Chapter 2
Exploring Collaborative Learning: Theoretical and Conceptual Perspectives

This chapter reviews the literature concerning the key aspects of CL. It opens with a review of relevant learning theories and the conceptual framework on which this study is based so that the foundations of CL can be understood. More importantly, this chapter differentiates some of the confusing concepts such as collaboration, cooperation, and group work and discusses how they have been researched in their own realm. A discussion of CL including its definition, rationale, characteristics, and structures serves as the closing part of this chapter.

2.1 Foundations of Collaborative Learning: Theoretical Supports

This section presents the supporting theories of CL from Vygotsky’s social constructivist theory of mind, second language acquisition (henceforth SLA), and learning motivation. These theories explain the theoretical and conceptual foundations of CL, which have steered this study given that it focuses not only on individual learners’ cognitive development, but on the overall development of learners as well. The order in which the theories are discussed is determined according to their relevance and importance to this study. Details of how these theories are related and how they are bound up with CL are explained in turn. In addition, several of the most important concepts are also explained and discussed in-depth.

2.1.1 Vygotskian Perspective

The concept of CL is largely rooted in Vygotsky’s sociocultural theory (SCT) which views learning as inherently a social process activated through the Zone of Proximal Development (ZPD) (Dillenbourg 1999). Vygotsky’s sociocultural views
have contributed significantly to social constructivist epistemology and highlight how learning is mediated in accordance with the context and experience with peers. This view illuminates the causal relationship between social interaction and an individual’s cognitive development. Learning, from the sociocultural perspective, is essentially a social term rather than individual in nature, where interaction constitutes the learning process (Lantolf and Pavlenko 1995; Lantolf and Thorne 2006). Social interaction is viewed as a prerequisite for the growth and development of cognition (Donato and McCormick 1994), and the physical and symbolic tools that mediate human interaction cannot be separated from the social milieu in which it is carried out (Wertsch 1993). In other words, mental functions are “intertwined with socioculturally determined factors” (Lantolf and Appel 1994, p. 5).

Vygotsky (1978) then based his paradigm on CL, claiming that working with a more capable person is pertinent to personal development. Vygotsky focused on the individual powerfully rooted in a CL context and famously made the following observations: learning is first mediated on a social level between a child and other people in his or her environment, and then is internalized by the child on an individual level. Secondly, learning on the social level often involves mentoring provided by more knowledgeable persons, either by adults or peers, who engage in activity with less experienced persons in a process of guidance or collaboration. In order for learning to process from the social to the individual level, language serves as a psychological tool to regulate objects, others, and oneself in organizing functions that are critical to mental activity.

From this perspective, the development of an individual cannot be viewed only as the study of an individual. The external social world in which the individual life has developed should also be considered. Thus, learning, with regard to this notion, is “embedded within social events and occurring as a child interacts within people, objects and events in the environment” (Vygotsky 1986, p. 287). More specifically, mental functions such as thinking, reasoning, and problem solving, can be performed by individuals as well as in collaboration with peers (Wertsch and Rogoff 1984).

CL in the Vygotskian tradition aims at social interaction either among students or between students and a teacher, and essentially assists students in advancing through the Zone of Proximal Development (ZPD), which he defined as: “the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers” (Vygotsky 1978, p. 86).

This definition indicates that an individual has two levels of development. The actual development refers to already-attained mental functions. At the actual level, the individual works independently without help. In contrast, the potential level of development refers to the functions that the individual is not able to perform independently. When the individual works collaboratively with more capable peers, the potential level of development will be increased. In other words, with the help of an expert, the individual can do more things, and this is referred to as potential development. Therefore, the concept of ZPD highlights the interdependence
between individuals and the social process in co-constructing knowledge in social settings (Warschauer 1997). One’s ability to perform cognitive tasks independently is premised on the prior social process, as this is regarded as the basic tenet of socioculturalism in which learning is situated within a given context and is influenced by the social and cultural activities one has experienced (Oxford 1997).

