chinese learning, English-speaking learners need to overcome the huge language differences between English and Chinese. These differences are evident in the Chinese phonetic system, for example. Chinese is a tonal language. English-speaking learners of Chinese need focus-on-form drills much more than when studying European languages because they need to spend much more time learning how to habitually add a tone to almost every syllabic word. The above example illustrates differences between the Chinese and

English languages and the need for corresponding classroom discourse with the feature full of phonetic focus-on-form interactions. Recast studies in Chinese and other L2s/FLs have not addressed such features in beginning L2/FL Chinese learning. The current study bridges the gap by specifically addressing recast distribution and its effectiveness in this context.

2. Definition of recast and its effectiveness

As Sheen (2006) and Ellis and Sheen (2006) summarized, studies have utilized a variety of operational definitions of recasts. For example, with respect to first language acquisition, Long (1996) focused on meaning-negotiation activities. Lyster and Ranta (1997) and Sheen (2006) used similar definitions of recasts as a teacher's reformulation of all or part of a student's ill-formed utterances. These definitions precisely describe the nature of recasting, but do not offer details about types of recasts (e.g., implicit vs. explicit recasts) that occur in various L2/FL classroom settings.

The definition of recasts in this study draws from Chaudron (1977). He distinguished two different subcategories of what are now called recasts: (1) recasts that "simply add correction and continue to other topics" and (2) recasts that "add emphasis to stress location of error and its correct formulation" (1977, p. 39). Many recast studies in L2/FL classroom settings adopt the first subcategory, stressing the implicit nature of recast (Fu, 2012; Li, 2014; Lyster & Mori, 2006; Lyster & Ranta, 1997; Oskoz & Liskin-Gasparro, 2002; Panova & Lyster, 2002; Sung & Tsai, 2014). Studies in laboratory settings (e.g., Doughty & Varela, 1998; Mackey & Philp, 1998) focus on the explicit nature of recasts.

Our study focuses on the second subcategory – explicit recast – but unlike prior studies of explicit recasts we focus on these recasts in classroom settings. We define a recast as teacher emphasis on correct formulation presented in contrast to student error. For example:

- (1) S: **Fang Jingli*. [Manager Fang.] (Error – Phonological error)
T: Fang, f, f, f, Fang. (CF – explicit recast)
S: Fang.
T: Fang, dui le [Fang, correct.]

- Notes. 1. (1) represents Example 1.
2. *This line shows pinyin, the Chinese Romanization system. Italicized text means the utterance contains at least one error.
3. The content in square brackets is the English translation.
4. The part in bold face indicates that teacher(s) put emphasis on that part.

5. S represents “student” and T represents “teacher”.
6. The above notations apply to all examples provided below.

In the above example, after perceiving the student’s phonological error, the teacher provided a correct form by stressing the pronunciation of *Fang*. The teacher also repeated and stressed [f] to emphasize the student that his or her error came from pronunciation of the initial [f].

Effects of recasts vary depending on the definition of recast and L2/FL settings. As noted, many classroom observational studies focus on implicit recasts and usually define recasting as a reformulation of an incorrect utterance while maintaining the flow of communication (e.g., Fu, 2012; Gass, 2010; Li, 2014; Long, 1996, 2007; Long & Robinson, 1998; Lyster & Ranta, 1997; Sung & Tsai, 2014). Implicit recast typically consists of a confirmation check that is often followed by topic continuation. It entails an implicit focus on form, which may not be salient to learners. As Lyster (1998) argued, the acquisition value of recasts is diminished because recasts are inherently ambiguous, and so the corrective function is not transparent. Learners sometimes are not sure that their interlocutors are echoing what they have said or providing them with correction. Han (2002, p. 550) stated that “recasts are among the least clear and direct forms of negative feedback”. Mackey et al.’s (2000) study provides evidence that learners often fail to perceive recasts as corrections. Therefore, many of these studies (e.g., Fu, 2012; Li, 2014; Lyster & Ranta, 1997; Panova & Lyster, 2002; Oskoz & Liskin-Gasparro, 2002; Sung & Tsai, 2014) argue that the effect of recasts in the form of immediate uptake and repair is not as obvious as other explicit CF, such as metalinguistic feedback and repetition. Accordingly, these studies conclude that implicit recasts might not be the most effective type of feedback. However, failing to identify the corrective function of recasts does not negate recasts’ acquisition potential (Ellis & Sheen, 2006). Using student immediate uptake and repair to measure effects of recasting and other CF methods is limited because teachers and students may not detect the effectiveness until later. Recast effectiveness might be compromised by other factors, such as low student motivation, low proficiency level, or teachers’ inappropriate use of CF methods (Mackey & Philp, 1998).

Recast effectiveness is obvious when teachers use this CF move explicitly. It has even been found to lead to learner repair as frequently as other explicit CF methods in some L2/FL settings (Nicholas et al., 2001; Sheen, 2004, 2006; Ellis & Sheen, 2006; Sato, 2011). In laboratory studies (Doughty & Varela, 1998; Mackey & Philp, 1998), recast has been considered tantamount to explicit correction. Several observational studies (e.g., Carpenter et al., 2006; Lyster, 1998; Mackey et al., 2000; Saito, 2015; Sheen, 2006) found that recasts can be quite salient to learners when their targets are L2 pronunciation errors.

In conclusion, the literature on recast studies informs us that recast effectiveness is related to whether recasts are explicit or implicit. Implicit recast is

typically studied in classroom settings, while explicit recast is commonly examined in lab settings. Explicit recast also occurs in classroom settings, but it is used to correct phonological errors (e.g., Carpenter et al., 2006; Lyster, 1998; Mackey et al., 2000; Saito, 2015; Sheen, 2006). Our study follows this line of research describing explicit recast and its effects on L2/FL Chinese phonological errors.

