Reading Comprehension: A Study on the Collaborative Learning

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Abstract

Despite a widespread assumption that collaborative learning (CL) is pedagogically effective, there has been little research on its place in non-Western educational institutions, specifically in relation to EFL. A mixed-method study was conducted in Iranian EFL reading comprehension classes in order to establish whether (a) CL leads to greater comprehension of a text than private reading, and, if so, (b) the processes by which it enhances comprehension. Participants were pre-tested for reading comprehension and streamed into two classes. The intervention consisted of four texts of equal length. Each class read two texts collaboratively and two privately, after which they answered in writing ten comprehension questions. Collaborative reading resulted in consistently and significantly higher scores than private reading for all four texts. Group interactions during collaborative reading were tape recorded and transcribed, and 10 students selected at random from the two classes were interviewed in depth. Using these methods, certain processes of collaborative reading were identified, including brainstorming, paraphrasing, and summarizing.

Key words: Collaborative learning, EFL reading

1. Introduction

It is commonly assumed that collaborative learning is beneficial for students. There is a great deal of research evidence to support this assumption in different parts of the world, particularly in the West. However, little research has been carried out in other parts of the world, i.e. in Iran. This paper investigates the extent to which collaborative learning in the Iranian EFL setting has an influence on the reading comprehension ability of university students majoring in English. The study addressed two major research questions:

1. Does collaborative reading lead to greater comprehension of a text than private reading?
2. If so, what aspects of collaborative learning contribute to the higher level of comprehension?

2. Collaborative Learning

Collaborative Learning is an educational approach to teaching and learning in which small groups of learners work together to solve a problem, complete a task or create a product. As Bruffee holds:

The primary aim of Collaborative Learning … is to help students test the quality and value of what they know by trying to make sense of it to other people like themselves - their peers (Bruffee 1981: 745).

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Collaborative Learning is inherently a social activity in which students and teacher, while sharing knowledge, responsibility, and authority, talk among themselves. It is through the talk that learning takes place.

In the past two decades, Collaborative Learning methods and techniques (e.g. Collaborative Strategic Reading) have been widely used in ESL and EFL settings. Many studies indicate that Collaborative Learning is effective in promoting the quality of ES/FL learning (August 1987, Wong Fillmore et al. 1985, Bejarano 1987, Freeman 1988, Ney 1991, Murray 1992, Nelson, Schmid 1989, Flowerdew 1998, Roskams 1999, Lan, Sung & Chang 2006, Chen & Hird 2006). Nunan (1992) contends that collaborative learning provides a viable, and in many contexts, a more effective alternative to the competitive ethic which dominates much educational thinking today. Research findings on collaborative — as opposed to competitive — learning have generally been positive. According to Good and Brophy (1987, cited in Nunan 1992) out of 41 studies reported in the literature, 26 found significantly greater learning in classes using cooperative methods, 14 were not significant, and only one found significantly greater learning in a control group. Flowerdew (1998) argues in favour of using group work for teaching learners coming from a Chinese background, in which Confucianism still partly reigns, pointing out that in certain classroom situations, group work may be methodologically suitable for these learners as long as it respects the basic Confucian values, i.e. *cooperation*, *face* and *self-effacement*. These values are supported by three main principles of Confucianism, namely humanism, faithfulness and propriety. After discussing the Confucian values in detail, Flowerdew (1998) suggests that

> Group work is a useful methodological tool for Chinese learners on two accounts: either because it exploits the Confucian value of co-operation, which would seem to foster a style conductive to learning; or because it can be used to counterbalance the Confucian concepts of 'face' and self-effacement, which impair the learning process.

This article may, however, also be of importance for teaching students from other cultural backgrounds, in that the underlying pedagogical principle of a considerable number of ELT teaching materials aims at supporting collaborative learning strategies and avoiding stressful learning environments for students.