Based on these discussions, CL by nature creates opportunities to develop students’ cognition by actively communicating with more proficient peers and thereby expanding conceptual potential. Thus, within ZPD, more capable students can provide peers with new ideas and thereby establish a mutually beneficial social process of learning. Peer scaffolding also serves as a mediating tool to promote learners’ ZPD and it has a valuable role to play in language learning situations.

2.1.2 SLA Perspective

In SLA, perhaps the best-known perspectives for looking at CL stemmed from Krashen’s (1985) Input Hypothesis and Swain’s (1985, 1995) Output Hypothesis, both of which provided rationales for why L2 learners achieved better linguistic competence. The input hypothesis posited that SLA is driven by comprehensible input (Krashen and Terrell 1983; Krashen 1985). In other words, the development of second language depends on the amount of comprehensible input that one receives. This implies that people acquire language when they understand what they have heard or read. In contrast, if the input is above the current level of L2 proficiency, and is thus not comprehensible, the input would not contribute to L2 learning. The output hypothesis, however, claimed that while comprehensible input is necessary for L2 learning, learners also need opportunities to speak and produce output in order to restructure their interlanguage grammar (Swain 2000). When students are asked to clarify their output, they reprocess and modify their interlanguage utterance, which leads to the development of the L2 (Pica 1994).

During CL, the exchange of ideas makes the negotiation of meanings possible. Through this process, students have the opportunities to both receive input and produce output. Researchers have investigated conversational interactions amongst learners to facilitate the ability to take in comprehensible input (Pica 1994; Long 1996). CL makes the input possible as the linguistic level of members in CL groups may be more or less at the same level. In a similar vein, Ghaith and Yaghi (1998) also found that CL enriches the language classroom with comprehensible input as well as promoting frequent and communicative classroom talk in a supportive environment.

Long’s interaction hypothesis (1981, 1983, 1985, 1996) built on the importance of comprehensible input to L2 learning, and highlighted the role of social interaction in promoting the amount of comprehensible input that students receive (Krashen 1981). This type of interaction includes learners seeking confirmation and clarification when they do not understand the input. Pica (1994) claimed that the CL setting provides students with more opportunities to repair comprehension.
breakdowns. It is the interaction between learners that drives L2 learning (Storch 2002, 2007).

The idea of learner autonomy in modern educational pedagogy also draws on the importance of CL. The concept of learner autonomy requires learners to be independent and to become lifelong learners. Thus, CL has the potential to move students away from their dependence on their teachers and extend their learning on their own (Sharan 1980; Johnson and Johnson 1989; Slavin 1995).

2.1.3 Motivational Perspective

Research in academic settings has indicated that many difficulties faced by L2 learners in various learning context and situations are related to non-cognitive aspects (Gupta 2004). Learning does not only involve cognitive skills but also includes aspects of how they feel about learning (Cantwell and Andrews 2002; Jiang 2009). In the field of L2 or foreign language learning, motivation has been considered as an important factor that determines L2 achievement and attainment (Gardner 1985; Scarcella and Oxford 1992; Dörnyei 1994, 1997, 2001). It serves as a driving force to generate learning at the start, and later as a sustaining impetus while in the long tedious process of learning a target language (Cheng and Dörnyei 2007).

Slavin (1996) criticizes the competitive grading structure of the traditional classroom for creating opportunities to demonstrate superiority over one’s peers, which can result in a deleterious effect on academic effort. Therefore, motivational theories have built models of incentive structures which incorporate variables of both one’s own achievement and peers’ attainment into CL methods. The rationale for the CL structure is that if learners value the success of the group, they will be motivated to help one another to achieve as well (Table 2.1 illustrates in detail the characteristics of CL compared with traditional classes).

While linking motivation with CL, social psychologists have assumed that attitudes exert a direction influence on one’s behavior (Dörnyei 2001). This behavioral perspective presupposes that collaborative efforts are fuelled by extrinsic motivations so as to achieve the group rewards. Motivational theorists consider that the inherent structure of CL creates a situation in which members in the group are able to attain personal learning objectives if the co-constructive learning is successful. Dörnyei (2001) further comments that, in a CL directed class, learners work with their peers so that responsibility for the learning outcomes is shared. Students are equally rewarded, which is in contrast to a competitive structure in which only the best learner in the class is praised (see Sect. 2.3 for details). Jones and Issroff (2005) therefore conclude that CL combines many aspects of the advantages of individual and social processes of learning, contributing to group members’ participation and energizing students’ learning by generating a powerful motivational system which ultimatized results in a better repertoire of performance.

