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汉语教学中学生与学生之间交际的错误修复次序
Repair Sequences in Chinese-as-a-Foreign-Language Student-Student Interaction

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Abstract: Error correction is an important part of focus on form instruction and frequently occurs in teacher-student and student-student interaction in second language (L2)/foreign language (FL) classrooms. The purpose of the present study is thus to examine the role learners play in repairing their incorrect utterances to improve accuracy, and to investigate what linguistic forms they tend to focus on in the course of repairing.

I. INTRODUCTION

Error correction is an important part of focus on form instruction and frequently occurs in teacher-student and student-student interaction in second language (L2)/foreign language (FL) classrooms. Schegloff, Jefferson, and Sacks (1977) refer to such "corrective activity" as *repair*. Kasper (1985) also uses repair to describe such corrective activity, and defines repair as "modifications of trouble source which have manifested themselves in the discourse" (p. 200). Kasper's definition of repair is broad in the sense that it involves correcting erroneous utterances as well as rephrasing an utterance a conversation participant is otherwise unsatisfied with. van Lier (1988) makes a distinction between repair and correction. He labels repair in its generic sense that includes "the correction of errors, but also other phenomena" (p. 183), while classifying correction as one type of repair, namely, the replacement of an error made by the speaker. Thus far, repair has not been defined in a uniform way, which has led many researchers to employ several related terms interchangeably. According to Lyster and Ranta (1997), error correction has been documented as repair by discourse analysts (e.g., Kasper, 1985), as negative evidence by linguists (e.g., White, 1989), as negative feedback by psychologists (e.g., Annett, 1969), as corrective feedback by second language teachers (e.g., Fanselow, 1977), and as focus-on-form in classroom second language acquisition (e.g., Lightbown & Spada, 1990; Long, 1991). As well, Nuan (2005) refers to verbal responses to learners' incorrect utterances as "correction" "feedback" and "repair", with the implication that the terms are interchangeable. In the present study, I define repair in a specific sense that involves correct reformulation of incorrect utterances, thus excluding the rephrasing of an utterance which may not contain an

error but nonetheless the speaker is not satisfied with.

Schegloff (1977), with colleagues, examined repair that occurred in non-educational native discourse and found that repairs were triggered by a trouble source in the utterance of a conversation participant. According to Schegloff et al., a trouble source can stem from either the present speaker or the interlocutor. In other words, both the speaker and the interlocutor can be producers of the trouble source. The former is referred to as self, whereas the latter as other. According to Liebscher and Dailey-O'Cain (2003), the basic repair structure consists of three components: the trouble source; the repair initiation, which is the indication that there is trouble to be rectified; and the outcome, which is either the success or the failure of the repair attempt. The following is a simple example of repair.

Mary: dōng jì jié (winter season)

Tom: dōng jì jié? (winter season?)

Mary: oh, dōng jì. (oh, winter)

In this example, the repair initiation is the *dōng jì jié* uttered by Tom, which targets the trouble source *dōng jì jié* from Mary. The outcome occurs in the second Mary's turn, where the same speaker repeats the trouble source with *jié* left out, thus correcting her initial error. There are two major types of repair: self-repair (when speakers repair their own speech) and other-repair (when speakers' conversation partners repair their speech). The initiation can, then, come from either the self or the other, resulting in two subtypes of each repair type: self-initiated self-repair (SISR), other-initiated self-repair (OISR); self-initiated other-repair (SIOR); other-initiated other-repair (OIOR).

With respect to who repairs errors in L2/FL classrooms, Kasper (1985) notes that apart from teachers' corrective feedback to students' erroneous utterances, students regularly repair their own utterances either to correct ill-formed ones or to rephrase ones they are unsatisfied with. Students' repair deserves attention for its implications in L2/FL teaching.

The purpose of the present study is thus to examine the role learners play in repairing their incorrect utterances to improve accuracy, and to investigate what linguistic forms they tend to focus on in the course of repairing.

II. THEORETICAL FRAMEWORK & LITERATURE REVIEW

Focus on form

Long (1991) defines focus on form as "overtly drawing students' attention to linguistic elements as they arise incidentally in lessons whose overriding focus is on meaning or communication" (pp.45-46). Later Long and Robinson (1998) extend Long's definition and maintains that "focus on form often consists of an occasional shift of attention to linguistic code features—by the teacher and/or one or more students—triggered by perceived problems with comprehension and production" (1998, p. 23). Long and Robinson argue that the responsibility

of helping learners attend to and understand problematic L2 grammatical forms falls not only on their teachers, but also on their peers

According to Doughty and Williams (2003), while teachers or learners focus on form, learners' cognitive processing occurs. McLaughlin (1987) argues that second language learning involves two cognitive processes: automatization and restructuring. Automatization refers to a quick and effortless response to linguistic stimuli, initiated by controlled processes. Through subsequent practice, the controlled processes become routinized and automatized. Restructuring concerns the time when the learner understands the input in a different way through "sudden moments of insight"(Mclaughlin, 1987, p.138). Restructuring is characterized as a total, discontinuous or "qualitative" change in the learner's already existing cognitive patterning. According to McLaughlin (1990), any cognitive development from one stage to the next entails such restructuring processes. While the learner' L2 develops from controlled to automatized stages, the learner constantly reorganizes, refines and integrates new information into previous internal representations. Restructuring takes place when the learner obtains control over previously learned pieces of information and relates them with a unified representation structure (Karmiloff-Smith, 1986).

