

## THE USE OF ENGLISH INTERACTION STRATEGIES IN COOPERATIVE LEARNING: A CASE STUDY OF FOUR CHINESE COLLEGE STUDENTS' SPOKEN DISCOURSE

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Received: 26.02.2023

Accepted: 09.10.2023

### ABSTRACT

**Background and Purpose:** Previous studies have examined the efficacy of the cooperative learning approach to enhance speaking outcomes, but little is known about what happens in the interaction process of cooperative learning and how cooperative learning works to promote speaking interaction. The current study examines Chinese college students' interaction strategies in cooperative learning activities and how cooperative learning instruction influenced their interaction strategy use.

**Methodology:** This research adopted the sequential explanatory design. Thirty students from an intact class at a Chinese public university participated in a 12-week cooperative learning instruction and kept learner diaries over time. One cooperative learning team of four members was randomly chosen for observing their interaction strategy use throughout the semester fortnightly. The frequencies of their interaction strategies employed in the transcribed recordings were analysed through descriptive statistics and the learner diaries were analysed through thematic analysis.

**Findings:** The findings indicated that the four students' Modified-Interaction strategies were employed much less frequently than Social-Interaction strategies when they worked cooperatively, and training in Modified-Interaction strategies was greatly needed for promoting students' effective interaction and language development. It has also been found that cooperative learning instruction was helpful in promoting students' Social-Interaction strategy use as it provided a natural and conducive environment for students to socialize and cooperate towards the group goals.

**Contributions:** This study can provide insights into implementing cooperative learning activities and training interaction strategies in a formal language classroom context.

**Keywords:** Cooperative learning, peer interaction, interaction strategies, modified interaction, social interaction.

**Cite as:** Jia, J., & Stapa, M. (2024). The use of English interaction strategies in cooperative learning: A case study of four Chinese college students' spoken discourse. *Journal of Nusantara Studies*, 9(1), 25-52. <http://dx.doi.org/10.24200/jonus.vol9iss1pp25-52>

## 1.0 INTRODUCTION

English learning occupies a vital position in the curriculum of higher education in China. In particular, the development of oral English is one of the major concerns of English teaching and learning. The *Guidelines for College English Teaching* formulated by the Ministry of Education in China in 2017 stipulates that college English teaching aims to “cultivate students’ language use ability”, which specifically refers to “the ability to use English to communicate effectively in daily life, academics and the workplace” (Higher Education Institution College English Teaching Advisory Committee, 2017, p. 2). This statement shows manifestly that oral communication has been accentuated in the teaching and learning college English.

However, it has been found that Chinese college students are “grammatically competent but communicatively incompetent” (Cheng & Wang, 2012, p. 28), even though they have invested a large portion of time and energy in learning English. In a survey conducted by Xie (2020), participants reported common obstacles and challenges in oral communication, such as insufficient vocabulary and grammar, lack of confidence in speaking, inaccurate pronunciation, lack of opportunities to practice spoken English, inadequate coherence and fluency to maintain the speed of speech, etc. As a result, the problem of weak speaking skills becomes urgent, given China’s increasing integration into the world arena.

Oral communication is a practice that involves reciprocal interaction with others (Galaczi & Khalifa, 2009; Sari, 2014). In other words, it includes not only “the expression of one’s thoughts”, but also involves “a reciprocal turn-taking between the listener and the speaker” (Aggouni, 2015, p. 10). Such interaction in speaking practice is essential for Chinese college students because they have been constantly reported as weak in the employment of interactional/conversational skills, e.g., poor turn-taking, turn control, over-modesty, and monotonous self-repetition (Wang, 2004; Sun, 2014). They have difficulty interacting

successfully with others in English by adopting only a few interaction strategies. It is largely because they have been exposed to few opportunities to practice speaking and interact with their peers in English both in and beyond the classroom settings.

Consequently, it is of great necessity to seek a teaching approach that would facilitate students' speaking interaction. Cooperative learning appears as a strategy that would allow students to use the target language freely with others. Many earlier studies have shown that the adoption of a cooperative learning approach exhibits positive effects on English as a Second Language (ESL) and English as a Foreign Language (EFL)— hereafter referred to as ESL/EFL students' speaking performance and interaction (Alghamdi, 2014; Astuti & Barratt, 2018; Cortés Vargas & Sánchez Rincón, 2018; Liang, 2002; Lin, 2011). However, much of the research only investigated whether cooperative learning is helpful in promoting ESL/EFL oral development or otherwise. Little scholarship has looked at what happens in the interaction process of cooperative learning and how cooperative learning works (Alghamdi, 2014; Astuti & Barratt, 2018). In other words, effective interaction in cooperative learning where learners use interaction strategies skillfully is thought to be conducive to language skills development, but the extant research on interaction strategy use in the cooperative learning process is scarce. Against this background, this research examines what interaction strategies Chinese college students use in cooperative learning and how cooperative learning instruction affects their interaction strategy use, as they are gradually exposed to this teaching approach.

## **2.0 LITERATURE REVIEW**

### **2.1 Interaction Theories in Language Learning**

Few researchers and theorists at present would doubt that learners acquire a second language (L2) through communicative interaction (Swain & Suzuki, 2008). It was advocated as a response to traditional language learning theories and approaches, e.g., behaviorism, structuralism, and audiolingualism, which focus primarily on grammar instruction and rote memorization (Richards & Rodgers, 2014). Research into the significant role of interaction in the second language acquisition (SLA) field originated in the early 1980s. For example, Krashen (1985) proposed Monitor Model and emphasized the role of comprehensible input, naturalistic communication, and learners' innate language acquisition capacities in the language learning processes. It is believed that educators should create language learning environments that mirror real-life language use and provide students with opportunities to have meaningful communication.