Another theory related to the motivational perspectives on CL is the Social Interdependence Theory. Unlike the idea from motivational theorists that students’
collaboration is due to the incentive structures, social interdependence theorists emphasize that the reasons for peer assistance is because of the care for other members in the group. This perspective postulates that the effects of CL are strongly mediated by the cohesiveness of the group, which, according to Clément et al. (1994), is a significant component of L2 motivation. Johnson et al. (1994) explain that group cohesiveness is an index of the level of group development, and it determines peer interaction, which in turn determines the learning outcomes. Slavin (1995) further indicates that cohesive groups are more productive than non-cohesive ones. In other words, positive interdependence resulted in promotive interaction as group members encouraged and facilitated one another’s efforts. The more time members of group spend together, the higher inter-member acceptance and collaboration become (Slavin 1995). Dörnyei (1997) therefore views CL as an effective way of creating a cohesive group for the following reasons. It recognizes the importance of teambuilding and contains regular self-evaluation, and the emerging cohesiveness in CL classrooms is also a function of the special dynamics of the CL process. Furthermore, students are able to control and organize their own learning.

These two aforementioned views explain the instructional effectiveness of CL from a perspective of motivation, drawing on concepts of intrinsic or extrinsic motivation. The motivationalists base their claims on extrinsic motivation, whereas the stance of social cohesion theorists rests on intrinsic motivation. However, both perspectives combined, as Chen (2008) and Dörnyei (1997) suggest, generate a

<table>
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<td>Types of interaction</td>
<td>Intense student–student interaction</td>
<td>Some talking among students, mainly teacher–student type</td>
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Adapted from Zhang (2010)
powerful motivational system considered to be particularly fostered by CL, which includes high incentives and high expectations of success as well as intrinsic and extrinsic motivation (Johnson and Johnson 1999a, b).

To sum up, the three perspectives discussed above all have well-established theoretical rationales and supporting evidence (see Sects. 2.4, 3.1 and 3.2 for detailed pedagogical and empirical evidence). Vygotskian social-constructivist ideas recognize that the individual’s cognitive development is bound up with social interaction in learning groups and cannot be separated from social life (Vygotsky 1978). This perspective stresses that CL is essential in assisting students’ development through the zone of proximal development. The SLA theories, however, acknowledge the importance of receiving comprehensible input and producing comprehensible output in language learning as the basic standpoint, and propose that CL allows for the exchange of meanings, and thus it is argued that CL is an effective mode of second-language acquisition (Swain and Lapkin 1998). In contrast to socioculturalism and SLA theories, the motivationalists viewed CL in terms of the impact of the incentive structures of CL, whereas social interdependence theory emphasizes the cohesiveness of the group, and both explore the extrinsic and intrinsic motivation inherent in CL. Although these theoretical perspectives stemmed from different paradigms, they can all contribute to explaining the effectiveness of CL. The next section discusses in detail what CL is, and its characteristics and rationales for use. Some of the most significant components and structures connected to CL are presented and elaborated as well.

2.2 Definitions and Typology of Collaborative Learning

2.2.1 Definitions

Swain (1997, 2000) describes CL as one of the most important and most effective means by which learning can take place, and a focus on the mutual exploration of a subject by means of social interaction with peers and between learners and teachers has experienced a long history. Dillenbourg (1999, p. 1) gives a global definition to CL as a “situation in which two or more people learn or attempt to learn something together.” In this definition, as italicized, “two or more people” can be interpreted as a pair, a small group with three to five learners, a class of 20–30 students, a community of a few hundred or thousand people, or a society of several thousand or millions of people. “Learn,” indicates the attendance to a course, a study of the teaching materials, a participation in the learning activities, or the accumulation of lifelong work practice. “Together” connotes the various types of social interaction, such as face-to-face interaction, interaction mediated by computer, whether or not it is a truly joint achievement, and if the work is arranged in a systematic way (Dillenbourg 1999).
While extending the definition to the classroom setting, Gokhale (1995, p. 22) terms CL as “an instructional method in which students at various performance levels work together in small groups toward a common goal.” His elaboration emphasizes a shared responsibility for one’s own learning as well as others’ among learners. Thus, the success of one student depends largely on other students, that is, one student helps others to be successful as well. From this perspective, CL describes a situation where particular forms of interaction among learners are expected to occur, which in turn triggers the learning mechanism.