Lan et al. (2006) describes how they overcame the weaknesses of non-technologically supported Collaborative Reading by designing a dynamic peer-assisted learning program in a wireless reading system. The weaknesses included *postponed support,* which happened when the participants in the groups with busy group leaders may have needed to wait for a while to get their leaders' help, *invisible helper,* which occurred even though some group leaders were available for providing support, *absent feedback,* which happened when students of medium ability did an unsure reading activity due to the fact that their leaders were always busy in helping their low-ability group-mates, and finally *ineffective collaborative process*, which occurred when some of the group leaders teased or excluded their group mates because of their slow learning rate. The evaluation of the mobile devices-supported EFL reading activities showed that Mobile Devices-Supported Dynamic Peer-Assisted Learning (MDPAL) activities overcome the weaknesses detected in the Collaborative EFL reading activities without technology. This can be achieved because students can take a TABLET PC anywhere in the classroom, and receive help not only from their group mates or group leaders, but also from online helpers. In addition, two or three students dynamically form a learning group via making an online call (via Skype) when doing an online peer-assessment activity or peer-assisted learning. All the students had the same role, individual activities, and an opportunity to be others' online helpers.

The application of collaborative learning to different levels of education yielded positive results in Taiwan. Being researched on for at least ten years in Taiwan, collaborative learning was

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proved to be very effective in increasing language proficiency, enhancing social maturity, and improving affective growth (Liang 2002). Liang (2002) investigated the effects of collaborative learning on the language learning of EFL junior high school learners, their motivation toward learning English as a foreign language, and the high-and low-achievers' academic achievements in a heterogeneous language proficiency group. The results of this quasi-experimental study showed that the experimental group class, in which collaborative learning methods had been used, performed much better than the control group class, in which the teacher had used traditional TEFL methods, both in terms of oral their communicative competence and as far as the motivational questionnaire was concerned. The results of the students' scores on the school monthly examination also showed that the academic achievements of the experimental group were comparable to those of the control group. In another study on the effect of collaborative learning on language development, Chang (1995) conducted an experimental study through which he compared traditional whole-class method and collaborative learning in an English reading class in college. The subjects were given a general test and a summarisation test for each method. The results showed that the average scores of students in collaborative learning were about two points higher than those of the students in traditional teacher-centred class.

3.   Characteristics of Collaborative Learning

According to Tinzmann et al. (1990), a typical collaborative classroom is characterized by four features. The first two features concern relationships between teachers and students; the third one concerns teachers' approaches to instruction; and the fourth one concerns the composition of the classroom. In traditional classrooms, the teacher acts as an information provider, with knowledge flowing from teacher to student exclusively. In collaborative classrooms, however, the teacher, while having essential knowledge about content, skills, and instruction, values and builds upon students' knowledge and experiences. Consequently, in most traditional classrooms, the teacher is responsible for setting goals, designing learning tasks, and assessing what the students have learned. By contrast, in a collaborative classroom, students get the chance to set specific goals, provide options for activities and assignments, and assess what their peers have learnt.

The role of the teacher in collaborative learning is to mediate learning. Through successful mediation, the teacher can help students to connect new information to their experiences and to learning in other areas. Also, the teacher can help students figure out what they should do when they are stumped. Everyone is supposed to learn from everyone else. Thus, no student is deprived of the opportunity to make a contribution or to appreciate the contribution of others. Students are not segregated according to their abilities, achievements and interests. Segregation can weaken collaboration seriously so that all students may not have opportunities to learn from each other. Unsuccessful students may learn from brighter students; bright students may learn from their average peers and sometimes, weaker students can reveal some unexpected insights in a collaborative atmosphere. According to Vygotsky (1978), group diversity in terms of knowledge and experience makes a positive contribution to the learning process.

Smith and MacGregor (1992) hold that, although collaborative learning takes on various forms and are practised by teachers of different disciplines; the field is tied together by some significant assumptions about learners and the learning process:

1. Learning is an active, constructive process; i.e. to learn new information, ideas or skills, students must work actively in purposeful ways. They need to integrate the new material with their background knowledge - or use it to recognize what they thought they knew.

2. Learning depends on rich contexts i.e. learning is influenced by the contexts, tasks, and activities which it is associated with. Students engaged in collaborative learning do not

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begin with facts and ideas and then move to applications. Instead, they begin with problems, for which they must figure out solutions.

3. Learners are diverse: students bring to the classroom different perspectives, background knowledge, learning styles, experiences and aspirations. These various perspectives which emerge in collaborative activities are clarifying but not just for teachers. They are also illuminating for the students themselves.

4. Leaning is inherently a social activity. As Golub points out,

> Collaborative learning has as its main feature a structure that allows for student talk: students are supposed to talk with each other…and it is in this talking that much of the learning occurs (Golub (1988) cited in Smith and MacGregor 1992: 2).