An essential component in the restructuring process in language learning is attention to form. Attention to form is believed to play a very important role in the cognitive process of second language development (Doughty & Williams, 1998). Schmidt (1990) contends that restructuring of grammar primarily occurs when learners attend to and notice linguistic forms in input. By attending to form, the learner attention is drawn specifically to a linguistic item as "necessitated by a communicative demand" (Doughty & Williams, 1998, p. 3). As noted by Gass (1988), "without selective attention, grammar development does not take place" (p. 212).

Furthermore, Doughty and Williams (1998) assert that attention to form has a positive influence on interlanguage development, and may "push learners beyond communicatively effective language towards targetlike second language ability" (p. 2). Even if such a focus may not be absolutely necessary, it provides learners with a more efficient language learning experience that can speed up natural acquisition process (Doughty & Williams, 1998).

Related Research

A number of studies has been conducted that center on repair sequences in teacher-learner interaction in L2/FL classrooms (Egbert, 1998; Jung, 1999; Kasper, 1985; Liebscher & O'Cain, 2003; van Lier, 1988). Nevertheless, studies focused on repair sequencies in student-student interaction in L2/FL classrooms are small in number (Buckwalter, 2001). In a small-scale descriptive study, Kasper (1985) compared the types of repair sequences in the form-focused phase and content-focused phase of one English lesson in a Danish high school. It was reported that in form-focused phase, other-initiated and other-repairs of learners' responses were very frequent, in which the initiator of the repair was usually the teacher, and the trouble source was always a linguistic error in the learners' utterances. On the other hand, in content-focused phase,

in terms of repairs of teachers' utterances, the most frequent type was the self-initiated and self-completed repair of trouble sources in which the initiator of the repair was the teacher. The trouble sources were either lexical or related to an elicitation. In terms of repairs of the learners' utterances, the dominate patterns were self-initiated and self-completed repairs, in which the initiator of the repair was the learner, and other-initiated and other-completed repairs, in which the teacher initiated and repaired the trouble. The trouble sources in this pattern involve linguistic and content problems. Kasper then concluded that the teacher's and students' repair behaviour differed depending on the communicative focus of the lesson. In this study, Kasper described the repair sequences and repair targets, however did not employ frequency distribution tables or figures. It remained unclear, hence, as to the extent to which one repair type or one repair target was preferred over the other.

In a sequential study of the process of repairing in student-teacher interaction in a L2 classroom, van Lier (1988) found a heavy emphasis on other-repair (completed by the teacher) in the classroom. He stated that other-repair in the turn containing the trouble source was generally performed to assist in the production of that turn, while at the same time other-repair may deprive speakers of the opportunity to self-repair.

Egbert (1998), in an analysis of German L2 oral proficiency interviews, focused on initiation of repair by students. Other-initiated self-repair was found to be the dominant one. She identified the most common student-initiated repair types as the most specific types such as partial repeats and candidate repairs.

Jung (1999), in a study of repair strategies employed by both teachers and students in the English as a second language classroom, discovered that the repair mechanism may in fact accomplish more than simply repairing trouble in speaking, hearing, or understanding in classroom discourse. She argued that repair also served as a pedagogical tool which could enable both students and teachers to communicate and learn more effectively.

In a study of adult English learners, Shonerd (1994) employed the conversation analysis of repair to analyze online L2 English learner discourse produced by the participants during interviews, picture descriptions and classroom interaction. The analysis relied on one of the two categories of self-or-other-repair. The participants were reported to implement self-repair that targeted lexical and syntactic modifications, and two-thirds of all other-repair were found to operate on the lexicon.

In a qualitative study of dyadic discourse between university students of Spanish as a foreign language, Buckwalter (2001) examined repair sequences and linguistic targets repaired. This study bears most relevance to the present study. It was found that the repair sequences of total identified repairs were self-initiated self-repair (SISR), self-initiated other-repair (SIOR), other-initiated self-repair (OISR), and other-initiated other-repair (OIOR) in a descending order. Findings indicated a clear preference for self-initiation over other-initiation of repair and self-repair over other-repair. SISR, the most preferred type of correction, addressed all

categories of linguistic difficulty including lexicon, morphology, pronunciation, and syntax, with lexical and morphological difficulties being the most common targets of SISR. Collaborative repair, as well as unsolicited other-repair operated almost exclusively on the lexicon.

All the studies reviewed examined repairs in a discourse context, with repair operationalized as repair in its generic sense (van Lier, 1988). Most studies did not tease out error correction for a particular analysis. Only a few studies systematically examined the linguistic targets of repair (see Buckwalter, 2001; Shonerd, 1994). As a result, the specific linguistic features students tend to focus on in repairing process are not documented adequately and empirically, especially in relation to teaching Chinese as a foreign language.