Jacobs et al. (2002, p. 1) also give an explanation of CL as “principles and techniques for helping students work together more effectively.” This point stresses that CL involves more than putting students to work together in groups. Instead, conscious efforts are made to help students make their learning experience as successful as possible.

As these definitions indicate that CL is an umbrella term that describes a wide variety of behaviors. In the most general sense, it occurs when more than one person works on a single task. However, for the purpose of this research, it is necessary to draw some specific parameters around what the term refers to. The following definition developed by the present researcher delineates the kind of behavior that this study focuses on:

“A formal group of four students working together on specific collaborative learning tasks in the EFL classroom to mutually construct and maintain a shared conception of knowledge whereby collaborative learning is the principal instructional approach employed in the teaching and learning processes to maximize students’ learning.”

As shown, the number of students during CL is specified as four. This is predetermined by considering the number of students in the class where the research is conducted. The composition of the group is heterogeneous, indicating a mixed gender and levels of English included. The CL tasks are carefully designed to correspond to the intended learning objectives of each teaching unit (see Sect. 4.5 for details on how CL tasks are designed and implemented). The CL approach is employed as a systematic instructional method in which students worked together in small groups to accomplish shared learning goals (Sect. 4.5 illustrates how CL was integrated into classroom teaching). The focus of this definition is on peer collaboration as mutual engagement where members of the group are supportive of each other, and that equal opportunities are provided to opine opinions. Furthermore, the interaction pattern in this study is face-to-face, and thus peer collaboration is regarded in terms of synchronous activities. The notion of shared conception of knowledge is central to this definition, as social interaction in this context occurred in a jointly negotiated and shared conceptual space where knowledge is learned as a consequence. Despite these key illustrations, it should also be noted that in the CL class in this study, other teaching methods and note-taking processes may not disappear entirely, but occur alongside with CL which is based on students’ discussion and working with their learning themselves. Although this definition does
not mention the role of teachers, it does however indicate that the teachers who employ CL as a teaching innovation tend to perform less as expert transmitters of knowledge, and more as facilitators and designers of students’ intellectual experiences in a more emergent learning process.

2.2.2 Collaboration, Cooperation, and Group Work as Different Communicative Strands

The debate about collaboration versus cooperation is rather complex, since common usage tends to treat the two concepts as the same and these terms may be used interchangeably (Nunan 1992; Clark et al. 2007). However, researchers such as Roschelle and Teasley (1995), Dillenbourg et al. (1996), and Oxford (1997) have made some discussions between collaboration and cooperation as two different communicative strands in L2/EFL classrooms. Therefore, it is useful to specify the phenomenon that this study seeks to understand.