3. Recast studies in the L2/FL Chinese setting

In the L2/FL Chinese setting, there is no study focusing exclusively on recasts. We found six studies examining the overall effects of all feedback methods, three of which were carried out in laboratory settings. Chen (1996) examined the effects of different types of CF on the acquisition of Chinese classifiers through comparing three experimental groups and one control group. Li (2010) investigated the interactions between feedback type, proficiency, and the nature of the linguistic target in L2 Chinese. The results indicate that feedback types and effectiveness relate to proficiency levels and linguistic targets, but they do not relate to whether class teaching is communication-oriented or if feedback is implicit or explicit. Qiao (2015) demonstrated the effectiveness of CF on acquisition of rule-based verb constructions. He distributed questionnaires exploring 18 second-year L2 Chinese students' perceptions and preferences of feedback type. He also used a pretest, a treatment, and two posttests to assess student acquisition.

Three studies have been conducted in the L2/FL Chinese classroom setting. Fu (2012) observed and transcribed 10 hours of a second-year reading Chinese class and described CF frequency, distribution patterns, and learner uptake. Fu found that recast is the predominant type of feedback (56.7% of all CF), but other explicit types of feedback are more successful in leading to learner uptake. Sung and Tsai (2014) explored interactions among CF, errors, and repairs in two language classes, one beginner and one advanced. The results show that CF is effective overall. The two most frequently made errors are phonological and lexical errors. Recasts are the most frequently used CF method and this method is particularly welcomed by beginning learners. Li (2014) compared immediate effects of prompts, recasts, and explicit correction on learner uptake and repair across three different Chinese proficiency levels in the college-level Chinese classroom setting. Results indicate that recasts still remain the most common feedback type across the classes. The uptake of feedback is influenced both by classroom communication orientation and the students' language proficiency.

4. Research questions

Our research is a classroom observational study in the L2/FL Chinese setting, in which students only have approximately one month of learning experience. Many CF studies in L2/FL and Chinese language classes conclude that recasts are the most predominant feedback method (e.g., Fu, 2012; Li, 2014; Lyster & Mori, 2006; Lyster & Ranta, 1997; Oskoz & Liskin-Gasparro, 2002; Panova & Lyster, 2002; Sung & Tsai, 2014). Accordingly, the current study intends to empirically verify whether this recast distribution trend also applies to the very beginning level of L2/FL Chinese classes. In addition, this study investigates the interaction between CF type and error type in these classes. The nature of CF distribution and how it relates to error types will thus constitute the first research question. The answer to this question provides information about CF moves in very beginning L2/FL Chinese classes. It also provides the background for understanding the other two research questions in this study.

Previous classroom observational studies have measured recast effectiveness using immediate uptake and learner repair (Brock et al., 1986; Ellis et al., 2001; Lyster & Ranta, 1997; Oliver, 1995). However, as Mackey and Philp (1998) argue, using repair immediately following a recast may not be the most appropriate way to determine effectiveness. This study analyzes longer stretches of transcripts of classroom interaction, as opposed to the previous studies that focus on only three moves, including error, feedback, and uptake. The rationale for analyzing longer stretches of classroom interactions rests on the assumption that immediate repair has to be contextually interpreted.

Unlike the observational studies cited above, our study not only examines recast distribution in the very beginning L2/FL Chinese classes, but also analyzes classroom interactions between teachers and students to interpret the effects of recasts. Three research questions guide this study:

1. What are the frequencies and the distribution patterns of different types of CF used by teachers, and how do CF types relate to student error types?
2. What does a single immediate repair indicate in terms of recast effectiveness?
3. What does a single immediate lack-of-repair indicate in terms of recast effectiveness?

5. Method

5.1. Participants

The participants in this study were three L2 Chinese instructors and their students at a Midwest university. The three teachers, referred to here as T1, T2,

and T3, are all Chinese natives with at least four years of college-level Chinese teaching experience in the US. The students were drawn from three sections of the same introductory class and had attended class for approximately one month prior to the beginning of this study.

Table 1 Classes observed

| | 1st day classes taught by | 2nd day classes taught by | 3rd day classes taught by |
|-------------|---------------------------|---------------------------|---------------------------|
| 1st section | T1 | T2 | T3 |
| 2nd section | T1 | T2 | T3 |
| 3rd section | T1 | T2 | T3 |

One learning unit consisted of three 50-minute drill classes. T1, T2, T3 taught the first, second-, and third-day drill classes, respectively. On each day, one teacher taught the same three sections. The total number of observed and videotaped classes was nine, as shown in Table 1.

5.2. Data collection and coding

Move, round, and CF episode are the units of classroom interactions in this study. One move means one utterance of a teacher or a student, which could be a complete or incomplete sentence. A round consists of two moves from either student or teacher. A CF episode consists of at least one interaction between teacher and student, beginning with a student's error and followed by a teacher's CF. The teacher's CF is either followed by uptake on the part of the student or not. In this study, when teachers used recasts to correct a phonological error, they usually provided more than one CF for each error. As a result, some of these episodes seemed to start with a teacher's positive prompts, but in fact they were CF moves, because these episodes shared the same error that appeared previously.

The data consisted of a series of episodes that involved CF. Episodes were categorized based on CF methods and error types. All identified episodes with learners' erroneous utterances were transcribed, checked against the videotapes, and judged by the researchers and one more coder. When coders disagreed, discussion continued until at least two out of the three coders reached consensus on the coding. We used Chinese pinyin, the official romanization system for Standard Chinese, to transcribe classroom interactions, and then translated pinyin to English.