While the concept of comprehensible input has been influential in language teaching, it has also been subject to ongoing debate and further theoretical developments. Long's (1996) Interaction Hypothesis saliently highlighted the importance of peer interaction in promoting second language development. He posited that comprehensible input (i.e., the input slightly beyond their current level of competence) alone is insufficient to promote language proficiency. Instead, conversational interaction in which language learners gain access to comprehensible input, negotiate meaning, and produce modified output, plays a central role in language development. In other words, learners may encounter difficulties in interactive and meaningful communication, so they need to engage in conversations to adjust their output, negotiate meaning, repair miscommunication, and refine their talk. Such meaning negotiation and modified interaction ultimately facilitate language acquisition (Zhao, 2021). There is ample evidence that providing learners with opportunities to use the target language through interaction with their peers is conducive to language development (Long & Porter, 1985; Swain, 2005).

The Interactive Hypothesis has provided a more comprehensive understanding of the role of interaction in language learning and led to the development of language teaching approaches that prioritize meaningful interaction and real-life communicative tasks in the language classroom. One of the instructional approaches that promote learner engagement and interactive language use is cooperative learning. The next section discusses the concept of cooperative learning and reviews its recent studies in the language classroom.

## **2.2 Cooperative Learning Approach**

Cooperative learning refers to the instructional approach involving group learning activities in which individuals work together to maximize their own and other peers' learning (Johnson & Johnson, 1999). Different from conventional group work, cooperative learning emphasizes the enactment of five inherent principles, i.e., positive interdependence, individual accountability, face-to-face promotive interaction, interpersonal and social skills, and group processing, so that students can be responsible not only for their own learning, but also contribute to the learning of their group members. In other words, these five principles are thought to foster effective implementation of this teaching approach and increase student peer interaction (Chen, 2011; Johnson & Johnson, 1999; Slavin, 1995).

For cooperative learning, in addition to academic objectives, social objectives are also required to concurrently integrate into every class session since interpersonal and small group skills are necessary for students to be genuinely cooperative. They include skills in decision-

making, conflict management, leadership, responsibility, effective communication, trust-building, etc. (Johnson & Johnson, 1999). The application of such collaborative tasks is considered to naturally foster cognitive, affective, and social development for students to learn through interaction and collaboration (Gillies, 2014), and this has been stressed in various studies. For instance, cooperative learning is proven to be effective in developing creative thinking (Marcos et al., 2020), increasing motivation in learning (Ning & Hornby, 2014; Tran, 2019), enhancing reading comprehension skills (Farzaneh & Nejadansari, 2014) and writing skills (Mahmoud, 2014; Zamani, 2016). According to Sadeghi and Ganji (2020), in comparison to traditional teaching, the cooperative learning method created a stress-free and supportive atmosphere where students were keen to participate in classroom activities. Such cognitive and affective benefits included increased classroom engagement, self-esteem, and self-confidence. In a study by Camacho-Minucho et al. (2021), the five cooperative learning elements applied in English classrooms helped students create a good rapport, build social skills, and achieve higher grades.

In particular, the cooperative learning approach has been used in ESL/EFL classrooms because it can provide learners with maximum opportunities “for meaningful input and output in a highly interactive and supportive environment” (Ghaith, 2003, p. 451). In this regard, Deen (1991) compared the patterns of interaction in a cooperative learning and a teacher-centered setting for nine weeks. He found that students under the cooperative learning instruction took more turns and produced a great more target language, despite certain dominance by high-proficiency students in the cooperative groups. He also revealed that all students in the cooperative learning setting, regardless of language proficiency, actively engaged in question-asking and modified output and achieved better performance in speaking. Similarly, Astuti and Barratt (2021) also confirmed that cooperative learning applied in an EFL context brought learners with opportunities for reciprocal interactions, including providing and receiving vocabulary help, which helped them perform better in the subsequent presentation on understanding learning materials. In a study by Cortés Vargas and Sánchez Rincón (2018) that examined the cooperative learning strategy Think-Group-Share on speaking performance and interaction of A1 seventh graders, respondents improved their self-confidence and ability to speak in English through increased interaction and output with their partners and teachers. It can be concluded that the cooperative learning approach can positively impact student interaction by promoting active participation, meaningful communication, and peer collaboration, which would be conducive to language development.

In a cooperative learning context, learners have abundant opportunities to interact with their peers, exchange ideas, negotiate meaning, and co-construct knowledge. This kind of interaction and negotiation necessitates the use of specific interaction strategies. The following section defines interaction strategies and reviews relevant studies.

### **2.3 Interaction Strategies**

According to Long (1996), when learners encounter communication breakdowns or difficulties in interaction, they would engage in conversational strategies to clarify, negotiate meaning, and ensure mutual understanding. Such interactional adjustments include processes such as “clarification requests” (i.e., asking for clarification by requesting the speaker to repeat, explain or provide additional information) and “confirmation checks” (i.e., paraphrasing or summarizing the speaker’s statement to confirm whether they have understood what has been said by the speaker) (Long, 1983). However, students struggle to interact effectively and seldom demonstrate such interactional adjustments because they lack adequate interaction strategies (Lourdunathan & Menon, 2017; Sato & Ballinger, 2016). In other words, students rarely attend to language form (Philp et al., 2013), often give infrequent and low-quality peer feedback (Adams et al., 2011), and sometimes show inadequate collaborative behaviors (Alghamdi, 2014). Therefore, interaction strategy training for L2 learners that helps them effectively interact with peers has been receiving increasing attention in L2 interaction research.