Therefore, in the present study, the research questions are:

1. What are the repair types employed by the learners of Chinese when they interact with each other in pair work?
2. What are the linguistic (Chinese) targets of the most common repair type during pair work?
3.

III. METHODS

Subjects

Four Canadian students of Chinese at a Canadian university participated in this study. The class observed was an intermediate Chinese as a foreign language class. The students were between 20 and 30 years of age, and are non-native speakers of Chinese. Two are of Asian origin and two Canadian Caucasians, among whom one's first language is Japanese, and the others' English. Other than Chinese, they all had learned one foreign language or second language at the time they participated in the study. I, the researcher as well as the instructor of this class, am a native-speaker of Chinese.

Procedure

I informed the class of the project by writing a letter to everyone. In the letter, I described the nature and purpose of the project and ensured the confidentiality and anonymity. Therefore, I obtained the permission from them, with each student signing a consent form. Written permission was also obtained from Chair of International Studies Program which offered the Chinese course.

Data Collection

The data were elicited by activities that were regular components of instructional procedure in this class and collected through audiotaping between February and March, 2004. They consisted of pair interactions generated by pair work in the textbook or the teacher-created activities in the lab. The pair activities that I taped were of a type familiar to the students. All activities could be labeled "speaking activities" in that communication in FL was what primarily constituted the task. Student participants were selected to be taped based on where they were seated within the room so as to maximize ease of recording. They had chosen their partners with whom they worked regularly. The first time recording, one of the students felt uncomfortable

with a tape-recorder nearby, but soon after, she adjusted to it.

Four 30-minute segments of the 80-minute class sessions were recorded. During each segment of audiotaping, I would observe the students from a distance without interrupting them and make some notes of the students' facial expressions or gesture, if possible, in my notebook. The small sample allowed me to be able to remember some of their body language and write them down on the transcripts I made after each segment of audiotaping. The objective of this course was to learn and produce the target language. The language of the classroom was a mixture of Chinese and English due to the students' limited Chinese proficiency. I strongly encouraged the students to speak Chinese, but the use of English was accepted too.

Data Analysis

I was involved in the collection and transcription of data by myself. In transcribing the audio-taping, I followed Buckwalter's (2001) transcription notations of repair initiation techniques in part (See Table 1).

The data analysis went through three steps. In the first step, I went through the transcripts and identified all instances of repair, which was operationalized as the correct reformulation of an error through self-initiated or other-initiated repairs resulting from a single student turn or the sequence of turns. In the second step, I developed a coding key before finding a Chinese visiting professor at the university where I conducted this study as my interscorer. I introduced to her in length the notion of repair and linguistic forms of repair, and then retrieved one quarter of data for us to code separately. Following this was our discussion about what we had coded. The interscorer reliability was .92. For those we coded differently or we felt uncertain about, we came to an agreement after discussion. Coding of data was conducted according to who initiated the repair and who executed the repair (see Table 2, and Results for examples of each repair type). The codes were marked as follows: SISR for self-initiated self-repair, SIOR for self-initiated other-repair, and OISR for other-initiated self-repair, OIOR for other-initiated other-repair. As regards linguistic targets of repairs, or the incorrect linguistic items that were repaired, I coded them as follows: L for lexicon, S for syntax, T for tone, P for pronunciation, M for morphology, and O for others (See Table 2, and Results for examples of the linguistic targets).

In analyzing repair sequences, I combined the qualitative analysis with some quantification. This initial qualitative analysis was a necessary step for the following quantitative component, in which I determined the relative frequency of different repair initiation types used by the students.

Analysis of repair types was based on proportions calculated for each coding variable by dividing the frequency of different repair types by the total number of all types of repair

Table 1. Transcription Notations

Transcription Notations	
(( ))	transcriber's comments
(3)	number within parentheses refers to the number of seconds of silence
-	sound cut-off
:	sound stretching
<	rapid onset of utterance
?	questioning intonation
( )	Parentheses surrounding talk indicate that the transcriber was not certain about the utterance.
.	a period indicates falling intonation
!	preceding talk spoken emphatically or with an excited tone.
(h)	laughing

Note: Adapted from Buckwalter (2001)

Table 2. Coding Key

Symbol	Repair Sequence	Symbol	Linguistic Targets of SISR
SISR	self-initiated self-repair	L	lexicon
SIOR	self-initiated other-repair	S	syntax
OISR	other-initiated self-repair	T	tone
OIOR	other-initiated other-repair	P	pronunciation
		M	morphology
		O	others

sequences. Then I went through all the instances of repair, and identified the linguistic targets of the most frequently used repair type—SISR. Analysis of linguistic targets were based on proportions calculated for each code variable in the linguistic repair group by dividing the frequency of the code by the total number of all linguistic targets of the most common repair sequence, SISR. These descriptive statistics were used to show the participants' preferred repair sequence and linguistic targets of repair. A second cycle of qualitative analysis was used to find possible explanation for the findings.