According to Oxford (1997), collaboration is distinguished from cooperation in that cooperative learning is considered more structured in its form, more prescriptive to teachers about the teaching technique, more directive to students concerning how to work together in groups, and more targeted. CL, in contrast, is related to social constructivist epistemology, with the goal of acculturating students into the immediate community of learning and the wider world of the target language and culture. Roschelle and Teasley (1995, p. 70) give a more detailed explanation, suggesting that cooperative work is “accomplished by the division of labor among participants, as an activity where each person is responsible for a portion of the problem-solving,” whereas CL involves the “mutual engagement of participants in a coordinated effort to solve the problem together.” Based on these discussions, it seems quite clear that cooperation and collaboration differ in the sense of epistemological issues and distribution of labor, where Oxford’s classification is more oriented to negotiation and fulfillment of learning potential, but ignores the structures of learning in the L2 classrooms, as learning is first goal-oriented and needs to be carefully planned by the teacher. Besides, defining collaboration in terms of the distribution of labor does not avoid ambiguity since some spontaneous division of labor may also occur in CL (Dillenbourg et al. 1996). Miyake (1986, p. 174) finds that “the person who has more to say about the current topic takes the task-doer’s role, while the other becomes an observer, monitoring the situation. The observer can contribute by criticizing and giving topic-divergent motions, which are not the primary roles of the task-doer.” Based on this assertion, cooperative learning and CL do not differ in terms of whether or not the task is distributed. Matthews et al. (1995) therefore call for building bridges between cooperation and collaboration. The present study, however, does not assume the dichotomous perspective which treats cooperative learning and CL as two strands, nor does it integrate them into one paradigm. It draws the notion of CL from the generic sense but also integrates the essential elements of cooperative structures into
formal English teaching. This is because, in innovative classrooms of this study, although CL is adopted, it should be implemented while taking into account the teaching/learning structures for organizing and conducting classroom instruction (see Sect. 2.6 for details). Meanwhile, while the social constructivist perspective addresses the importance of the negotiation of meanings, in this research context learning is first goal-oriented and so the teaching model is still teacher-directed. The CL tasks are assigned to provide a more student-centered learning atmosphere, whereas teachers are ready for help when necessary and monitor students’ behaviors and the whole learning process. Hence, the teaching model in this study involves both learning and collaboration, and the aims of CL also include both academic as well as collaborative learning objectives (see Fig. 4.2).

However, before ending this section it is also necessary to mention the notion of group work, which shares some similarities with but differs from the concept of CL to a certain extent. It is evident that the concept of group work is still in use in some research (Pica and Doughty 1985; Flowerdew 1998; Huang 2003, 2006; Melles 2004; Chen and Hird 2006; Jiang 2009); however, little has explained as to how group work is differentiated from CL. Therefore, the difference between the two concepts deserves clarification. Woolfolk (2004) highlights that group work is simply several students working together; however, it may not be cooperating. Furthermore, group work is merely the first step toward making students work collaboratively. Group work, however, can be still effective, but real CL requires much more than simply putting students in groups (Woolfolk 2004).

### 2.3 Characteristics of Collaborative Learning

This section presents the characteristics of CL as compared with traditional language teaching approaches so that its characteristics can be clearly demonstrated. Jacob et al. (1996) claim that group presents a precondition for CL, and is the word that should be emphasized, being the fundamental structure in which learners work and learn. Johnson and Johnson (1979) highlight the goal structure of CL, which helps to give an understanding of how it works differently from traditional learning. According to Johnson and Johnson (1979), the goal structure refers to the type of interdependence amongst students as they strive to achieve learning goals, and can be classified into three categories: collaborative, competitive, and individualistic. In a collaborative goal structure, an individual is able to achieve learning goals when their peers also achieve theirs. However, the type of relationship involved in a competitive goal structure is opposite to that in a collaborative structure. In other words, an individual student achieves while others do not. In the individualistic structure, no interrelation between the goal attainments of the different students is involved, indicating that one’s success is independent from that of others. Based on this classification, it is clear that CL belongs to the category of collaborative goal structure while the competitive and individualistic goal structures are more likely to
involve the traditional teacher-fronted learning (Zhang 2010). Table 2.1 compares the characteristics of CL with those of traditional Chinese language teaching in the following respects: the role of the language teacher and students, learning materials used, types of classroom activities, types of interaction, classroom layout, and teacher–student relationship as well as learning expectations.