When a student immediately responded to a teacher's CF, we coded the response as uptake; otherwise, it was coded as no uptake. We followed Lyster and Ranta (1997) in categorizing two types of uptake: (1) uptake that results in repair of the error and (2) uptake that results in an utterance still in need of repair. In this study, we further coded uptake into four categories: (1) Simple Repetition

or Needs-Repair (uptake that resulted in an utterance still in need of repair); (2) Half-Repair (uptake demonstrating that students realized an error but still could not repair the error); (3) Inconsistent Repair (repair with inconsistency); and (4) Final Acquisition (internalized repair or consistent repair). Thus, the extent of immediate repair can be thought of as a spectrum ranging from Needs-Repair to Final Acquisition, as shown in Figure 1.

| Simple Repetition or Needs-Repair | Half-Repair | Inconsistent Repair | Final Acquisition |
|-----------------------------------|-------------|---------------------|-------------------|
| Stage 1 | Stage 2 | Stage 3 | Stage 4 |

Figure 1 Repair line

5.3. Categorization of CF

We mainly followed Lyster and Ranta (1997) in coding six types of CF methods: explicit correction, recasts, clarification requests, metalinguistic feedback, elicitation, and repetition. Below are detailed descriptions of each type.

- 1) *Explicit correction* means that the teacher explicitly points out student error and provides a correct form.

- (2) S: Oh, *tā zhǎng de yòu gāo yòu shòu de nánren.*
[Oh, # he looks tall and skinny man.] (Error - grammatical)
T2: Méiyǒu "de nánren." Tā zhǎngde yòu gāo yòu shòu (CF - explicit correction)
[There is no "de nánren". He looks tall and skinny.]
Notes. 1. T2 represents the teacher observed on the second day.
2. # before an English sentence means the sentence is a literal translation of an ungrammatical Chinese sentence.
3. Other notations are the same as shown in the notes for Example (1).

- 2) *Recast* is defined and illustrated in Example (1) as explicit reformulation. The implicit recast is also a reformulation of an incorrect utterance, but it typically consists of confirmation checks that are often followed by topic continuation, entailing an implicit focus on form, which is not salient to learners. In the classes we observed, when the L2 Chinese teachers reformulated a student's linguistically erroneous utterance, they often added some reinforcement words such as *Duì le (correct)*, *Hěnhǎo (very good)*, and *Búcuò (good)*, even if the student's utterance was not correct.

- (3) S: *Tā máng.* [#He busy.] (Error - grammatical)
T1: *duì le. Tā hěn máng.* [Correct. He is busy.] (CF – implicit recast)
S: *Tā hěn máng* [He is busy.]

- 3) *Clarification request* means that the teacher asks the student to repeat or reformulate his/her utterance after the student makes an error.

- (4) S: *Bái Míng tā de zhǎng de zěnmeyàng?* [# Bai Ming, his what does he look like?]
 (Error - Grammatical)
 T2: *Qǐng nǐ zài shuō yíbiàn.* [Please say it again.] (CF - clarification request)
 S: *Bái Míng tā de zhǎng de zěnmeyàng?* [# Bai Ming, his what does he look like?]

- 4) *Metalinguistic feedback* means that the teacher offers “comments, information, or questions related to the well-formedness of a student’s utterance, without explicitly providing the correct form” (Lyster & Ranta, 1997, p. 47) (in the example below, the student initially described a short person erroneously as *tall*).

- (5) S: *Tā yòu gāo yòu zhuàng.* [He is tall and strong.] (Error - Lexical)
 T3: *Gāo? Tā shì nánrén, gāo ma?*
 [Tall? He is a man. Is he tall?] (CF - metalinguistic feedback)
 S: *Huà fù jīnglǐ hěn ǎi, zhuàng, yòu ǎi yòu zhuàng.*
 [Assistant manager Huà is short, strong, short and strong.]

- 5) *Elicitation* means that the teacher prompts the student to use a form correctly by providing part of what the student needs to do so. In the example below, T3 said *de...* to encourage the student to use “*de*” and add more words to form a grammatically complete sentence.

- (6) S: *Tā jiùshì nàge yòu gāo yòu zhuàng.* [# He is right that tall and strong.]
 T3: *De....*[modifier marker to elicit the noun after it] (CF - elicitation)
 S: *De nánren [...Man.]*

- 6) *Repetition* means that the teacher repeats the part of the student’s utterance that is erroneous with obvious emphasis in order to highlight the student’s error.

- (7) S: *Yòu pàng yòu gāo yīdiǎnr de nánrén?* (Error – Grammatical error)
 [# The fat and tall man.]
 T2: *S, Yòu pàng yòu gāo yīdiǎnr de nánrén?*
 [S, (Did you say) the fat and tall man?] (CF - repetition)
 S: *Búduì?*
 [Isn’t it correct?]
 T2: *Yīnggāi zěnmē shuō?* (CF – clarification request)

[What should (we) say?]
S: Tā zhǎng de yǒu pàng yǒu gāo.
[He looks fat and tall.]