IV. RESULTS

Results of the analysis for all the identified repair sequence over the 4 data collection sessions showed a preference for self-initiation over other-initiation of repair, and self-repair over other-repair (see Table 3). This is consistent with Buckwalter's (2001) and Shonerd's (1994) findings. This preferred type of repair, SISR (82%), dealt with almost all categories of linguistic difficulties, with lexical and syntactical difficulties being the most common targets of SISR (with 35.7% and 32.1% respectively). The remaining three repair sequences operated most

regularly on lexical difficulties. These findings are illustrated in Tables 3 and 4, and Figures 1 and 2.

Self-Initiation of Repair

Self-initiation of repair occurs when the producer of the talk containing the trouble source is also the person who indicates that trouble is being experienced. Repair initiation techniques found in these data consisted of pauses, cut-off, sound stretches, rising intonation given to a lexical item, and other nonlexical items, such as *uh* and *um*. These non-lexical indicators were much more likely to result in self-repair, with a grouping of several indicators often being needed before other-repair would be issued; other-repair proceeded mostly from lexical indicators. Exclamations in English such as *oh, no, wait,* was used as a "floor-holding" device and tended to be self-orienting in nature (Buckwalter, 2001).

Self-Initiated Self-Repair SISR was the most common repair sequence found in the data and was found to operate on lexicon, syntax, tone, pronunciation and morphology, with repairs on lexicon and syntax being the most frequent.

SISR most commonly occurred when the trouble source appeared. The following example includes both lexical and nonlexical indicators of a trouble source and linguistic target of repair on lexicon.

Example 1

Tom: Chá de míngzi shì (3) um (5), mò: li (2) chá? oh, no, mò lihuā chá( ), wǒ xǐhuan ( ) mòlihuā chá.[The name of the tea is (3) um (5) Jas:mine? Oh, no, Jasmine tea ( ). I like ( ) jasmine tea.]

A high frequency of pauses occurred in this study, which may be explained by the students' relatively low L2 proficiency level. The pauses were found to indicate that a trouble source was present, especially when the speaker was involved in a word search. It seemed that other indicators such as the sound stretching in the example above also accompanied the pauses to show a word search was underway. In the above example, the pauses indicated that Tom was experiencing difficulty accessing this word, as he paused for a total of 8 seconds before uttering *mòli chá.* After he produced *mòli chá,* he became aware that he missed a word *huā* in referring to "jasmine tea". His awareness was triggered by his own linguistic production, which led him to correct his own error. His self-initiated self-repair behaviour suggested that the student may be capable of repairing his own error when he had knowledge about the linguistic item he seemed to have difficulty producing. On the other hand, the incorrect use of *mòlichá* did not pose a threat against the flow of communication. It was likely that what Tom got interested was in remembering this item or simply he did not know *mòli chá* would not break the communication. This phenomenon frequently appeared in the instances of repairs related to lexicon.

Table 3.

Repair Sequences

Repair sequences	Total number	Frequency
SISR	28	82%
SIOR	5	14%
OISR	1	2%
OIOR	1	2%

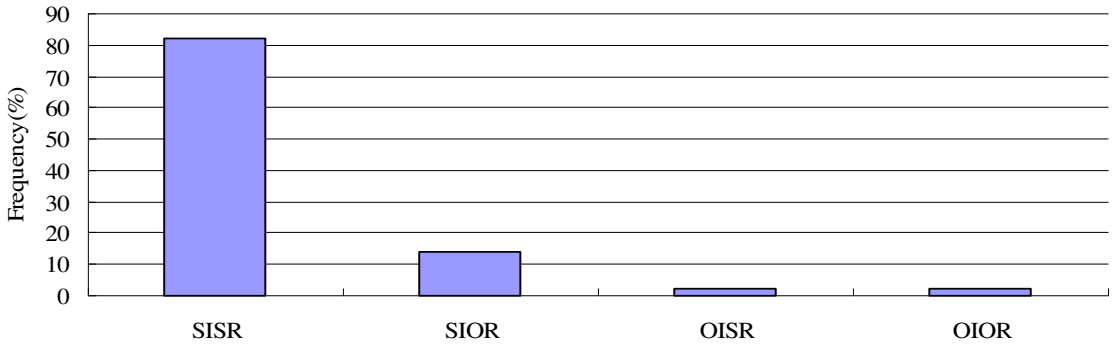
Table 4.

