

ORAL RECAST AND TASK-BASED INTERACTION ON THE PROSODY OF L2 CHINESE LEARNERS

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ABSTRACT

This study investigates the effect of oral recast on the acquisition of Mandarin prosody of L2 learners from diverse L1 linguistic backgrounds in Task-Based Language Teaching (TBLT) classroom-based context. The participants were thirty-six L2 learners of Chinese, and tokens of prosodic tasks were collected from the pre-test and post-test, and task-based interaction sessions in beginner L2 Mandarin classrooms. The results indicated that the accuracy rate of tones and *Third Tone Sandhi* production with oral recast corrective feedback was significantly higher than those without oral recast provision in the same condition. The findings verified the effectiveness of oral recast in tonal pedagogy and shed light on the tonal acquisition of L2 Chinese learners. Additionally, tonal production with oral recast feedback treatment facilitated the application of *Third Tone Sandhi* rules and prosodic fluency in L2 Chinese speech.

Keywords: oral recast, TBLT, L2 learners, prosody, Mandarin Chinese

1. INTRODUCTION

This study investigates how oral recast, one of the most frequently occurred corrective feedback (CF) in beginner classrooms of Chinese as a second language [1][2] affects the production of prosody of the second language (L2) learners in Task-Based Language Teaching (TBLT) classroom-based context. Teacher-student interactions have been believed to be beneficial to language development [3][4][5]. Recent studies carried out further investigation on the levels of L2 proficiency and paired task performance [6][7][8]. The phonetic pedagogy on prosodic tasks for learners to notice and correct errors still needs to be explored in L2 Chinese classrooms. Additionally, corrective feedback aimed at pronunciation and tonal errors in second language classrooms has been relatively understudied. The present study fills in the gap by investigating the effect of interactional corrective feedback, specifically oral recast, in face-to-face (FTF) and synchronous computer-mediated communication (SCMC) task-based interaction on the prosodic gains of L2 Chinese learners. The degree

to which the impact of oral correct feedback on the prosodic tasks in beginner L2 Chinese classrooms was investigated.

An oral CF move in L2 instruction ranges from a reformulation, an indication of an error, prompting a target phrase or structure, to a metalinguistic explanation. Oral implicit CF includes recasts, clarification requests, elicitation, and repetition [9][10], whereas oral explicit CF includes metalinguistic feedback and other explicit corrections. While the effects of recasts have been confirmed [11], prompts have been found to be more effective than recasts [12], and form-focused instruction, combined with prompts, contributes to L2 grammar development [13]. Specifically, empirical studies suggest that metalinguistic feedback outperformed recasts [14][15] in grammar instruction, albeit such issues as processing prosodic and phonetic knowledge in task-based interaction are relatively unexplored. This study investigates oral CF effects and contextual factors, exploring the role of oral CF provision in FTF or SCMC task-based interaction with potential benefits in facilitating L2 Chinese prosodic acquisition. The study positions oral recast treatments as mediated by noticing and meaning-making processes and embedded in phonetic pedagogy with relevance to L2 acquisition. Through an empirical examination of the integration of oral CF in task-based L2 Chinese phonetic instruction, this study adds to the discussion on using linguistic resources in the classroom context and contributes to understanding L2 Chinese prosodic gains in the TBLT framework.

2. CORRECTIVE FEEDBACK AND L2 PHONETIC ACQUISITION

Oral CF in this study refers to verbal responses to a learner's errors [11][14][16]. Recasts, defined as the reformulation of a learner's utterance, have been argued to be the most effective type of CF in facilitating learning [11]. Additional or alternative explicit CF practices include a metalinguistic explanation with the provision of rules and examples. Studies have shown that recasts are the most frequently occurring oral CF type in language classrooms [15][17][18]. Although teaching pronunciation in beginner-level L2 Chinese

classrooms has become essential in teaching practices, the majority of studies on Chinese phonology and phonetics were theoretically-based or conducted in laboratory contexts. It should be noted that such issues as teaching L2 learners from diverse linguistic backgrounds [19], and raising L2 learners' attention in classroom tasks [20][21][22] can be crucial in promoting phonetic instruction and L2 phonetic acquisition. The practices and application of oral CF in L2 Chinese phonetic instruction and their effects on prosodic production, specially, in the FTF or SCMC modality, inform practitioners of learners' behaviour and shed light on the tonal acquisition of L2 Chinese learners.