5.4. Categorization of error

Student moves were coded either as error-free or error-containing. Error-free means that no error occurs in the student's utterances, while error-containing means that at least one error occurs in utterances. In this study, only the errors followed by CF were analyzed. Errors were classified as grammatical, lexical, phonological, or other:

- 1) Grammatical error. If the structure of an utterance is not grammatically correct, we coded it as having a grammatical error (see Example 3.).
- 2) Lexical error. The following three cases were coded as lexical errors: (a) students asked the meaning of a word; (b) students used their first language for a word; (c) students used semantically inaccurate words (see Example 5.).
- 3) Phonological error. Phonological errors include tonal errors, initial- and final-related errors, and mixed phonological errors. Tonal errors are incorrect renditions of Chinese tones. Initial- and final-related errors are incorrect productions of Chinese initials or finals. Phonological errors that are combinations of tonal, initial- or final-related errors were coded as mixed phonological errors.
- 4) Other error. These errors reflect contextualized meaning negotiation and include two types. Type 1: A student omitted a necessary word or phrase in his or her utterance. It was difficult to determine whether these errors were lexical or grammatical, so they were coded as "other". Type 2: A student did not respond to a teacher's request appropriately, as when a teacher asked "What's his personality?" and the student answered: "He is tall and skinny".

6. Results

6.1. What are the frequencies and the distribution patterns of different types of CF used by teachers, and how do CF types relate to student error types?

6.1.1. CF distribution by error types

We observed and coded 570 CF episodes in the nine observed classes. 71% of CF episodes were made in response to phonological errors, 17% were made in response to grammatical errors, 6% were in response to lexical errors, and 6% were in response to other errors, as presented in Figure 2. Within the phonological error category, CF in response to tonal errors represented 72% of CF episodes,

CF in response to initial- and final-related errors comprised 17% of CF episodes, and CF in response to mixed errors occurred 11% of CF episodes (see Figure 3).

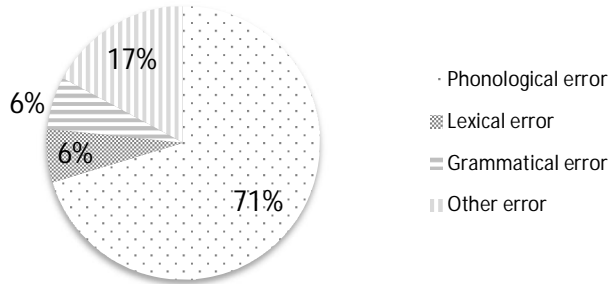


Figure 2 CF distribution across error types

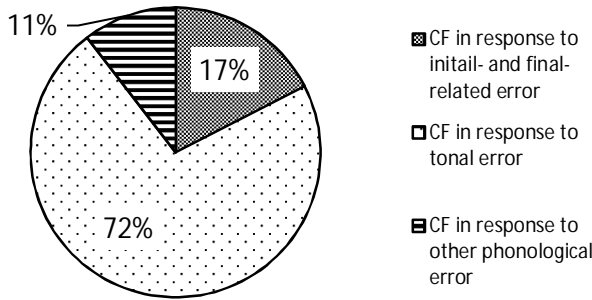


Figure 3 CF distribution across phonological errors

6.1.2. CF distribution by CF methods

Regarding CF methods, recasts comprised more than half of the total CF episodes (72%). The next most frequent types of CF episodes were elicitation, repetition, and multiple-CF at 11%, 4%, and 8%, respectively. The other types of CF – explicit correction, clarification request, and metalinguistic feedback – were sparingly used (1%, 1%, and 3%, respectively).

6.1.3. CF distribution across error types and CF methods

Examination of CF distributions across error types demonstrates that phonological CF was the most common type of feedback. Table 2 shows the distribution of phonological CF, where it can be seen that 94% of the phonological CF episodes were recasts.

Table 2 Distribution of CF methods in response to phonological errors

| Error | CF | Recasts | Explicit correction | Repetition | Elicitation | Clarification request | Meta-linguistic feedback | Multiple-CF |
|-------|----|---------|---------------------|------------|-------------|-----------------------|--------------------------|-------------|
| # | | 378 | 1 | 4 | 3 | 0 | 0 | 19 |
| Ratio | | .94 | .002 | 0 | .008 | 0 | 0 | .05 |

Note. # represents the number of phonological episodes. "Ratio" refers to the proportion of phonological episodes.

Examination of CF distributions across error correction methods demonstrated that recast was used more often than other CF methods. Figure 4 displays the distribution of recasts across different types of errors. Teachers used 89% of recasts to correct phonological errors.

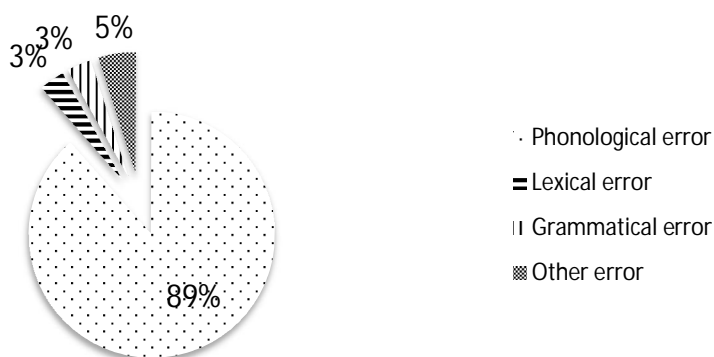


Figure 4 Distribution of recasts across error type

In summary, the analyses described above suggest that beginning level L2 Chinese learning can be characterized by an overwhelming tendency for college teachers to use recasts to correct phonological errors.

6.2. What does a single immediate repair indicate in terms of recast effectiveness?

The subsection above describes recast distributions in beginning level L2 Chinese classes. The two subsections below analyze the complexity of recast repair status. As mentioned in the data collection and coding subsection, repair can be interpreted as Needs-Repair (Simple Repetition), Half-Repair, Inconsistent Repair, or Final Acquisition. The two sections below each illustrate the complexity of making such interpretations and address Research questions 2 and 3.