Linguistic Targets of Repair Sequences

	SISR	SIOR	OISR	OIOR
Lexicon	35.7% (n=10)	(n=4)	(n=1)	(n=1)
Syntax	32.1% (n=9)	(n=1)	--	--
Tone	14.3% (n=4)	--	--	--
Pronunciation	7.1% (n=2)	--	--	--
Morphology	7.1% (n=2)	--	--	--
Other	3.6% (n=1)	--	--	--

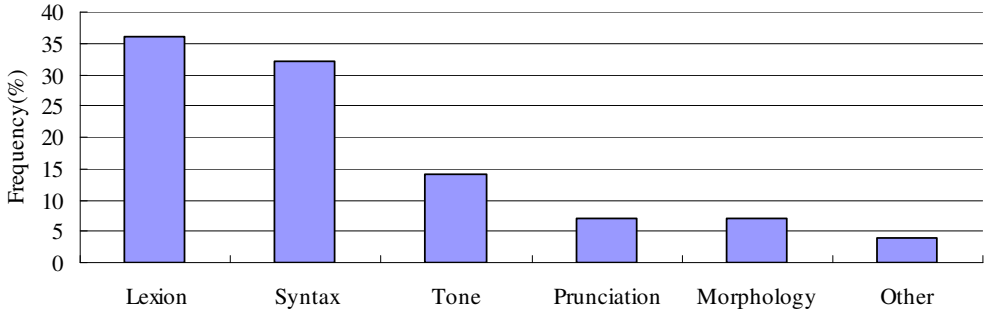
Figure 1

Repair Sequences as Percentage of Total Identified Repairs



Note. The chart shows the relative frequency of occurrence of the four repair trajectory types.SISR=self-initiated,self-repair;SIOR=self-initiated,other-repair;OISR=other-initiated, self-repair; OIOR=other-initiated, other-repair

Figure 2.
Linguistic Targets of Repair as Percentage of Total Self-Initiated Self-Repair



Self-Initiated Self-Repair of Lexicon. Lexicon received the most frequent repair, which accounted for 35.7% of all linguistic repairs. SISR of lexis seemed to be a sign of students working on items that were in the process of becoming acquired. These were the items the student had been exposed to, but could not produce automatically. However, they seemed to prefer to come up with the item on their own. In the repairing process, the students in this study seemed to be restructuring their interlanguage system as well as providing help to each other.

In the following example, the use of English by the speaker revealed that the speaker was attending to the linguistic form he produced and noticed the incorrect way of expressing what he intended.

Example 2

Dan: zhōngguó de xībù ( ) shì gāoshān (3)? no ( ) I want to use another word ( ) gāo (1) uh, <gāoyuán . [The western part of China is( ) high mountain(3)? no ( ) I want to use another word ( ) high(1) uh, <highland.]

Originally he produced *gāoshān*, meaning high mountains. In producing it, he showed his uncertainty by using rising intonation, and then recognized he produced a word he found inappropriate when he stated *no, I want to use another word.* These actions signify a cognitive process taking place. Dan was incapable of recalling automatically the target linguistic item he wished to employ; however, he was able to assess his own knowledge and solve the lexical problem on his own. He eventually produced the correct word *gāoyuán.*

Self-Initiated Self-Repair of Grammar. When a verbal exchange resulted in SISR of grammar, it tended to be one of syntax rather than of morphology. This finding is just the opposite to Buckwalter's (2001), in which SISR tended to be one of morphology rather than of syntax. Although repair of syntax was observed, repairs of measure words, some special sentence structures and word order were far more common.

Example 3

Mary: wǒ měitiān chī sān gè: gè: no, sǎn dùn fàn. [Everyday I eat three: three: no, three meals.]

Modifications of measure words are very common in the data, which shows that Chinese measure words pose one of the major difficulties in learning Chinese. In the Chinese language, if nouns are connected with numbers, measure words must be used between nouns and numbers, while in English, only uncountable nouns and few countable nouns use measure words for connection with numbers. Although repair for measure words was much seen, repairs of some special sentences was the most frequent repair operation, as seen in the following examples.

Example 4

Mary: Huángdì ( ) gǎn qūyuán, uh, bǎ: qūyuán (2) gǎn (1) huí gùxiāng. [The emperor ( ) drove quyuan uh, got: quyuan (2) expelled (1) to his hometown]

Example 5

Tom: Wǒ zài: tǐyùguǎn : kàn (1) tā () kàn (2) jiàn tā le. [In: the gym, I: see(1) him () see (2) saw him.]

In Example 4, the sentence, called *bǎ* sentence, is a special pattern. *Bǎ* is used to shift the object, *Qūyuán*, to before the verb, *drive*, which is supposed to be accompanied by some other word or expressions, like "back to his hometown". The student forgot to place *bǎ* in front of the object, *Qūyuán.* But soon after, he realized the mistake. Following "uh", she made a self-repair that moved the utterance closer to the target language form. In Example 5, not placing after the verb the verbal complement to express the result of the action, "see", the student incorrectly used the verb,

In the following example of syntactic repair, Mary produced a sentence according to the Chinese word order with the adverbial "to us" placed before the verb. But she didn't seem to remember the Chinese grammatical rule at the beginning until in the middle of her utterance, she realized that she needed to insert the adverbial in its appropriate position preceding the verb.

Example 6

Mary: Tā dài lái le(2) diǎn xin: gěi : oh, no, tā (2) gěi wǒ men dài lái le diǎn xin.
[He brought (2) snacks: to: oh, no. he brought snacks to (2) us.]