In addition, L2 Chinese learners must use prosodic elements such as tonal changes to communicate effectively. One of the most commonly taught tonal change patterns is the *Third Tone Sandhi* rule. The Tone 3 (T3) Sandhi in Mandarin Chinese is a phonological pattern in which a T3 syllable becomes a Tone 2 (T2) or a T2-like syllable when it is followed by another T3 syllable in connected speech [23]. In phonetic drills, when two T3 syllables occur in succession, the first syllable is instructed to change to T2, while the second syllable keeps the T3. In strings of more than two T3 syllables, the tone changes depending on syntactic bracketing structure or the context in teaching practices. Accordingly, the "context" needs more elaboration and concrete illustration in task-based phonetic instruction. To read the seven-syllable T3 string, as in '*lǐ xiǎojiě xiǎngmǎi shuǐjiǎo*' ('Ms. Li would like to buy dumplings'), form-focused instruction and prosodic grouping could be crucial in developing L2 learners' L2 phonetic acquisition and avoiding breakdowns.

Focusing on the form within communicative tasks is a central component of task-based frameworks [24][25]. As classroom tasks "provide opportunities for noticing the gap between a participant's production and input provided and for metalinguistic reflection in the form of output" [26], meaning messages between the instructor and the L2 learner are conveyed. Although attention or awareness may not be a significant concern in TBLT, learning can be predicated on learners' attending to the target structures when engaged in meaningful task-based interaction [25]. TBLT research also demonstrates the integration of traditional acoustic analysis of L2 pronunciation and L2 pronunciation accuracy within the TBLT context.

This study seeks to provide an empirical understanding of how phonetic and phonological knowledge can be transformed into successfully uptake in the context of second language learning and L2 Chinese tonal instruction. Given that implicit knowledge is considered to represent a learner's true

competence and knowledge without awareness [27], explicit knowledge is often described as knowledge with awareness [28]. Concrete form-focused instruction activities have been proposed in L2 learners' interlanguage development [16]. In terms of phonological deviant tokens, implicit feedback has been shown to be salient to learners [29]. Although learning contexts in L2 Chinese classrooms are different from laboratory settings with controlled conditions, it is evident that tasks and learning contexts influence the production accuracy and processing of tonal knowledge.

This study sets out to investigate the effects of oral recast and TBLT interaction on the prosodic gains of beginner L2 Chinese learners' production. The research questions are formulated as follows:

- RQ1 What are the effects of oral recast on learners' production of Mandarin tones and Third Tone Sandhi?
 RQ2 What are the effects of task-based interaction on beginner L2 Chinese learners' prosody?

3. METHOD

3.1. Instructional setting and participants

The study was conducted in an intensive L2 Chinese program. The classes were delivered for five hours per week. Three teachers conducted and their 36 students participated in the investigation, and they were divided into three groups, Class A and Class B constituted the experimental group with oral recast, in contrast to Class C in the control group without oral recast in phonetic instruction. In the experimental group, Class A utilized the oral recast and task-based interaction in the phonetic instruction in the FTF modality, whereas the instruction intervention of Class B was conducted in the SCMC modality. The participating teachers were highly experienced, with a mean experience of 10.8 years. The class size was the same, with 12 students per class, and the students were beginner L2 learners of Chinese from linguistically diverse backgrounds. None were heritage learners, and they began learning Mandarin in adulthood. The mean age for the L2 Chinese learners was 26.5 years (ranged 18-36), and they reported no history of hearing impairments or speech disorders at the time of the investigation.

3.2. Materials

A pre-test and equivalent post-test was designed to assess the prosodic gains of the participants in both groups from three classes. The participants were asked to complete a total of five task-based activities in Chinese consisting of sentence completion and information exchange. Strings in consecutive T3

syllables were presented in pinyin with diacritics marking tones without grouping or syntactic bracketing. There were 30 items on the pre-test and post-test representing potential application of the T3 Sandhi rules (in T2 or a T2-like syllable) and the other 120 tones. The participants were instructed in Week 1 that if two syllables in succession use the third tone, the first syllable changes to the second tone, and the second syllable keeps the third tone, such as *shuǐ jiǎo* becomes *shuǐ hǎo* ‘dumpling’ and *shuǐ guǒ* becomes *shuí guǒ* ‘fruit.’ The production task was conducted individually, and picture-based interaction was administered to assess L2 learners’ explicit and declarative knowledge, in addition to the prosodic gains, along with elicitation inquiry that guided the correct application to the T3 Sandhi rule in the task-based interaction. Participants were required to describe the assigned pictures in Chinese, using the provided items to produce oral tokens with tone changes. The teacher in each class initiated the questions, assigned the task in the activities, and gave instructions to elicit the production of the participants. The production task took participants in the groups approximately 15-20 minutes to complete. All the tests were recorded and conducted in the classrooms as part of the course assessments. In addition to the oral recast treatment sessions, classroom discourse and voice tokens collected from task-based interaction recordings were compiled from Week 4 to Week 12, along with an optional follow-up task recording in Week 24. The elicitation materials and the familiarity or unfamiliarity with the production tasks were controlled.