Our analyses suggest that a single repair does not necessarily manifest true repair status. Table 3 illustrates the complexity of interpreting a single repair. In Table 3, the student repaired in the 1st and 2nd rounds, but the two

repairs cannot demonstrate that the student fully mastered the pronunciation. The two repairs could represent any point on the repair line in Figure 1. T3 might have been unsure of the student's repair status, so, she requested that the student say the word again in a longer context by adding *bù* in the 3rd round. We designated the student's uptake as Needs-Repair in the 3rd round, which indicates that the repairs in the 1st and 2nd rounds were not Final Acquisition on the repair line. However, we cannot determine whether the two pairs represent Simple Repetition, Half Repair, or Inconsistent Repair. They could represent any points on the repair line, except for Final Acquisition. T3 might have perceived this error as a common difficulty for all students, so she asked the whole class to follow her in practicing the word *qīngchǔ* (Rounds 4, 5, 6, 7).

In Rounds 8, 9, and 10, T3 returned to the original student. All coders designated the uptakes in the three rounds as Needs-Repair, which further determines that the student's 1st and 2nd repairs were not Final Acquisition. T3 might have perceived this repair status and requested that the student simply repeat only the word *qīngchǔ*, and the student repaired the error again (Round 11). The teacher then checked the repair in a longer context *bù qīngchǔ*, and again, got the result of Needs-Repair (Round 12).

In Rounds 13 and 14, the three coders agreed that the student's pronunciation of *qīng* in the context of *bù qīngchǔ* was improved. This improvement implies that the student realized the tonal and initial-related error in *qīng*. The repairs of *Qīngchǔ*, as presented in Table 4, seemed to tell us that the repairs in Rounds 1 and 2 were somewhere between Needs-Repair and Half Repair on the repair line. The repairs in Rounds 13 and 14 were close to Inconsistent Repair on the repair line. However, the repairs of *Qīngchǔ* in Table 4 did not inform us how far away the student was from achieving Final Acquisition.

Table 4 provides another example illustrating the complexity of interpreting repair. In Table 4, recast Episodes 1, 2, and 3 occurred at 10:33 am, 10:34 am, and 10:36 am, respectively. Recast Episodes 4, 5 and 6 occurred continuously within one minute. The student received feedback five times and repaired the error four times immediately after recasts. However, the student continued to make that error in later episodes, which made it difficult to determine his real repair status until his question about the pronunciation of *qīngwèn* in Episode 6—*Qīngwèn? Qīngwèn? Which one is correct?* The student's question reflected his confusion about the pronunciation of *qīngwèn* and his realization of the difference between his pronunciation and that of T1. His question also showed that his previous repairs after recasts occurred at some point close to Half-Repair on the repair line.

The two examples above illustrate the complexity of interpreting immediate repair after recasts. Immediate repair can be Needs-Repair (Simple Repetition), Half Repair, Inconsistent Repair, or Final Acquisition. One repair alone does

not provide enough information to manifest students' real repair status and thus the extent to which recast was effective.

Table 3 A *Qīngchǔ* (to know) repair case

| Rounds | Interactions | Uptake |
|--------|---|---------------------------------|
| | S <i>Qīngchǔ</i> . [Know.] | Tonal and Initial-related error |
| 1 | T3 Qīngchǔ . [Know.] | |
| | S <i>Qīngchǔ</i> . [Know.] | Repair |
| 2 | T3 ^o Qīngchǔ . [Know.] | |
| | S <i>Qīngchǔ</i> . [Know.] | Repair |
| 3 | T3 <i>Bù qīngchǔ</i> . [Don't know.] | |
| | S <i>Bù qīngchǔ</i> . [Don't know.] | Needs-Repair |
| 4 | T3 " Qīngchǔ " búduì, qīng dàjiā gēnzhe wǒ shuō "qīngchǔ." ["Qīngchǔ" is not correct. Everyone, please say after me "Qīngchǔ."] | |
| | SS <i>Qīngchǔ</i> . [Know.] | |
| 5 | T3 <i>Bù qīngchǔ</i> . [Do not know.] | |
| | SS <i>Bù qīngchǔ</i> . [Do not know.] | |
| 6 | T3 <i>Bù qīngchǔ</i> . [Do not know.] | |
| | SS <i>Bù qīngchǔ</i> . [Do not know.] | |
| 7 | T3 <i>Wǒ bù qīngchǔ</i> . [I do not know.] | |
| | SS <i>Wǒ bù qīngchǔ</i> . [I do not know.] | |
| 8 | T3 <i>Wǒ bù qīngchǔ</i> . [I do not know (pointing to the student).] | |
| | S <i>Wǒ bù qīngchǔ</i> . [I do not know.] | Needs-Repair |
| 9 | T3 <i>Wǒ bù qīngchǔ, qīngchǔ</i> . [I do not know, know.] | |
| | S <i>Wǒ bù qīngchǔ</i> . [I do not know.] (T3 pointed to the student) | Needs-Repair |
| 10 | T3 " Qīngchǔ " búduì, qīngchǔ . ["Qīngchǔ" is not correct, Qīngchǔ .] | |
| | S <i>Wǒ bù qīngchǔ</i> . [I do not know.] | Needs-Repair |
| 11 | T3 <i>Qǐng nǐ gēn zhe wǒ shuō "qīngchǔ."</i> [Please follow me "qīngchǔ."] | |
| | S <i>Qīngchǔ</i> . [Know.] | Repair |
| 12 | T3 <i>Bù qīngchǔ</i> . [Do not know.] | |
| | S <i>Bù qīngchǔ</i> . [Do not know.] | Needs-Repair |
| 13 | T3 <i>Bù qīngchǔ</i> . [Do not know.] | |
| | S <i>Bù qīngchǔ</i> . [Do not know.] | Repair |
| 14 | T3 <i>Wǒ bù qīngchǔ</i> . [I do not know.] | |
| | S <i>Wǒ bù qīngchǔ</i> . [I do not know.] | Repair |

Notes. SS represents all students in a classroom.