In line with this, Bejarano et al. (1997) constructed a framework for specifying the interaction strategies needed for the communicative interaction among members in the small group. The framework was based on theories on interaction processes in SLA field and cooperative learning. The two types of interaction strategies defined in their study were Modified-Interaction and Social-Interaction strategies. The first sub-type of strategies is relevant to language, and interlocutors usually use them to negotiate for meaning and modify interactions to make the intended message comprehensible. The latter sub-type of strategies is particularly pertaining to overall participation and cooperation skills that enable members in a group to maintain a smooth flow of interaction. The taxonomy of interaction strategies is shown in the table below.

Table 1: The taxonomy of interaction strategies by Bejarano et al. (1997)

Category	Sub-strategies	Explanations or examples
Modified-Interaction strategies	Checking for comprehension and clarification	Comprehension checks ( <i>e.g., Do you know what I mean?</i> ); Clarification request ( <i>e.g., Did you say...?</i> )
	Appealing for assistance	Seeking linguistic help from others ( <i>e.g., How do you say...?</i> )
	Giving assistance	Giving linguistic help to others
	Repairing	Correcting linguistic errors of others
Social-Interaction strategies	Elaborating	Giving examples or further explanations of what others have said
	Facilitating the flow of conversation	Using promoters to encourage others to continue their utterance
	Responding	Responding to what others have said by agreeing or disagreeing
	Seeking information or an opinion	Asking for others' opinions or more detailed information ( <i>e.g., what do you think of...?</i> )
	Paraphrasing	Rephrasing others' opinion

As shown in the table above, Modified-Interaction strategies are techniques that allow the speaker and listener to modify their interactions in a way that makes it easier for the intended message to be understood. These include asking for an explanation and confirming understanding, appealing for help, providing assistance, and making repairs. Using some of these techniques, participants can fix grammatical or lexical errors in the target language that other group members made. Unlike Modified-Interaction strategies that are more about language and meaning conveyance, Social-Interaction strategies, on the other hand, are more concerned with cooperation. They are used to enhance group engagement that involves all group members. They help the participants develop greater engagement and attentive listening abilities (Terpstra & Tamura, 2008). These are essential to preserving the coherence and flow of a group discussion in which students respond to one another and discuss what other group members have said, as opposed to delivering their own separate or unrelated short speeches that lead to non-interaction participation. This group of tactics consists of providing details, promoting discussion flow, asking for clarification or an opinion, and paraphrasing (Bejarano et al., 1997). These two sets of interaction strategies are essential for effective interactions in a group. This framework is widely referred to in subsequent studies for comprehensively defining interaction strategies, e.g., Naughton (2006), Lourduathan and Menon (2017), Dong (2018), Xu and Kou (2018).

It is essential to note the differences between communication strategies and interaction strategies. Even though both sets of strategies overlap to some extent, and are considered indispensable to successful interactions, their notions underscore different facets for different purposes. Communication strategies are derived from the concept of strategic competence, a separate component of Canale and Swain's (1980) framework of communicative competence. They primarily focus on how speakers clearly and effectively convey information, ideas, and messages. In particular, communication strategies are resorted to compensate for the deficiency of linguistic competence when interlocutors face a communication problem. They may modify or abandon their initial communicative competence by employing avoidance strategies, such as topic avoidance and message abandonment. Otherwise, they may utilize achievement strategies to reach a particular communicative goal that include approximation, circumlocution, word coinage, foreignizing, code-switching, etc. (Dörnyei & Scott, 1997). On the other hand, interaction strategies are exclusively concerned with the interaction process and the dynamics and quality of engagement between individuals (Awong et al., 2021; Zhang & Jin, 2021). They are adopted not only to foster understanding but also to establish and maintain cooperation and meaningful interactions (Bejarano et al., 1997). In other words, speakers need not only to negotiate for message meaning, but also to encourage the use of strategies for effective cooperation, which are subsumed into Modified-Interaction strategies and Social-Interaction strategies as mentioned above.

The proposal of interaction strategies by Bejarano et al. (1997) is based on both interaction theories on SLA and cooperative learning. It can be inferred that the cooperative learning approach is naturally connected with using interaction strategies. As argued by Lam and Wong (2000), cooperative behaviors and peer support can create a supportive environment for students to boost confidence and motivation to use such interaction strategies. The explicit teaching of social skills highlighted by cooperative learning (Johnson & Johnson, 1999) is also inherently in alignment with the training of interaction strategies. In other words, cooperative learning approach is expected to promote interaction strategies, and some prior studies have supported this. For example, Gillies (2004) verified that cooperative groups provided more assistance to their team members than unstructured groups. Alghamdi (2014) proved cooperative learning groups were significantly better than unstructured groups in making basic statements, responding to others' requests, giving explanations, and supporting others. However, despite extensive research on cooperative learning, few studies have observed students' interactions in cooperative learning processes (Alghamdi, 2014; Gillies, 2014). As Astuti and Lammers (2017, p. 215) claimed, "Little scholarly attention, however, has been

given to revealing how this teaching method works and promotes learners' improved communicative competence", what happens in students' interaction during cooperative learning processes is under-researched. In particular, since students need to adopt certain strategies when cooperating, how their interaction strategy use evolves as cooperative learning instruction is not adequately addressed in previous studies.