The traditional language teaching in study refers to the teacher-centered method in which many of the ingredients of grammar-translation and audio-lingual methods are used in language teaching and learning. Such teaching concentrates on making students aware of certain aspects of language without providing sufficient practice. Most interaction in EFL classroom is still teacher–student/s and student-initiated interaction. Student–student interaction is minimal. Students are considered to be passive recipients of language knowledge rather acquiring communicative competence. CL, in contrast, shares some characteristics in common with communicative language teaching (CLT), which highlight both interaction and communication among students and between students and teachers (Zhang 2010). The role of the language teacher is more like a facilitator rather than a controller in the classroom. A positive learning atmosphere is established, which is more conducive to learning. Besides this, a respect for integrative development allows for personal growth, the enhancement of responsibility, and learner autonomy. The activities used in class are closely related to the learning objectives, involving more diversity compared to the traditional language class where the dominant classroom activities are solely to practice basic language knowledge, such as grammar and translation exercises (Sect. 4.5.2 describes the design of the CL tasks for this study). However, CL differs most from the traditional teaching approach in the promotion of interaction, which allows learners to work together rather than competing with each other individually. Harmer (1991) proposes that CL maximizes the opportunities for students to interact and collaborate with one another as they work toward a common learning goal. Through interaction, students become actively and constructively involved in the learning content, and take the ownership of their own learning as well as that of others.

It should be made clear that, to a large extent, although the characteristics of traditional language teaching and CL differ, overlaps may exist when used concurrently in an English class, which may be particularly the case in the Chinese EFL class, as teachers need to use traditional methods to direct and lead students in English learning due to students’ limited English proficiency. This also relates to the difficulty of learning and language learning objectives, as CL may not dominate a 50-min class if there is a need that teachers explain the difficult language points for students using traditional approach. Learning sometimes may go beyond students’ actual level to solve problems even in the presence of more capable peers. Besides, overlapping may also emerge if an English class involves both individual and collaborative learning objectives. In such circumstance, the role of both teacher and students may shift between collaborative and individualistic goal structure, and so do the types of activities used and interaction pattern. In other words, the characteristics of both traditional and CL approaches may be fluid in that they may be shifted in different stages of learning while students’ English proficiency, learning objectives, and degree of learning difficulty are considered. In this study,
CL is used to solve the educational problems posed in Chap. 1 and to rejuvenate learning and teaching in the Chinese EFL classroom; nonetheless, the traditional teaching approach will be used together with CL approach.

2.4 Rationale for Collaborative Learning

The study of CL has strong pedagogical and theoretical support (Storch 2007). Generally, CL is found to:

2.4.1 Provide More Language Practice Opportunities

This perspective is highly supported by the traditional method as a means to maximize students’ language practice opportunities, as students work together to fulfill a common goal by using the basic language skills (Long and Porter 1985; Harmer 1991). Researchers such as Long and Porter (1985) and DiNitto (2000) claim that one principal cause of students’ low achievement of many L2 learners is simply due to the inadequate time they have to practice the language. Long and Porter in the early 1980s have found from the observational evidence, indicting that in a 50-min English class, the average time allocated for each student is only 30 s (Long and Porter 1985). Xi et al. (2007), Zhang (2010) correspond to the early findings, claiming that the situation is more serious in large EFL classrooms in China when there is an urgent need for students to develop their oral skills. CL, therefore, helps to increase the total individual language practice time by arranging students into small groups where more time can be allocated and more turns of conversation can be realized.

2.4.2 Improve the Quality of Students Talk

Ohta (1995, 2000) assumes that collaborative talk provides more chances to produce language in a functional manner. Zhang explains that, particularly in a traditional EFL classroom, discourse is initiated by the teacher in an artificial setting, whereas CL can be employed to create a social setting that mimics real-life in the way that language is used. It helps students produce not only in terms of the quantity, but also the quality of speech by engaging themselves in requesting, clarifying, and negotiating conversation during CL. In addition, in a CL directed learning context, the adjustment of language occurs as students need to make themselves understood (Long and Porter 1985). This implies that students speak in different ways to ensure that their peers listen and are able to comprehend ideas from various sources, which encourages students to speak more accurately and use appropriate language.
2.4.3 Create a Positive Learning Climate