^o An episode usually started with student error and was followed by teacher CF and student uptake. CF was sometimes provided in the form of positive prompts for students to follow. We coded this as CF because it was the teacher's response to student error that appeared in previous episodes.

[§]Other notations are the same as shown in the notes for Example (1).

S within a table refers to the same student. This notation applies to other tables.

Table 4 A *Qǐngwèn* (excuse me) repair case

| Episodes | Interactions | Uptake |
|----------|---|--------------|
| 1 | S <i>Qǐngwèn</i> [Excuse me.] | |
| | T1 Qǐngwèn . [Excuse me.] | |
| | S <i>Qǐngwèn</i> , Chén xīn fù jīnglǐ shì nǎwèi? [Excuse me, who is assistant manager Chén xīn?] | Repair |
| 2 | T1 Qǐng nǐ zài shuō yíbiàn. [You please say it again.] | |
| | S <i>Qǐngwèn</i> . [Excuse me.] | |
| | T1 Qǐngwèn . [Excuse me.] | |
| | S <i>Qǐngwèn</i> , Chén xīn fù jīnglǐ shì nǎwèi? [Excuse me, who is assistant manager Chén xīn?] | Repair |
| | S <i>Qǐngwèn</i> . [Excuse me.] | |
| 3 | T1 Qǐngwèn . [Excuse me.] | |
| | S <i>Qǐngwèn</i> . [Excuse me.] | Needs-Repair |
| | T1 Qǐngwèn . [Excuse me.] | |
| 4 | S <i>Qǐngwèn</i> . [Excuse me.] | Repair |
| | T1 Qǐngwèn . [Excuse me.] | |
| 5 | S <i>Qǐngwèn</i> . [Excuse me.] | Repair |
| | T1 Qǐngwèn . [Excuse me.] | |
| 6 | S <i>Qǐngwèn?</i> <i>Qǐngwèn?</i> [Excuse me? Excuse me? (Which one is correct?)] | |
| | T1 “Wèn”, bú duì, qǐngwèn . [“wèn” is not correct, qǐngwèn.] | |

Note. Notations in this table are the same as shown in the notes for Example (1).

6.3. What does a single immediate lack-of-repair indicate in terms of recast effectiveness?

The status of a single repair does not necessarily indicate recast effectiveness. In the same way, a Needs-Repair or lack of repair does not necessarily mean that a recast was ineffective. We report here two situations of Needs-Repair.

In Situation 1, some immediate Needs-Repair is followed by evidence of recast effectiveness later on, as shown in Table 5. Table 5 shows another student's *qǐngwèn* repair case. The table lists four episodes. On the observation day, Episodes 1, 2, and 3 occurred at 10:25 am, 10:27 am, and 10:28 am, respectively. Episode 4 occurred at 10:44 am. It was found that the student did not repair the error after feedback in Episodes 1 and 2, which seemed to indicate that the recast was not effective. However, the student self-repaired the error in Episode 3. The time lag between Episodes 2 and 3 was only one minute, yet the uptake status changed from Needs-Repair to self-repair. This improvement, therefore, can be attributed to recast. In Episode 4, this student repaired the error immediately after the teacher's feedback. This repair was diagnosed as an improvement compared with the status of Needs-Repair in Episodes 1 and 2. These two improvements are a demonstration of recast effectiveness, because even though other factors may, in theory, affect the student's acquisition, but recast is the most plausible factor within such a short period of time.

After the student's self-repair in Episode 3, he made the same error again in Episode 4. This error alone does not negate the effectiveness of recast, because it is common for language learners to repeat the same error during their language learning. Language learning is a process that moves from realization of an error – namely, the gap between a learner's target language and his own interlanguage – to occasionally repairing the error, and then to finally using the correct form consistently. Therefore, we cannot deny the effectiveness of teacher feedback when a student continues to make the same error after having repaired the error. This particular repair case demonstrates again the complexity of interpreting the relationship between repair and recast effectiveness.

Table 5 Another *Qǐngwèn* repair case

| Episodes | | Interactions | Uptake |
|----------|---------------------------------|---|--------------|
| 1 | S | <i>Qǐngwèn</i> . [Excuse me.] | Needs-Repair |
| | T1 | Qǐngwèn . [Excuse me.] | |
| | S | <i>Qǐngwèn</i> . [Excuse me.] | |
| | T1 | <i>Wèn</i> . [Ask.] | |
| | S | <i>Wèn</i> . [Ask.] | |
| 2 | S | <i>Qǐngwèn</i> . [Excuse me.] | Needs-Repair |
| | T1 | Qǐngwèn . [Excuse me.] | |
| | S | <i>Qǐngwèn</i> . [Excuse me.] | |
| | T1 | <i>Wèn</i> . [Ask.] | |
| | S | <i>Wèn</i> . [Ask.] | |
| 3 | S | <i>Qǐngwèn</i> . [Excuse me.] | Self-Repair |
| | T1 | Dui le. [Correct.] | |
| | S | <i>Qǐngwèn</i> , Huáng fù jīnglǐ shì nǎwèi? [Excuse me, who is assistant manager Huáng?] | |
| | ^o So _{ther} | Huáng jīnglǐ ma, tā ya, jiù shì nàgè yòu gāo yòu pàng...de nánren. [As for assistant manager Huáng, he is exactly that tall, fat...man.] | |
| | S | Tā xiànzài yǒu kòng ma? [Is he available now?] | |
| | S2 | Yǒu kòng. [(He) is available.] | |
| 4 | S | <i>Qǐngwèn</i> . [Excuse me.] | Repair |
| | T1 | <i>Qǐngwèn</i> . [Excuse me.] | |
| | S | <i>Qǐngwèn</i> . [Excuse me.] | |

Note. ^o So_{ther} represents another student who had interacted with the student who received CF. Notations are the same as shown in the notes for Example (1).