Therefore, this research intends to fill in the gap by examining the interaction strategies used by four college students in China's cooperative learning context and how cooperative learning instruction affects their interaction strategy use as they are gradually exposed to this teaching approach. Therefore, the specific research questions are as follows:

1. What interaction strategies do the four college students use in cooperative learning activities?
2. How much does cooperative learning promote their interaction strategy use?

### **3.0 RESEARCH DESIGN**

#### **3.1 Research Design**

This study adopted an intrinsic case study to explore one four-member cooperative learning group's interaction strategy use in a Chinese college English learning context. The intrinsic case study, which is widely used in education, refers to a single-case design for the purpose of gaining an in-depth understanding of the intricacies of a case or phenomenon (Cohen et al., 2002). The study was also longitudinal research that examined the evolution of the four students' interaction strategy use over time under cooperative learning instruction.

#### **3.2 Research Site and Participants**

This study was conducted at a state-funded university in mainland China under the national English curriculum stipulated by the China Ministry of Education. The participants were four first-year college students majoring in business English between 17 and 19 years old. They all passed the College Entrance Examination in China, equivalent to A2 within the Common European Framework of Reference for Languages (CEFR).

Having been exposed to English formal instruction for about ten years, they enrolled in an integrated English class at college in two 90-minute sessions per week and for 15 weeks throughout the whole semester. As a fundamental required course, this course was aimed at enhancing students' overall proficiency in the English language by expanding students' vocabulary, reinforcing grammar use, and training language skills like listening, speaking,

reading, and writing. Though it is an integrated course, the reality in China is that text-based instruction is still the norm (Wen, 2012; Zhang & Zhao, 2017). Normally, the instructional hours are devoted to analyzing the text structure, understanding reading skills and writing techniques of the text, mastering grammar and vocabulary in the text, having language drills practice, and theme-related discussions and activities. The texts cover general topics such as education, natural disasters, environmental protection, and job interviews. Since there were not adequate communicative activities in the class that could help students engage in meaningful communication, the current study introduced the cooperative learning approach as a pedagogical reform.

The cooperative learning instruction for the class was formally carried out over a period of 12 weeks. More than 50% of the class time per week was devoted to cooperative learning and the rest to conventional teacher-fronted instruction. The cooperative learning instruction in the present study was built on Johnson and Johnson's (1999) five principles mentioned in the literature review above to ensure the students could be positively interdependent with each other, while being responsible for their own study. According to Johnson and Johnson (1991), not only were academic objectives incorporated into cooperative learning activities, but the social skills objectives were also highlighted per class so that the students could be trained to cooperate and interact with others effectively. The cooperative learning activities implemented in the current study mainly included Kagan's (1989) structural approach (e.g., think-pair-share, three-step interview, and small group discussion) and jigsaw activities. They were related to the teaching content and tailored to the teaching objectives. For example, after the teachers' lecture on the text and demonstration of social skills, students in a cooperative learning group worked on specific tasks with different assigned roles (i.e., recorder, checker, reporter, and leader; or pieces of "jigsaw"), helped each other, and worked out a final product to present. It is worth mentioning that the class of 30 students was divided into seven groups, each with four to five members respectively, which is recommended by many previous researchers (e.g., Jacobs & Goh, 2007; Kagan & Kagan, 1994; Slavin, 1995). The four respondents in a group were randomly selected from the seven cooperative learning groups for ongoing, consistent and in-depth investigation in the current study. They included one high-achiever, two medium achievers, and one low-achiever based on their grades in the previous semester's integrated English course.

### **3.3 Data Collection**

The data for investigating the four respondents' interaction strategy use were collected from their cooperative learning processes in the class. In order to reduce any potential observer effects on the classroom environment and make the participants feel more at ease speaking English with their teammates, they were requested to videotape the whole group interaction process using their mobile phones. Their recordings were collected by the first researcher six times over the semester. She took recordings from the respondents at two week intervals, as they were getting familiar with the cooperative learning instruction. The six recordings were all well-structured CL tasks including three small group discussions (lessons 1, 2, 6) and three jigsaw activities (lessons 3, 4, 5). Each time their group interactions lasted for at least 20 minutes. The entire recording was around 170 minutes long.

In addition to the video recordings, the four participants in the current study were requested to keep a learner diary each time they were exposed to cooperative learning activities. They were requested to record their learning experiences and feelings about their experiences in cooperative learning activities freely. Based on the previous studies by Sarobol (2012) and Prastyo (2017), some questions were provided for them as a reference if they did not know what to write, for example, "What did you learn in today's class and how did you feel about it?", "Were there any impressive experiences today?", "How did you interact with your teammates? "Was the interaction smooth and effective?" "What problems did you encounter in your interaction?" etc. The respondents were required to write as many details as possible in their mother tongue, Mandarin Chinese, but they were free to write in their styles. The learner diaries were collected every week and altogether 12 weeks of them were obtained. They were expected to help the researchers gain more insights about students' interaction strategy use in cooperative learning and achieve triangulation for video recording (Creswell, 2012).

### **3.4 Data Analysis**

The recordings were first transcribed by the first researcher verbatim. Since the length for each cooperative learning activity was more or less unequal (20-35 minutes), and since the interaction strategy use of each time would be compared to track their changes, the recordings were analyzed for the same period, i.e., 20 minutes, to make a more accurate comparison. After all, the comparisons should be based on the same interaction length because the interaction strategies used can be sensitive to time and increase with time. Then two independent raters were invited to code the four students' interaction strategies, and the inter-rater reliability of

0.92 was reached. For any disagreements, the two independent raters discussed with the researchers in the current study to achieve consensus.