Mary's discourse in the above example might suggest that Mary drew her own attention to the grammatical point and was accessing her knowledge of grammatical rules as she worked through this repair.

Self-Initiation Self-Repair of Tone. SISR of tone relatively frequently occurred (14.7%) during the student-student interaction in this study. Quite a number of instances of repair on tone, especially on the second and third tones, were found in the data, which suggested students had trouble grasping the two tones although they had learned Mandarin for three semesters. A couple of instances of repair on tone are reflective of lexical items not yet completely acquired by the student, but the following examples are discussed as tone rather than as lexical repairs according

to the student's confidence and almost non-hesitation when producing the item with a wrong tone.

Example 7

Dan: hē chá de xǐguàn (2) xíguàn [the habit (2) habit of drinking tea]

Example 8

Jane: wǒ xǐ huan( ) chī tāng (2) t: (3) táng . [I like to ( ) eat (2) c: (3) candy]

In example 7, the student became aware of his inappropriate tone and immediately repeated the word with a correct tone. The student in example 8 spent 5 seconds to repair her tone error. She had mistakenly chosen the similar sounding *tāng* which means *soup* and is a word with the first tone and over which students normally have greater control than over the other three tones. Chinese is a tone language and Chinese tones have the function of differentiating words, and mispronunciation of a tone can result in misunderstanding. This mispronunciation of tone seemed to delay the repair. The student, however, finally produced the right one by herself.

Self-Initiated Self-Repair of Pronunciation. The students in this study attended to their pronunciation less frequently (7.1%), probably because in these speaking activities their goal was oriented towards communication. As long as they thought their pronunciation did not pose any obstacle in understanding each other, they tended to leave it unattended. Another possible explanation is that the students themselves were unable to identify the errors in their pronunciation, and what's more, their conversation partners were not either, or did not intend to point the errors out for the sake of face-saving.

In the example that follows, it can be seen that Tom hesitated for the pronunciation of a "cup" before he was conscious of the error signaled by the English exclamation "oh no" and eventually corrected his mispronunciation.

Example 9.

Tom: Bái: zi, (2) oh no, bēi zi li um(3) fàng zhe (2) yì diànr chá. [In the cu:p (2), oh no, in the cup, um (3) there is (2) a little tea.]

This example again appeared to demonstrate how Tom was engaged cognitively in retrieving a word from his memory, and that this retrieving process may raise his awareness of the error, thus leading to his self-repair behaviour.

Self-Initiated Self-Repair of Morphology. Like SISR of pronunciation, SISR of morphology occurred less frequently in these data (7.1%). This could be explained by the fact that in Chinese, only a few words have morphological changes. A few nouns can be formed by adding one word to a verb, which still has not been recognized as a grammatical rule even as of today. In the Chinese language, only three modal particles can be added to verbs to indicate tenses. The following example is a repair of morphology.

Example 10

Mary: wǒ chī wǔ(2) chī: le wǔfàn.[I have lun(2) ha:d lunch.]

Production of the appropriate aspectual particle "le" might be challenging for Mary, and she

realized after uttering *chī wǔ* (half way of finishing her utterance of having lunch) that she needed to add an appropriate particle to indicate that she had finished lunch. In producing *chī wǔ,* Mary herself noticed her non-targetlike way of expressing "having had lunch", as a result of which she corrected her own erroneous utterance.

Self-Initiated Other-Repair

Self-initiated other-repair occurred much less frequently (14%) than SISR. SIOR was triggered when students recognized that their knowledge base was insufficient to carry out an action, and thereby indicated their uncertainty by means of rising intonation. Students in this study did not tend to offer help immediately but rather waited until sufficient time for self-repair had passed, which can be interpreted as a face-saving strategy.

In the only one instance in the corpus, SIOR is concerned about the lexical difficulty. The student made an attempt to mark his trouble in some way as being problematic, as seen in the following example.

Example 11

1. Jane: wǒ xǐhuan wēngēhuá de: (1) uh chūnjìjié? no. [I like Vancouver's :(1) uh spring season? no.]
2. Tom: chūnjì? [spring?]
3. Jane: Yes, chūnjì: um() chūntiān bú (1) xiàyǔ. [Yes, spring: um() in spring it doesn't (1) rain.]

In line 1, Mary initiated repair by indicating the lexical difficulty and in line 2, Tom provided the outcome. The pause, the *uh*, the rising intonation on *chūnjìjié,* and the *no* all combined to signal trouble and Tom waited until probably he assumed to be an appropriate time to offer the assistance. Face-saving seemed to be a major concern in the student-student interaction, which very likely resulted in the low frequency of other-repair.

Other-Initiation of Repair

Other-initiated repair, which was executed by the listener after identification of a trouble source, was rare in these data. As other-initiated repair is defined, the trouble source always is presumed to lie with the speaker's production. Indicators of other-initiated repair in these data included sound stretching and rising intonation. Other-initiation resulted in self- and other-repair.