According to Barfield (2003), language learning is an emotional and psychological experience to some extent. Lack of self-confidence will affect students’ learning (Jiang 2009). DiNitto (2000, p. 182) further argues that “a public arena of language is an unsupportive and stressful environment.” It seems that the traditional competitive structure of the classroom makes students fearful of making mistakes or losing face in public, and they are “vulnerable to what they may perceive as criticism and rejection” (Brown 1994, p. 174). This is, however, not the case in CL, as it offers learners a much closer and more comfortable feeling without being watched by the whole class or the teacher (Jiang 2009). It frees the learners from “requirement for accuracy at all costs” and facilitates students’ “entry into the richer and more accommodating set of relationships in small group interaction, in which a more comfortable and safe environment can be therefore created” (Long and Porter 1985, p. 212). Delucchi (2006) reports that students engaged in CL activities are able to exchange diverse opinions due to the low-anxiety situation and this leads to more effective learning. DiNitto (2000) further claims that CL allows for the negotiation of meanings and therefore the learners’ understanding is reshaped. All of these improvements will occur in a positive affective situation of learning.

2.4.4 Promote Social Interaction

Brown (1994, p. 159) asserts that “the best way to learn to interact is through interaction itself.” CL provides learners with a stage to interact with their peers in a psychologically comfortable and secure situation. In addition, students are able to develop their cognitive learning and interactive skills. In the process of completing the CL tasks, learners are exposed to new ideas and information from different perspectives and approaches through discussing, questioning, and organizing processes, which in turn facilitate students’ comprehension and internalization of critical concepts. Their linguistic competence and communicative skills will be improved as well (Jiang 2009).

2.4.5 Allow for Critical Thinking

Participating in CL makes students more critical in their thinking (Gokhale 1995). Maesin et al. (2009) argue that the likelihood of critical thinking is dictated by the learning environment and the teaching approach used. In Gokhale’s (1995) investigation of the effectiveness of individual versus collaborative learning in enhancing drill-practice skills and critical-thinking skills, the results reveal that students engaging in CL performed significantly better compared with those who
studied individually. This is because CL encourages critical thinking through the problem-solving process (Johnston et al. 2000). In other words, CL fosters the development of critical thinking skills through discussion, clarification and the evaluations of peers’ opinions. In a similar vein, Hussain (2004) researched web-based CL and indicated that students are able to expand and stretch their creativity to think of innovative ideas. Gokhale (1995) therefore concludes that, if the learning purpose is to enhance learners’ critical thinking and problem-solving skills, CL is more beneficial than individual learning in this respect.

However, there are still other additional benefits supportive to CL, such as fostering learners’ responsibility and independence. Ellis (2003) suggests that, by working with a wide range of peers, social and cognitive skills can be acquired and these skills will in turn assist students in performing individual tasks. Studies have also indicated that there are beneficial effects on students’ intrinsic motivation (Long and Porter 1985; Dörrnyei 1997; Johnson and Johnson 1999a, b; Jones and Issroff 2005). CL also enhances students’ performance (Cantwell and Andrews 2002; Gupta 2004) and promotes lifelong learning skills (Boud et al. 1999). In addition to these recognized merits, CL is considered to be able to heighten students’ self-esteem as well as increase learners’ self-confidence (Slavin 1995, 1996). According to Jiang (2009), CL helps students build greater confidence and self-esteem than will occur in a competitive learning classroom and this will lead to increased efforts in language learning and greater willingness to take risks in learning.

2.5 Essential Components of Collaborative Learning

Kagan (1994) highlights four main elements of CL: simultaneous interaction, positive interdependence, individual accountability and equal participation. In contrast to the traditional classroom where one person talks at a time, usually the teacher who does most of the talking, CL provides active participation for all the students at the same time. The structure of the traditional classroom limits learners in practicing the language skills, and observational research indicates that up to 60–70 % of the time is devoted to teacher-centered interaction. In comparison, 25–50 % of the students can be talking at any given time in CL, depending on whether pair work or group work is being used (McGroarty 1989). In addition, students are given specific instructions in CL activities, such as paraphrasing, summarizing, clarifying, or indicating agreement or disagreement, all of which are beneficial to the language acquisition process. Positive interdependence occurs when group members need to depend on each other to achieve the task. Students work together to help each other and ensure that all have learned the materials. In completing the tasks, each member of the group feels in charge of his own and peers’ learning and makes an active contribution to the group, and hence every individual learner contributes to learning attainment. Finally, as participation is part of the learning process and an important element for students’ success, students in
CL therefore learn by interacting with the materials and peers and each student has an equal opportunity to participate in the process and in the final product of an activity (Kagan 1994).