The coding scheme was based on a taxonomy of interaction strategies formulated by Bejarano et al. (1997) but modified by the researchers after the pilot study. It covered eight variables of interaction strategies. The researchers added “refining the utterances of others” under the category of “repairing”. The two raters reported that the original two categories “elaborating” and “paraphrasing” were somewhat overlapping because sometimes respondents were found to paraphrase with more details. Therefore, the two categories were combined to be “elaborating or rephrasing”. Under the original category of “seeking information or an opinion”, seeking information could be a feature of “facilitating flow of conversation”, so the two categories were modified. In addition to using promoters to encourage others to continue their talk, “facilitating the flow of conversation” also included “requesting others to provide more detailed information”. “Inviting an opinion” was kept as an individual code exclusively referring to asking for others’ opinions. The coding scheme is shown in the table below.

Table 2: The coding scheme for interaction strategies

Category	Sub-strategies	Explanations or examples
Modified-Interaction strategies	Checking for comprehension and clarification	Comprehension checks ( <i>e.g., Do you know what I mean?</i> ); Clarification request ( <i>e.g., Did you say...?</i> )
	Appealing for assistance	Seeking linguistic help from others ( <i>e.g., How do you say...?</i> )
	Giving assistance	Giving linguistic help to others
	Repairing	Correcting linguistic errors of others; Refining the utterances of others
Social-Interaction strategies	Elaborating or rephrasing	Giving examples or further explanations to what others have said; Rephrasing what others have said
	Facilitating the flow of conversation	Using promoters to encourage others to continue their utterance; Requesting others to provide more detailed information
	Responding	Responding to what others have said by agreeing or disagreeing
	Inviting an opinion	Asking for others’ opinions ( <i>e.g., what do you think of...?</i> )

Based on the coding scheme shown above, the researchers analyzed the four students’ interaction strategy use and assessed if there were changes in their interactive performance, while they were involved in cooperative learning activities. The researchers analyzed the two types of interaction strategies (i.e., Modified-Interaction strategies and Social-Interaction

strategies) at the group level every week. They later compared the changes in interaction strategy use of the group across the six times through descriptive frequency statistics. In total, two hours of students' verbal interactions were coded. When comparing the changes in their use of interaction strategies across the six lessons, the researcher purposefully classified two categories for comparison, i.e., three small group discussions (lessons 1, 2, 6) and three jigsaw activities (lessons 3, 4, 5). This was done because different types of cooperative learning activities may entail different usages of interaction strategies, and task type was proven to be an important influencing factor in eliciting how problems are addressed in language interaction (Chen et al., 2022; Llinares, 2015). Furthermore, thematic analysis was used to analyze the data gained from learner diaries.

#### 4.0 ANALYSIS AND DISCUSSION

##### 4.1 Four College Students' Interaction Strategy Use in Cooperative Learning Activities

In order to examine four Chinese college students' interaction strategy use in cooperative learning activities, both Modified-Interaction and Social-Interaction strategies used by them were recorded and analyzed in terms of their overall frequencies and the frequencies of their sub-strategies. Table 3 presents the data for these categories.

Table 3: Frequencies of students' interaction strategies (modified and social) in cooperative learning

Category	Sub-strategies	Frequency
Modified-Interaction Strategies	Checking for comprehension and clarification	29
	Appealing for assistance	10
	Giving assistance	11
	Repairing	6
	Total	56
Social-Interaction Strategies	Elaborating or rephrasing	10
	Facilitating the flow of conversation	28
	Responding	76
	Inviting an opinion	35
	Total	149

As the results in Table 3 indicate, the four students used all two types of interaction strategies in their cooperative learning activities. Still, the total number of Modified-Interaction strategies (N=56) was much smaller than that of Social-Interaction strategies (N=149). In other words,

in the six cooperative learning activities observed, they used Social-Interaction strategies nearly three times as frequently as Modified-Interaction strategies. In general, they recurrently engaged in cooperative and social interaction such as responding to each other, inviting opinions from others, and asking follow-up questions to facilitate the flow of the conversation. On the contrary, interactional behaviors such as clarification requests and checks, appealing and giving assistance, and repairing were not as often as the Social-Interaction strategies.

The observed higher frequency of Social-Interaction strategies in comparison to Modified-Interaction strategies was confirmed in Bejarano et al.'s (1997) study where students from both the experimental group and control group used Social-Interaction strategies more than Modified-Interaction strategies, both before and after the treatment of interaction strategy training. This is probably because Social-Interaction strategies are not language-specific but are related to general interactional and social skills. In their first year of college life, the students in the present study are more likely to embrace cooperative learning after being exposed to teacher-centered learning in their primary or secondary schools. Moreover, they are in their post-teenage and even early adult years, so they should have already possessed basic skills to work with others to achieve common goals (Chen & Liu, 2017; Chan & Rao, 2009). In addition to the respondents' age characteristics, this can also be due to the influence of Confucius collectivist culture in China that contributes to the cordial relationships among students in a group and peer cooperation (Lin, 2016). However, the Modified-Interaction strategies are considered as the ones to encourage students to use the target language and help them overcome linguistic stumbling blocks (Long, 1996; Swain, 2005), so the training in how to use this type of strategies is of great importance for the foreign language classroom setting. Then the following two subsections examine the use of Modified-Interaction and Social-Interaction strategies in detail, respectively.