Other-Initiated Self-Repair. OISR in the present study, accounting for 2% in the data, was directed at an error in the speaker's turn. The listener did not, however, explicitly point the error out to the speaker. Rather, the listener would pronounce the item in a rising intonation, which signaled to the speaker that there was something ambiguous in using the item or the listener had difficulty comprehending the item. The listener's signal prompted the speaker to focus on the item that caused the trouble and to come up with a correct word. The following example might illustrate this point.

Example 12

1. Tom: Wǒ cháng cháng qù tǐyù:guǎn dǎ(1) zú :qiú. [I often go to gy:m to play(1) so:ccer]
2. Mary: Um. nǐ chángcháng qù(2) tǐyù:guǎn dǎ (1) zúqiú:?[you often go(2) to gym to play(1) soccer:?]
3. Tom: Um, um. tī, tī (2)zúqiú? Oh, tī: zúqiú.

In this example, Mary indicated in line 2 that *dǎ zúqiú* was troublesome for her by raising her intonation and stretching the sound *qiú*, which apparently drew Tom's attention to the words. Tom's consciousness of the trouble source in his utterance led him to self-repair his own error.

Other-Initiated Other-Repair. Operations of OIOR were rarely found in the data (2%). When it was found, it was found to operate on an error of lexicon. The only instance of OIOR found in the data showed that the listener employed a rising intonation in response to the non-target-like item in hope of raising the speaker's awareness of her error. This could be illustrated by the following example.

Example13

1. Jane: nánfāng (1)rén xǐ huan chī: mǐ. [Souther(1)ners like to eat: rice.]
2. Dan: (2) nán fāng (1)rén xǐhuan chī(5)mǐ? [(2) Southerners like to eat (5) white.]
3. Jane: Mǐ? [Rice?]
4. Dan: Mǐ:fàn, yeah (h), mǐfàn. nánfāngrén xǐhuan chī: mǐ. (cooked rice, yeah, (h), cooked rice, Southerners like to eat cooked rice.)
5. Jane: Ok. mǐfàn. [Ok, cooked rice].

In this example, despite Dan's effort to raise Jane's awareness, Jane still felt puzzled and did not modify her erroneous utterance. Maybe Dan's feedback was not explicit enough to draw her attention. As a result, Tom provided the correct form in the subsequent turn, and Jane accepted other-correction by repeating it in isolation. Jane's ready acceptance of the repair might show she was conscious of her incorrect lexical choice.

V. Discussion

The purpose of this study was two fold: (1) to explore the repair type(s) students prefer during student-student interaction in communication-oriented speaking activities and (2) to examine the linguistic targets of the most common repair type exhibited in the data, with a view to documenting the frequency and distribution of repair types and linguistic features repaired. The findings derived from the data offer the following responses to the two research questions:

1. What are the repair types employed by the FL students when they interact with each other in pair work? Students in this study performed four types of repair: SISR (82%), SIOR (14%), OISR (2%), and OIOR (2%). SISR was thus far the most frequently used repair type.
2. What are the linguistic targets of the most common repair during pair work? The linguistic targets of the most common repair type, SISR, covered lexicon (35.7%), syntax

(32.1%), tone (14.3%), pronunciation (7.1%) and morphology (7.1%).

Findings regarding the first research question revealed a predominance of self-initiated self-repair over other repair types within this group of students. The students in this study tried to solve their own production problems first and allowed their partners to do the same. This finding is consistent with those of Shonerd's (1994) and Buckwalter's (2001) studies. The finding might suggest that the interaction patterns of adult FL learners might be restricted by "face" considerations (Kasper, 1985). They cooperated in maintaining each other's public self-image by not bringing attention to or correcting problems in their partner's L2 production. There was little evidence which showed students' attempts to instruct each other. The predominance of SISR seemed to indicate that most repairs were what Shonerd (1994) called "local", that is, they were performed in order to move an utterance closer to the target language form. SISR reflected students' attempts to gain control over their use of the foreign language.

This prevalence of SISR and various lexical indicators such as *oh, no, and wait,* and/or non-lexical indicators such as sound stretching, pauses, and cut-offs involved in SISR seemed to bring to light two major issues. To begin with, in this study, students were capable of correcting at least, if not all, many of their own errors, and they preferred self-correction. In all the instances that contained SISR, the students ultimately were successful in retrieving or producing the linguistic features they perceived problematic for them after an effort-taking self-repair. They were cognitively actively engaged in this process and endeavored to express themselves correctly through their own efforts. They resorted to various lexical and non-lexical means to assist them in retrieving or generating the linguistic forms they felt troublesome to come up with. The self-initiated self-repair behaviour exhibited in the data of this study seemed not only an indication of students' capability of repairing but also a strategy of face-saving. As discussed by Kasper (1985), the self-completion of repair offers the learner a chance to restore face.