In Situation 2, a student's lack of repair is not necessarily attributable to recast ineffectiveness. Classroom interactions are influenced by factors such as teacher and student characteristics, interactions between them, classroom atmosphere, and types of errors students make. The interaction in which teachers provide recasts is just one of many factors that contribute to recast effectiveness. A particular Needs-Repair response on the part of a student can be attributed to one or more of the above-mentioned factors, not necessarily to recast ineffectiveness.

Table 6 shows how difficult it can be to correct an error. T2 used different feedback methods, such as explicit recast and explicit correction, to help the student correct the pronunciation of [k], but the student still did not repair the error. It seemed difficult for the student to recognize the gap between his own pronunciation and that of T2. The researchers and the third coder did not observe inappropriate teacher CF behaviors. This example illustrates that recast will sometimes be ineffective for the student. In other words, this is not to say that teacher recast was ineffective, but rather that the student was not ready for it or the recast effectiveness did not manifest at the right time.

Table 6 Needs-Repair resulting from student developmental readiness

| Rounds | Interactions |
|--------|--|
| 1 | S Yòu shòu yòu <i>kāo</i> de nánren. [(The) Skinny and tall man.] |
| | T2 Gāo. [Tall.] |
| | S <i>kāo</i> . [Tall.] |
| | Gāo [Tall.] |
| 3 | S <i>kāo</i> . [Tall.] |
| | T2 Búshì "kāo," "gāo." [It's not "Kāo," "gāo."] |
| 4 | S <i>kāo</i> . [Tall.] |
| | T2 Yòu shòu yòu gāo, "g," "g." [Skinny and tall, "g," "g."] |
| 5 | S <i>kāo</i> . [Tall.] |
| | T2 Yòu shòu yòu gāo. [Skinny and tall.] |
| 6 | S Yòu shòu yòu <i>kāo</i> [Skinny and tall.] |
| | T2 Bú shì "k," shì "g." [It's not "k," it's "g."] |
| 7 | S <i>kāo</i> . [Tall.] |
| | T2 Bú shì zhè ge, "gāo." [It is not this one. (It is) "gāo." (T2 wrote the spelling on blackboard.)] |
| 8 | S <i>kāo</i> . [Tall.] |
| | T2 Chà yī diǎnr, yòu shòu yòu gāo. [You are almost there. Skinny and tall.] |
| | S Yòu shòu yòu <i>kāo</i> [Skinny and tall.] |
| | T2 Yìhòu [(practice it) later.] |

Note. Notations are the same as shown in the notes for Example (1).

Table 7 Inappropriate CF interaction led to Needs-Repair

| Rounds | Interactions |
|--------|------------------|
| 1 | T Nàge. [That.] |
| | S Nàge. [That.] |
| 2 | T Nàge. [That.] |
| | S Nàge. [That.] |
| 3 | T Nàge. [That.] |
| | S Nàge. [That.] |
| 4 | T Nàge. [That.] |
| | S (No response.) |

Needs-Repair sometimes did appear to come from inappropriate recast interaction. Table 7 presents an example of what appears to be inappropriate

recast. As presented in Table 7, there were four rounds of recasts to correct a phonological error in *Nàgè*. Only the teacher's first three prompts were followed by responses from the student. The researchers and the third coder believed that the speed of the recast was too fast for the student to think over the discrepancy between his own pronunciation and that of the teacher. The teacher's feedback after each of the student's repairs did not provide any hints to inform the student which was a Repair and which was a Needs-Repair. Thereafter, the student appeared to exhibit a frustrated facial expression and he did not respond to the teacher's fourth recast. This interaction between student and teacher seemed to demonstrate inappropriate CF interaction leading to a Needs-Repair.

7. Discussion and conclusion

This study investigated recasts that were used to correct phonological errors in classroom settings. CF frequency and distribution patterns showed that teachers primarily used recasts to correct phonological errors. Seventy two percent of the 570 CF episodes were recast episodes. Among these episodes, teachers used 94% of their recasts to correct phonological errors. Thus, in our study, recasts remained the most common CF type, similar to recast distributions in other studies (e.g., Fu, 2012; Li, 2014; Lyster & Ranta, 1997; Panova & Lyster, 2002; Oskoz & Liskin-Gasparro, 2002; Sung & Tsai, 2014). However, the recasts examined in these studies were usually defined as implicit, whereas in our study we focused on explicit recasts. In addition, the 72% ratio of recast to overall CF in our study is higher than the ratios in prior studies, in which the ratios ranged from approximately 40% to 60%. Furthermore, most recasts in our study were in response to phonological errors. These discrepancies might be accounted for by differences in the focus of classroom interactions and the goals of teaching and learning in our study. In our study, feedback was observed in the very beginning of Chinese drill classes, where students had started to learn Chinese approximately one month prior to our observation. One of the main learning goals of this phase is to cultivate each student's solid foundation in the Chinese phonetic system. Therefore, we observed many feedback moves used to correct phonological errors. Recast, which features quick, direct, and explicit responses, turned out to be the dominant feedback to correct phonological errors. In contrast, Lyster and Ranta's (1997) study was carried out in primary-level French immersion classrooms; Panova and Lyster's study (2002) took place in an adult ESL classroom; Fu (2012) observed second-year reading Chinese classes; and Oskoz and Liskin-Gasparro (2002) examined an elementary-level Spanish classroom. In these L2/FL settings, excessive focus on phonological production might be considered unsuitable, pedagogically speaking, for the different age groups, learning goals, and student proficiency levels.