#### ***4.1.1 Four College Students' Modified-Interaction Strategy Use in Cooperative Learning Activities***

Modified-Interaction strategies are considered language-specific and they are used when students focus on a specific language to facilitate understanding of the intended message and achieve communicative goals (Bejarano et al., 1997). In terms of Modified-Interaction strategies, the most frequently used strategy was "checking for comprehension and clarification" (N=29), followed by the strategy of "appealing for assistance" (N=10) and "giving assistance" (N=11), while the least frequently used strategy was "repairing" (N=6). This means when the students were involved in the cooperative learning activities, they focused

more on the intended meaning. If they failed to comprehend the meaning or they were afraid of not being understood, they would negotiate the meaning by asking questions like “What do you mean?” or “Do you understand what I mean?”. However, the form-focused episodes, in particular, repairing others’ phonetic, lexical, and grammatical errors and refining others’ utterances were seldom observed. Such findings were also supported by the entries of four students’ learner diaries. In their learner diaries, they often addressed the problem of listening and understanding, e.g., “*Sometimes I can’t understand what my partner is saying*” and “*When my teammates talked fast, I could not catch up with them. Especially when I had to record what they said, I was very anxious to know what they said*”. So as one student (SS2) added, “*When we found communication breakdown, we involuntarily asked questions so that we could finish the task*”, cooperative learning necessitated peer interaction where mutual understanding was mostly required for the purpose of accomplishing the group tasks. This further supported Singay’s (2020) findings, who also found that students frequently checked the listeners’ comprehension or asked for clarification when working with peers.

Nevertheless, Modified-Interaction strategies like seeking and giving linguistic help, particularly repairing their partners’ linguistic errors, were not frequently identified. “Repairing” was observed to only appear six times over the six lessons, which ranked as the least used strategy in oral communication. According to the data from students’ learner diaries, they confirmed such inadequacy of form-focused episodes. For example, “*I think, more often than not, we cannot catch some of our teammates’ phonetic and grammatical errors*”, and “*I really hope my friends can give me more feedbacks on my pronunciation problems, which they seldom did*”. Though pronunciation-related repairs occurred in a few instances, they seemed futile and the speakers still carried on with their problematic pronunciation. The following two excerpts illustrated their trajectories of negotiating pronunciation repairables.

*Excerpt 1:*

*SS4: Wait wait. (looking up words on the mobile phone) bamboo (mispronounced as [’bæm, bæʊ]) basket (wrong stress [ba:s ’kɪt]).*

*SS1: What?*

*SS4: Bamboo basket (still mispronunciation and wrong stress).*

*SS3: Bamboo basket (repairing SS4’s pronunciation).*

*SS4: Bamboo basket (still mispronunciation and wrong stress) have [sic] an apple.*

*SS1: Ok I know...*

*Excerpt 2:*

*SS1: ... We can use some bags*

*SS2: Yeah. Bags (mispronouncing it as /bʌgs/).*

*SS1: Bags 就是咱们的包 (uttering Chinese, meaning “I mean the bags we usually carry”).*

*SS2: Right, bags (still mispronouncing it as /bʌgs/).*

*SS1: Er. It’s ok (with an embarrassing look).*

In Extract 1, SS4’s pronunciation problem of “bamboo basket” was addressed when it interfered with SS1’s understanding. In response, SS3 tried to fix this problem, but SS4 did not realize SS3 was trying to repair it and focused on the meaning he intended to convey. Due to time constraints, SS1 then continued the group work without addressing the problem further. In Excerpt 2, SS1 helped correct SS2’s mispronunciation of “bags” but SS2 did not realize that her pronunciation was problematic. SS1 looked embarrassed and abandoned the repair. The low frequency of repairing is also noted by Xu and Kou (2018), who examined the use of group interaction strategies by Chinese university students in 1080-minute transcribed recordings and found that the least frequently used strategy was correcting others’ speech errors. In another study, Chen et al. (2022) also found that the occurrence of pronunciation-related repairs in peer interactions was almost negligible in both English topic discussions and simulation tasks in a marketing course at a Chinese university. They attributed the rare instances of pronunciation repairs to the fact that they might threaten face. In other words, peer correction on pronunciation is well-intended, but it brings embarrassment and makes students lose face. This is especially true for first-year Chinese students in the current study who are not fully confident to speak English as their English learning previous experiences in primary and secondary schools used to be more exam-oriented and the opportunities for speaking English were inadequate in classrooms.

The observed lower frequency of appealing for and giving linguistic assistance might be related to the availability and help of mobile-assisted devices, as one student (SS3) noted, “*More often than not, I resorted to the online dictionaries for help and tried to solve the problem on my own. It is convenient.*”. This echoes Færch and Kasper’s (1986) view that learners mostly depended on their own effort to solve problems without needing cooperative assistance from their interlocutors. In another study on Chinese college students’ strategic competence conducted by Wang et al. (2015), the strategy of appealing for assistance was also

sparingly adopted by students. Both studies attributed the low frequency of repairing or asking for help to Chinese culture, where students feared the loss of face if they sought help too often or explicitly corrected others' linguistic mistakes.

#### ***4.1.2 Four College Students' Social-Interaction Strategy Use in Cooperative Learning Activities***

Social-Interaction strategies refer to the strategies that enable students to engage in cooperative interactions (Bejarano et al., 1997). They help make sure members in a group react to each other, maintain a smooth flow of interaction, and achieve effective group dynamics. In terms of Social-Interaction strategies, an overwhelming proportion was observed in "responding" (N=76), while the least commonly employed strategy was "elaborating or rephrasing" (N=10). The frequencies of learners' use of the remaining two strategies were almost similar, i.e., "facilitating the flow of conversation" (N=28) and "inviting an opinion" (N=35). This indicates that when students were working with others, they frequently gave verbal responses either for showing agreement/disagreement or they were listening. Students in their learner diaries also mentioned the ubiquity of responding to others. For instance, "*In class when cooperating with my teammates, I feel respected because they listened to me and gave me timely responses.*" and "*More often than not, I listen very attentively and show my responses, because I really hope others can do the same when it is my turn to speak.*". The verbal responses simply saying "yes" and "I agree with you" made students feel respected and valued as they worked together. For the participants in the current study, this seemed to be a tacit rule of etiquette and a manifestation of politeness and kindness toward others. As one student (SS2) wrote, "*After working together for a long time, there is a certain tacit understanding and the cooperation is going quite smoothly*".