In collaborative learning activities, there are frequent mutual problem-exploring, meaning-making, and feedback-receiving strategies which most likely lead to better understanding on the part of students and to the creation of new understanding for teachers as well.

4. The Study

A quasi-experimental design was used to answer the first research question. The major part of the research lasted about seven weeks. In the first week, the participants were pre-tested and divided into two homogeneous classes based on their reading comprehension ability. Each class comprised 18 students, all of whom were second year students studying at the Islamic Azad University of Malayer, Iran

4.1. Central Question: Does Collaborative Reading Lead to Greater Comprehension?

. The pre-test, selected from an actual TOEFL test (2004), included four reading comprehension passages, each of which had ten comprehension questions. In the second week, the subjects were taught four reading comprehension strategies adapted from Collaborative Strategic Reading (Klingner & Vaughn 1998). The strategies included Preview, Click and Clunk, Get the gist, and Wrap-up. The students were expected to make use of these strategies while they were reading the texts collaboratively. The intervention, starting from the third week, consisted of four texts of equal length, comprising two texts rated in a pilot study as conceptually difficult/linguistically easy, and two texts rated as conceptually easy/linguistically difficult. The subjects in each class were involved in reading the two types of texts for four sessions. Each class read two of the texts collaboratively in small groups and the other two privately. Since the focus of the research was on the nature and quality of the students' interaction, the teacher's intervention was carefully limited to introducing the text to the students both orally and in written form. The purpose of this introduction was to provide the students with the relevant background information about the reading passage. The teacher's intervention was scripted and followed precisely by both collaborative and private readers. It should be noted that the students in both classes were allowed to use one type of dictionary, i.e. *The Oxford Advanced Learner's Dictionary of Current English*. There were four to five students in each group. On the basis of the pre-test scores, one of them was allocated the role of the leader. The leader's main responsibility was to make sure that everybody was actively involved in group interactions. Another student took the role of the recorder. During the whole class wrap-up, this student reported the main idea(s) of the paragraphs the group had learned to the class The other members of the group were just collaborators.

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The students in the collaborative reading class read the text in stages. After the teacher's introductory explanation, they were asked to listen to the tape recorded by a native speaker of English, to become familiar with the correct pronunciation of the words. Then they read the text paragraph by paragraph while applying the first three collaborative reading strategies mentioned above. At the end of each paragraph, they were supposed to achieve consensus on what the main idea(s) were. When they finished the whole text, they were engaged in whole-class discussion. In this stage, all groups shared their understanding of the text with the rest of the class. The teacher's role was to chair the discussion with minimal intervention. After reading the text, the subjects were asked to answer in writing ten comprehension questions. The comprehension questions comprised four items of lexical knowledge, one item of grammatical knowledge, and five items related to textual concepts. Apart from the method of reading (private reading or reading in groups), the same procedures were followed in each type of class. Comprehension test scores were compared across the reading mode, with an independent-samples t-test being used. For all the four texts, collaborative reading resulted in consistently higher scores than private reading. The statistical evidence provided below reveals that the difference was significant in three of the texts.

Independent samples t-test for Test 1 (Group Statistics)					
	VAR00002	N	Mean	Std. Deviation	Std. Error Mean
VAR00001	1.00	18	6.0139	1.77497	.41837
	2.00	18	3.8750	1.81345	.42743

Tab. 1: Independent samples t-test for Test 1

An independent-samples t-test was carried out to compare the reading comprehension scores on text 1 for the two classes involved in the study. There was a statistically significant difference in scores for class 1 (*M = 6.01, SD =1.77)* and class 2 (M = *3.87, SD = 1.81), (sig. . .001).*

Independent samples t-test for Test 2 (Group Statistics)					
	VAR00002	N	Mean	Std. Deviation	Std. Error Mean
VAR00001	1.00	18	5.3750	2.28043	.53750
	2.00	18	7.2500	1.82507	.43017

Tab. 2: Independent samples t-test for Test 2

An independent-samples t-test was carried out to compare the reading comprehension scores on text 2 for the two classes involved in the study. There was a statistically significant difference in scores for class 1 (*M = 5.37, SD =2.28)* and class 2 (M = *7.25, SD = 1.82), (sig . . .01)*

Independent samples t-test for Test 3 (Group Statistics)					
	VAR00002	N	Mean	Std. Deviation	Std. Error Mean
VAR00001	1.00	18	5.8472	2.39506	.56452
	2.00	18	6.4028	2.17293	.51216