2.6 Collaborative Learning Structures

The structures used in CL vary, as well as variation among them. This section reviews the structures used during teaching intervention. As early as the 1980s, Kagan (1989) pointed out that the structural approach to studying CL is largely based on creation, analysis, and systematic application of structures. The rationale for the use of structures in CL is that they allow teachers and students to learn and adopt various social interaction sequences. CL structures, as the name suggests, refer to the content-free ways of organizing social interaction in the classroom. They involve a series of steps, which prescribe behaviors at each step. According to Kagan (1989), Slavin (1990) and Olsen and Kagan (1992), structures may be used repeatedly with almost any subject matter, various in grade levels and at various points in a lesson plan. The use of structures in CL promotes the academic progress of students with many subject matters, and indicates a strong tie between what students do and learn. Each of the structures has different functions and domains of usefulness and help both teachers and students to reach the learning objectives in a more efficient way. Hence, teachers who have some understanding and are able to use a range of structures can design various types of CL tasks and efficiently produce specific academic, cognitive, and social outcomes of learning. Further, Kagan and Kagan (1994) emphasize that the use of CL structures builds in the four main elements of CL mentioned previously of simultaneous interaction, positive interdependence, individual accountability, and equal participation. Besides, one key component of the structural approach is class building, requiring teachers and students to co-construct the social learning atmosphere in the classroom so as to be positive and supportive as possible, with the aims of getting acquainted and establishing mutual support. The use of structures also calls for a need to change the management style of teachers in a CL classroom, where students are given permission to talk and work together (Kagan and Kagan 1994). Therefore, the use of CL structures in the present study intends to create effective lessons that engage and improve the learning of the students. And the traditional teaching class is thus shifted to more student-centered learning. Table 2.2 shows a sample of CL structures used in the present study, including the adapted and self-designed ones.
### Table 2.2 Review of the CL structures used during the teaching intervention

<table>
<thead>
<tr>
<th>Structures adapted</th>
<th>Brief description</th>
<th>Academic and social functions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Concept development</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Think-pair-share</td>
<td>Students think to themselves on a topic provided, first on their own to reach consensus and share with other peers and then the entire class</td>
<td>Express opinions, inductive and deductive reasoning; enhancing participation and involvement</td>
</tr>
<tr>
<td>Three-step-interview</td>
<td>Students interview each other in the group, first one-way, and then the other. Each shares the information they learned in the interview</td>
<td>Sharing and getting acquainted with peers, enhancing participation, developing listening, speaking, and communicative skills</td>
</tr>
<tr>
<td><strong>Multifunctional</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Co-op Co-op</td>
<td>Students work in groups to produce a particular CL product to share with the whole class, each makes contribution to the completion of the task</td>
<td>Learning and sharing complex materials (multiple sources), developing analysis, synthesis, conflicts resolution and presentation skills</td>
</tr>
<tr>
<td><strong>Communication</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Match mine</td>
<td>Students attempt to match the arrangements from two columns with one student reads the items and other others respond, using oral communication only</td>
<td>Vocabulary development, role-taking ability, communication skills</td>
</tr>
<tr>
<td><strong>Mastery of knowledge</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Role-taking</td>
<td>Students each performs a role in a situational context and makes dialog with peers</td>
<td>Developing listening, speaking, communication skills and memorizing facts</td>
</tr>
<tr>
<td>Finding differences and making comparisons</td>
<td>Students compare and contrast the similarities and differences based on the understanding of and familiarity with the topic provided</td>
<td>Understanding and differentiating ideas and concepts; developing analysis and synthesis skills; enhancing skills in making suggestions</td>
</tr>
</tbody>
</table>

### References


References


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Investigating Chinese HE EFL Classrooms
Using Collaborative Learning to Enhance Learning
Lin, L.
2015, XXVII, 310 p. 47 illus., 17 illus. in color., Hardcover
ISBN: 978-3-662-44502-0