It seemed that the students' interaction was limited to easy and convenient interactions, but they seldom explained others' opinions in detail or gave restatements for more complicated linguistic processing. In other words, their interactions were featured by frequent responses and asking and answering questions, but the "elaborating and rephrasing" in Social-Interaction strategies was not frequently observed in the respondents' utterances in the current study (N=10). Students were found to mostly rephrase others' utterances to strengthen understanding and accomplish the group goals. This can be seen in the following excerpts.

*Excerpt 1:*

*SS4: They don't buy anything.*

*SS1: They don't buy anything. Their trolley is empty.*

*Excerpt 2:*

*SS2: Enjoy the walk (mispronounced it as "work"). In the evening, we can walk (mispronounced as "work") slowly along the street, put down the phone and play badminton.*

*SS1: Yes. Enjoy walk[sic], and we [sic] can also play some sports you like such as play [sic] baseball play[sic] badminton. Sports can make you feel happy.*

In Excerpt 1, SS1 rephrased SS4's utterance of "they don't buy anything" as "Their trolley is empty" to comprehend the intended message better. This was done because the four members were involved in the jigsaw activity and they needed to understand each other and piece information together to achieve the group goal. Similarly in Excerpt 2, in the small group discussion, SS1 rephrased SS2's utterances about her favor for a slow-paced lifestyle because they were required to pool all ideas and make a summary. In other cases, elaborating or rephrasing were seldom, if any, identified in the recordings.

This was further supported by data analysis from learner diaries, where respondents noted the problem of inadequate "in-depth exchanges of ideas" during peer interaction. One student (SS2) described, "*I found a problem: when we communicated, we only simply reacted to others' utterances and then started to express our viewpoints without further commenting on or responding to theirs.*" This means the respondents were interactive but such interactions should involve more explanations, exemplifications, and interpretations. This might be due to the fact of students' similar language proficiency and convergent ideas and experiences, which can be seen in SS3's account "*Our opinions seemed very similar, so when we discussed a topic, we did not need to explain a lot. We can understand each other*". However, Slavin (1995) and Webb (1991) both argued that constructive learning outcomes resulted from the explanations given by one student to another when students worked together. More elaborations, explanations, and restatements should be encouraged for students to practice in group activities.

#### **4.2 The Impact of Cooperative Learning Instruction on The Four College Students' Interaction Strategy Use**

In order to determine if there were differences and changes in the four Chinese college students' interaction strategy use across the six lessons throughout the cooperative learning instruction,

their interaction strategy use for each week was compared. Table 4 presents the data for these categories. It is important to note that the comparison was done in two categories, i.e., lessons 1, 2, and 6 for small group discussion, and lessons 3, 4, and 5 for jigsaw activities. This was done because the two types of cooperative learning activities were quite different and may entail different interaction strategies. So, it was safer and more reasonable to compare separately.

Table 4: Frequencies of students' interaction strategies (modified and social) across the six lessons

Category	Sub-strategies	Frequencies for Each Time					
		1	2	3	4	5	6
Modified- Interaction Strategies	Checking for comprehension and clarification	3	1	9	6	4	6
	Appealing for assistance	3	3	0	0	3	1
	Giving assistance	6	2	0	0	2	1
	Repairing	3	1	1	1	0	0
	<b>Total</b>	<b>15</b>	<b>7</b>	<b>10</b>	<b>7</b>	<b>9</b>	<b>8</b>
Social- Interaction Strategies	Elaborating or rephrasing	1	0	1	3	2	3
	Facilitating the flow of conversation	1	2	6	7	9	3
	Responding	4	10	16	14	18	14
	Inviting an opinion	5	6	4	4	3	13
	<b>Total</b>	<b>11</b>	<b>18</b>	<b>27</b>	<b>28</b>	<b>32</b>	<b>33</b>

As Table 4 demonstrates, the most salient feature of changes in interaction strategy use was identified in the Social-Interaction strategies. In both 3 small group discussions (i.e., lessons 1, 2, and 6) and 3 jigsaw activities (i.e., lessons 3, 4, and 5), students' employment of Social-Interactional strategies was on the steady rise. In the small group discussions, students' almost all Social-Interactional strategies increased, including elaborating and rephrasing, facilitating the flow of conversation, responding, and inviting an opinion. In jigsaw activities, despite fluctuations, the total number of Social-Interactional strategy overall usage increased from 27, 28 to 32. This indicates that as cooperative learning instruction proceeded, students demonstrated a better ability in using Social-Interactional strategies to work towards the group goals. In other words, cooperative learning instruction was effective in promoting Social-Interactional strategy use according to the analysis of six video recordings.