Second, self-initiated self-repair may activate the cognitive process of L2/FL learning. The students' SISR indicated that their errors were noticed and their attention was drawn specifically to the linguistic items, which is believed to be central to restructuring process (Karmiloff-Smith, 1986) and play an instrumental role in L2 learning (Doughty & Williams, 1998; Gass, 1994; Schmidt, 1990). The ill-formed utterance the students produced and the waiting period (indicated lexically and non-lexically) can allow them to attend to and recognize the incorrect utterance, then search their own knowledge, and reorganize it, which may bring about what Mclaughlin (1987) called "sudden moments of insight". These moments may lead the learners to gain control over the linguistic forms they have learned, thereby leading to restructuring of knowledge. Furthermore, attention to form may facilitate learners' interlanguage development (Doughty &Williams, 1998).

SISR being the most prevalent repair also resonates with Allwright and Bailey's (1991) claim. They point out that feedback to language learners' errors in classrooms are largely provided by the teacher. However, more learning may occur if learners can accomplish "a

substantial proportion of the corrective task themselves" (Allwright and Bailey, 1991, p. 107). Self-repair is also believed to improve learners' ability to monitor their speech in the target language (Chaudron, 1988).

Finding concerning the second research question pointed to the difficulties the students in this study typically experienced in learning Mandarin. SISR mostly operated on lexicon and syntax, which was a reflection of the students' needs in this study. This result conforms with that from Shonerd's (1994) study, in which he reported a selective nature of self-repair in favour of lexical and syntactic modifications. Meanwhile, this finding seems to necessitate the focus on form instruction in that students in this study did pay attention to form in meaning-based activities and managed to work on accuracy in their utterances without breaking the flow of communication.

As observed in this study, when focusing on lexicon, the students seemed to be more interested in remembering the word. This interpretation is due to the fact that the utterances they considered to be problematic and intended to repair, nonetheless, did not interfere with the communication. It might also be likely that the students perceived their utterances as being erroneous, hence attempting to correct them. Similarly, Ellis, Basturkmen and Loewen (2001) discovered that over 60% of both teacher-initiated and learner-initiated focus-on-form episodes addressed vocabulary. Williams (1999) reported that the lexically oriented language-related episodes (LRE) initiated by students accounted for about 80% of all LREs for all proficiency levels. The similar findings from these studies seem to indicate that students either have more difficulty or are more interested in learning vocabulary and grammar.

VI. CONCLUSION

This study reported on the repair sequences among adult learners of Chinese as they participated in the communicative activities in the FL classroom. The findings revealed SISR to be the most common repair sequence, with SIOR the second most common, followed by OISR and OIOR. SISR was found to operate largely on difficulties in lexicon and syntax, followed by tone, pronunciation and morphology. The findings revealed the students' preference for self-repair over other-repair and for self-initiated over other initiated repair.

Pedagogical implications

A descriptive study of two hours of speaking activities involving five students does not allow any generalization about the repair sequences in FL classrooms. However, the findings may have some pedagogical implications. L2 learners need activities that encourage production practice. The fact that they are able to do much self-repair might imply that they need opportunities that allow them first to compare their utterances to models formed in their minds in the course of learning and then to reformulate utterances as necessary. The teacher may offer the opportunity to learners that allow them to try to self repair. Only learners "are capable of making changes in their developing interlanguage systems (Allwright & Bailey, 1991, p. 107). Ideally, when students can repair their own errors and produce the target language on their own

in a targetlike way, the correct form will be internalized (Allwright & Bailey, 1991).

In providing the opportunity to the students to self repair, van Lier (1988) suggested that the teacher should give adequate wait time or delay of other-repair (both initiation and error replacement) for learners to access their output (also see Allwright & Bailey, 1991). This delay, as claimed by van Lier, may be beneficial in facilitating the development of self-monitoring and pragmatic adjustment, an essential competence in the target language. Meanwhile, care should be taken as to the extent to which students are offered the self-repair opportunity. Teachers should neither underestimate nor overestimate students' ability to correct their own errors. It is advisable for teachers to take into consideration students' language proficiency level as well as affective and cultural factors.

Importance should also be attached to effective vocabulary and grammar instruction. All the repair types mostly operated on lexicon and syntax this study. Lexicon and syntax seem to be a very important component in language learning and effective communication. Teachers may design their lesson plans more targeted towards students' needs. It is also necessary for teachers to receive more professional training in how to exploit effectively various instructional methods to promote students' vocabulary and grammar development.

Limitations

As only four students were observed, the results of the study should be interpreted with caution and used only as a guide. The findings cannot be generalized to adult foreign language learners as a whole. Another factor affecting the results of the study was the use of audiotaping instead of videotaping, by which the researcher could observe more the body language of the participants. Although the research employed supplementary strategies, such as making notes after each session of audio-taping, still some data might be missing, which could have assisted in data interpretation.

Future Research

The limited findings of this study suggest that self-repair was the major strategy that the students employed during student-student interaction. Given the small sample size, more evidence needs to be collected as to whether the patterns and functions of repair in this classroom are typical of an intermediate foreign language classroom. If we can find adequate evidence for certain repair techniques which facilitate L2 learning, teachers may design class activities accordingly which allow students to gain more profit for L2 development. Further studies are required to explore the relationships between and/or among repair types and affective factors such as motivation, individual learning styles, and cultural factors.

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