The analyses of repair cases of *qingchu* in Table 3 and *qingwen* in Table 4 demonstrate that a single immediate repair can be classified as Needs-Repair (Simple Repetition), Half Repair, Inconsistent Repair, or Final Acquisition. One repair alone does not provide enough information to indicate students' real repair status and thus the degree to which CF is effective. This finding illustrates the limitation of using immediate uptake and repair to measure recast effectiveness. However, it does not negate the overall value of using immediate uptake and repair to interpret CF effectiveness. Teachers' explicit recasts force students to notice the gap between their own interlanguage and their target language, which is important and necessary for learners to acquire an L2/FL (Gass, 1990; Gass & Varonis, 1994; Schmidt, 1990, 1994, 2010; Schmidt & Frota, 1986). When describing the importance of interaction in facilitating L2/FL acquisition, Gass (1990, p. 136) pointed out that "nothing in the target language is available for intake into a language learner's existing system unless it is consciously noticed".

The analyses of repair cases in Table 6 illustrate the role of student developmental readiness and its influences on recast effectiveness. According to Ellis and Sheen (2006), developmental readiness in the context of recasts refers to individual learners' development stages that enable them to incorporate target forms into their interlanguage to a greater or lesser extent. The notion of developmental readiness derives from early work in L2, which holds that learners follow a relatively fixed, universal order of acquisition and manifest clear developmental sequences in the acquisition of specific structures (Ellis, 1994). If recasts target features that a learner is developmentally primed to acquire, those recasts will potentially be effective; if recasts target features that lie too far beyond the learner's current stage of development, then they are likely to fail (Ellis & Sheen, 2006). A similar point was made in Pienemann's (1989) teachability or learnability hypothesis, which suggests that learners will only acquire features for which they show developmental readiness. Features that are beyond a learner's stage of development will not be teachable because "the acquisition process cannot be steered or modeled just according to the requirements of formal instruction" (1989, p. 57). Similarly, Truscott (1996) concluded that teachers should align the CF they provide to a learner's current level of L2 development in order to have the desired effect on student progress.

In our study, Table 6 shows that the student was not ready for any CF regarding his pronunciation of the initial [g]. However, this example does not mean that the teacher's recast was not effective or that the teacher's recast did not, in Truscott's (1996) terms, align to the learner's current level of L2 development. We do not have follow-up data, such as tests of the student's acquisition of [g], later on or interviews with the student regarding his perceptions of this initial. We can assume that the student may have acquired [g], later on even though

the acquisition was not evident in Table 6. The example in Table 5 illustrates such a case. The student in Table 5 failed to repair in the first two rounds of teacher recasts – a manifestation of a failure of CF. However, the student self-repaired later.

The analyses presented above demonstrate that using a single repair to determine the relationship between student developmental readiness and the effects of recasts is limited. This finding echoes the disagreement between Truscott (1996) and Ellis and Sheen (2006) regarding the relationship between developmental readiness and CF effects. Truscott (1996) argued that the insights and research base concerning developmental sequences are still too limited to be useful for teaching practice. Therefore, Truscott concluded that provision of aligned CF is not yet a feasible objective. This argument is based on his review of three studies (Kepner, 1991; Semke, 1984; Sheppard, 1992), which demonstrate that error correction does not have a significant effect on improving L2 student writing. Ellis and Sheen (2006) also claimed that little is known about the role that the learner's developmental readiness plays in determining whether recasts work for acquisition. However, to illustrate the effectiveness of recast, they cited the work of Mackey and Philp (1998), who examined acquisition of English question forms and showed that recasts plus negation are more beneficial than negation alone for more advanced learners.

We argue that the effects of recasts assessed by immediate repair could be better observed and interpreted through longer stretches of classroom interactions within a single class or across sequential classes with a similar theme. Our findings, based on classroom interactions that exemplify the relationship between repair and recast effects, indicate that immediate repair has to be contextually interpreted. Our evidence is that a single repair does not necessarily indicate real repair status, the effectiveness of recast is sometimes evident when repair is not successful, and recast is not always effective owing to limitations in student developmental readiness. We view these findings through the lens of "process" in Vygotsky's Sociocultural Theory. As Vygotsky (1978, p. 64-67) stated, "We need to concentrate on not the product of development but on the very process by which higher forms are established". According to Vygotsky, "process" is which the nature of mental development is most clearly observed. In the present study, classroom interaction is the "process" that the effects of CF can be observed, and its effects are not reducible to simple products such as repair. For example, by analyzing the "process" of classroom interaction we found that a single repair may be misleading and that CF may be effective even when repair is not observed.

This study enhances our understanding of recasts used to correct phonological errors and the corresponding students' uptake and repair in beginning L2 Chinese drill classes. Our study is distinctive in examining the effects of recasts through analyses of longer stretches of classroom interactions, rather than through

immediate single repairs. This “process” method is arguably an improvement over the traditional “product” method, as discussed in the paragraph above. This study also contributes to the recast literature by focusing on explicit recast in classroom settings, which differs from the traditional studies with implicit recasts often occurring in classroom settings and explicit recasts being typically studied in laboratory settings.

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