This finding is further corroborated by the data from students' learner diaries. When cooperative learning instruction was first introduced, students repeatedly reported their upset

about not being able to cooperate with their teammates in English smoothly. For example, the students wrote *“The group members did not take enough initiative to work with each other and sometimes there were silent or awkward moments”*, and *“Some in my group were not very familiar with each, so our communication was a little awkward and everyone seemed a little reserved”*. However, as students got familiar with working with others, they seemed to be more motivated to interact and get tactful in cooperation, which can be seen in the learner diary entries like *“I am more willing and eager to get a response and exchange more ideas with my partners”*, *“we asked and answered more questions than before so that we could efficiently finish the task”*, and *“the group members were very motivated and had better teamwork skills”*. The students under cooperative learning instruction are becoming more cooperative and interactive socially to achieve shared outcomes. This echoes Cohen’s (1994) view that when the learners in a group try to solve a problem, their frequency of task-related interactions would determine their productivity. The role of cooperative learning instruction in promoting Social-Interactional strategy use was also supported by Alghamdi (2014) who reported that the students with exposure to cooperative learning instruction demonstrated more communicative, social, and interactive behaviors with each other than those in the control groups. They were found to respond more to others’ requests, make basic statements, interrupt politely, and gain more cooperative skills through time. According to Vrhovec (2015), the constant application of socializing activities through cooperative work can lead to more frequent communication and thus enhance communication skills. Kagan and Kagan’s (1994) statement further strengthens this, *“Cooperative learning was actually a practice that can put the communicative approach into action”* (cited from Singay, 2020, p. 306).

On the other hand, across the six lessons, whether for jigsaw activities or small group discussions, the use of Modified-Interaction Strategies seemed to be unstable without indefinable changing patterns. As for the three small group discussions (i.e., lessons 1, 2, and 6), the students’ observed use of most Modified-Interaction Strategies declined slightly except for *“checking for comprehension and clarification”*. On the contrary, for the three jigsaw activities (i.e., lessons 3, 4, and 5), two Modified-Interaction Strategies (i.e., checking for comprehension and clarification, and repairing) decreased in the frequency while the other two (i.e., appealing for assistance, and giving assistance) were found to be increasing. In other words, it was very difficult to conclude whether cooperative learning instruction led to increased Modified-Interaction strategy use and other variables might have influenced it.

A closer scrutiny of the respondents’ learner diaries shed light on this. For the first small group discussion activity, students reported on the demanding topic of *“how to survive in the*

event of an earthquake”, which can be seen in one learner diary, “*This topic was easy but we really didn’t know many words about specific objects and movement. So, we had to negotiate words quite often*”. However, the scenario was different for the fourth lesson where students were required to guess the heroes described by others and come up with the typical qualities of those heroes. One student (SS3) explained, “*For describing people’s life experiences and qualities, I think we had adequate words in our mind and we generally had no problem in understanding each other*”. In the current study, the topic of the task seemed to emerge as an influential factor that leads to different frequencies of Modified-Interaction strategy use. Previous research has also shown that the modified interaction is influenced by many factors, such as students’ diverse language proficiencies (Kim, 2015), task type (Pang & Wu, 2000), and other sociolinguistic factors (Basturkmen & Shackleford, 2015).

## **5.0 CONCLUSION**

The present study examines four Chinese college students’ interaction strategy use in cooperative learning activities and the efficacy of cooperative learning instruction to promote their interaction strategies. Through the analyses of video recording transcriptions and learner diaries, it has been found that students’ Modified-Interaction strategies were employed much less frequently in comparison to Social-Interaction strategies, and the employment of Modified-Interaction strategies is largely influenced by other factors such as the task topic. Given the contributing role of negotiated interaction for language proficiency development, the training in Modified-Interaction strategies was of great necessity for students to focus on form and take more opportunities for language practice. The second major finding from the present study is that cooperative learning instruction was found to be conducive to enhancing the students’ Social-Interaction strategy use, as it inherently necessitates socializing and cooperation for the accomplishment of group goals and enables interactants to communicate better. This positive result is also related to the students’ age characteristics, previous learning experiences, and social-cultural factors like Confucius collectivist values, which makes cooperative learning method congruent with them.

The findings of the study are expected to provide useful insights into the interaction strategy used in cooperative learning or group activities and shed some light on what has been happening during peer interaction in classroom settings. The ongoing video recordings and documentation of learner diaries throughout the semester are guided by Ellis’s (2005) call for more social and process-oriented research in the SLA field. Pedagogically, the present study can also help inform the lecturers of the impact of cooperative learning activities on Chinese

college students' use of interaction strategies, thus raising their awareness of designing and implementing such interactive activities in their classrooms and encouraging students to engage in meaningful and formal interaction. The findings also imply that there was a scarcity of Modified-Interaction strategies used by the four Chinese college students in cooperative learning activities that could help students overcome linguistic problems and contribute to their linguistic development. This is manifested by the rare instances of language-related repairs observed in their oral interaction. The frequencies of Modified-Interaction strategies used could be highly relevant to the extent of students' face-saving and specific topics of the tasks. Such initial results suggest the importance of raising teachers' awareness that students should be trained and encouraged to receive corrective feedback and produce modified output and that different topics hold different learning opportunities in peer interaction.

However, concerning scope and context, the present study only examined one cooperative learning group's (i.e., four respondents') interaction strategy use throughout the semester, such a small scale can be extended to include a larger sample in future research. Given that there are different patterns of interaction among group members (Storch, 2002) and different group dynamics can entail different patterns of interaction (Guo et al., 2020), more cooperative learning teams with varying relations of power can be involved. Another limitation is that the current study did not include non-verbal interaction in its scope such as head movement or use of gaze, which is also crucial for human interaction. Therefore, future research could be extended to examine non-verbal interactions in cooperative learning activities to shed light on whether and/or how those activities afford learning opportunities for effective interaction and academic as well as non-academic success.

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