3.3. Procedure

All participants in the experimental group, in FTF and SCMC modality, received oral recast when making errors on tone changes in phonetic instruction treatments. The oral recast treatment sessions in the experimental group lasted 30 minutes every week, in both FTF and SCMC modes, from Week 4 to Week 8. The control group did not receive any oral recast feedback in the phonetic instruction. All the learner participants were instructed in task-based interaction to know the difference among a full T3, a half T3, and T2. In the present study, all the participating teachers provided tonal instruction by asking their students to change the marked parts to T2 in the strings longer than three syllables, such as [*Lǐ xiǎojiě*] *mǎi* [*shuǐjiǎo*] ‘Ms. Li buys dumplings’ and [*Lǐ xiǎojiě*] *xiǎngmǎi* [*shuǐguǒ*] ‘Ms. Li would like to buy the fruit’ with bracketing and grouping. L2 Chinese learner participants spent 30-40 minutes interacting with the instructor when practicing task-based activities. The

procedure of the pre-test, treatments, and the post-test is illustrated in Fig. 1.

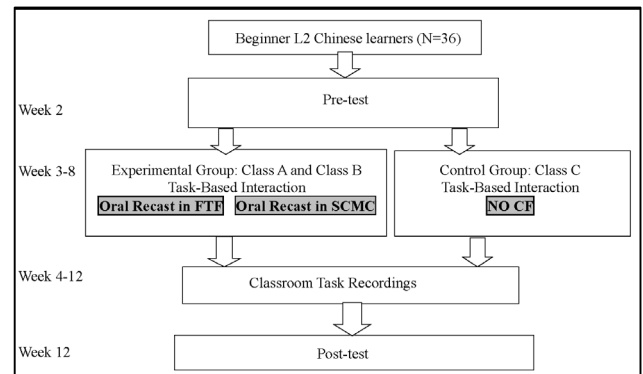


Figure 1: An overview of the procedure

As for the production scoring, the present study adopted a combination of an acoustic analysis and human rating method. The pre-test and post-test were scored for accuracy and fluency. Changes in crucial acoustic properties will either immediately or eventually enhance the overall intelligibility of L2 speech production. Five native speakers of Mandarin instructors who did not teach the participants were recruited to rate the accuracy of L2 learners’ production tasks in speech strings. Acoustic analyses are conducted on the dataset using Praat with a focus on the significant acoustic variables, correlates of prosodic accuracy and fluency when inconsistency of the rating emerged. The recruited raters were presented with production tokens in a randomized order and asked to rate them. The inter-class correlation was calculated for tonal accuracy ($r = .85$) and fluency ($r = .81$). The values were statistically significant at $p < .001$, indicating adequate reliability among the human rating.

4. RESULTS

The data were checked for normality and revealed two potential outliers in the post-test scores of the experimental and control groups. Outliers have been retained for the analysis as no significant changes were found in testing performed with and without outliers. A mixed ANOVA tested for a significant interaction effect ($\alpha = .05$) between test time and groups with and without oral recast feedback group. Significance testing was calculated. The first research question investigated the effects of oral recast on learners’ production of Mandarin tones and T3 Sandhi. Results indicated that the experimental and control groups with task-based interaction significantly improved their tone production scores from Week 2 to week 12. All scores in the post-test were higher than those in the pre-test, indicating gains

in prosodic accuracy and fluency of the testing. The main effect for time was statistically significant ($F=115.96$, $df =1$, $p = .00$), which addressed the second research question by confirming the effect of task-based interaction on the prosodic production of L2 Chinese learners. The comparison of prosodic tasks of L2 Chinese learners in the post-test is shown in Fig. 2.

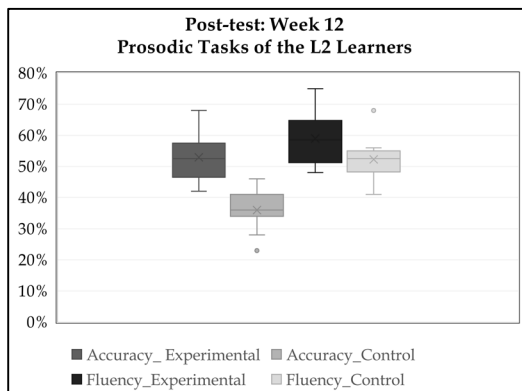


Figure 2: Comparison of prosodic tasks of L2 Chinese learners in the post-test

In terms of the experimental group in Class A (in FTF mode) and Class B (in SCMC), the FTF group showed a mean gain of 33.2% from the pre-test to post-test, while the SCMC group saw a mean gain of 28.6%. The interaction between time and modalities was not statistically significant ($F = .983$, $df =1$, $p =.356$). Therefore, the model was simplified to a 2 (Group, Experimental and Control Group) \times 2 (Time) mixed design ANOVA, which showed the significant Time by Group interaction ($F(1, 34) = 3.85$, $p = .027$, $\eta^2_p = .08$), as well as a significant main effect of Time ($F(1, 34) = 7.28$, $p = .0125$, $\eta^2_p = .09$). The main effect of Group on the prosodic accuracy was significant ($F(1, 34) = 5.33$, $p = .023$, $\eta^2_p = .07$), indicating L2 Chinese tone and T3 Sandhi production with oral recast feedback was significantly higher than those without oral recast provision in the same task-based interaction condition. However, the main effect of Group on the fluency was not significant ($F(1, 34) = 2.78$, $p = .278$, $\eta^2_p = .02$). The accuracy of L2 production of T3 Sandhi in classroom task recordings is illustrated in Fig. 3. As can be seen, both experimental and control groups improved their accuracy of T3 Sandhi production in task-based interaction classrooms, though the gains in the experimental group were more salient and retained in Week 24. The result suggests that the retrieval access to target form in oral recast treatment can contribute to the long-term prosodic gains. It is worth noting that the study focused on the oral recast feedback in phonetic instruction, and individual learner factors warrant a long-term follow-up to assess the gains.

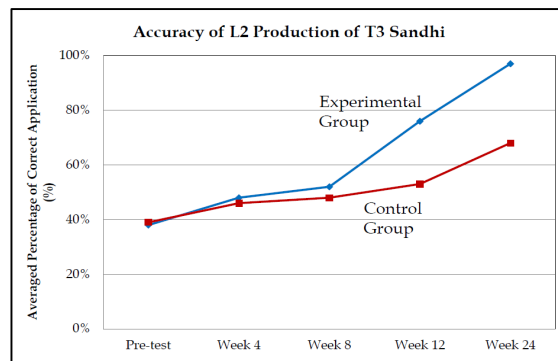


Figure 3: Accuracy of T3 Sandhi in the groups

5. DISCUSSION AND CONCLUSION

This study aimed to investigate the effect of oral recast and task-based interaction on the prosodic production of beginner L2 Chinese learners. By examining the impact of oral recasts on beginner L2 Chinese learners' prosodic development, whether recasts provided in FTF and SCMC classrooms benefited prosodic development can be further examined in different modalities. It is evident that with task-based interaction, beginner L2 learners can apply the T3 Sandhi rule in their speech. The accuracy rate of tones and T3 Sandhi production with oral recast corrective feedback was significantly higher than those without oral recast provision in the same condition. Additionally, tonal production with oral recast feedback treatment facilitated the application of T3 Sandhi rule and prosodic fluency in L2 Chinese speech.

Gains in the prosodic production throughout the investigation also confirmed the impact of oral recast feedback on beginners' tonal production. Oral feedback with task interaction assets of tonal contrasts in communicative mode improved the production of a tonal system. Findings suggest that oral recast feedback provision in FTF and SCMC classrooms facilitates L2 Chinese prosodic acquisition. Pronunciation tasks in task-based dialogue could be effective in improving learners' speech fluency, and focus-on-forms tasks improved L2 learners' communicative strategies.

Prosodic issues in L2 learners' connected speech are seldom explored in earlier studies. The study confirmed that FTF and SCMC oral recast feedback enhanced learners' tonal production, prosodic familiarity, and appropriate application of tonal changes in their pronunciation tasks, regardless of their L1 linguistic backgrounds. Task-based interaction could be relevant to the prosodic achievements of L2 learners in beginner classrooms. The findings in this study verified the effectiveness of oral recast in tonal pedagogy and shed light on the tonal acquisition of L2 Chinese learners.

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