Tab. 3: Independent samples t-test for Test 3

An independent-samples t-test was carried out to compare the reading comprehension scores on text 3 for the two classes involved in the study. There was a difference between the

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means of the two classes as follows, but this difference was not statistically significant. Class 1 (*M = 5.84, SD =2.39)* and class 2 (M = *6.40, SD = 2.17), (sig. . .47).*

Independent samples t-test for Test 4 (Group Statistics)					
	VAR00002	N	Mean	Std. Deviation	Std. Error Mean
VAR00001	1.00	18	7.1250	1.58404	.37336
	2.00	18	4.1111	2.42569	.57174

Tab. 4: Independent samples t-test for Test 4

An independent-samples t-test was carried out to compare the reading comprehension scores on text 4 for the two classes involved in the study. There was a statistically significant difference in scores for class 1 (*M = 7.12, SD =1.58)* and class 2 (*M = 4.11, SD = 2.42), (sig. . .000).*

4.2. Processes Leading to Greater Comprehension

Qualitative methods were employed to answer the question which processes lead to greater comprehension. Group interactions during collaborative reading were tape-recorded (two groups in each session) and transcribed so as to identify the processes of collaborative reading. In the seventh week of the study, ten participants, selected at random from the two classes, were interviewed concerning their feelings and attitudes towards the two modes of reading.

4.2.1. Class Discussions

The transcripts of students' collaborative interactions were analysed carefully, and it was revealed that students, in their attempt to comprehend the texts, were engaged in various types of processes. Students' utterances were labelled preliminarily. These labels were then discussed, modified and eventually consolidated into five major categories: *brainstorming*, *summarising*, *paraphrasing*, *using meta-linguistic utterances*, and *using interaction management utterances*. In addition, other minor processes were identified, such as *making positive/negative claim to understand*, *eliciting confirmation*, and *confirming*. It should be noted that the utterances made in Farsi were translated into English and are italicised in the following data.

4.2.1.1. Brainstorming

Brainstorming was manifested in a number of ways. First, a student made an initial text-interpreting utterance (TIU, initial). Then, other students made other types of text-interpreting utterances, such as convergent expanding text-interpreting utterances, confirming text-interpreting utterances, and divergent text-interpreting utterances. Sometimes text-interpreting utterances included those which asked for explanation, utterances explaining something and utterances in the form of questions and answers.

Example:
Transcript 3.2, Paragraph 5
3.2. A: He wants to emphasize the colour of white here…unfortunately, he forgets that crayon. TIU (initial)
3.2. C: The most important colour for painting on a brown paper is white. TIU (convergent, expanding)
3.2. B: Yes, because this is very visible. TIU (convergent, expanding)
3.2. C: So what it wants to show? TIU (asking for explanation)

3.2. B: It wants to show the importance of white colour on brown paper. TIU (explaining)

4.2.1.2. Summarising

In most cases, the groups involved in the collaborative reading, while applying the 'get-the-gist' strategy, attempted to summarise the texts paragraph by paragraph, and it was the recorder's duty to make a written record of the summary of the paragraphs already agreed by all members of the group. The summary was supposed to include the main idea(s) of the paragraphs.

Example:
Transcript 1.1, Paragraph (4)
1.1. B: [probably to the reporter]
The children from middle classes are more independent than the children from rich families.

4.2.1.3. Paraphrasing

In their attempts to interpret the texts, the students sometimes resorted to paraphrasing which took the form of either rephrasing the ideas presented by other students or pure paraphrasing of the original sentences contained in the text.

Example:
Transcript 2.1, Paragraph (3)
2.1. A: *In spite of this, nine days after the first burglary she suffered from the second burglary.*
2.1. B: *It means that the second burglary happened nine days after the first.*

4.2.1.4. Meta-Linguistic Utterances

One noticeable phenomenon, observed to a great extent in the students' interactions, was the use of meta-linguistic utterances, which included activities such as asking for the meaning of unknown lexical items, providing definitions from the dictionary or by participants, asking about the word's part of speech, etc. This phenomenon discloses the fact that students draw on each other's linguistic knowledge to comprehend the texts.

Example:

Transcript 1.1, Paragraph (3)

1.1. C: *What does* 'rely on' *mean?*
1.1. B: /tekye kardan / [Farsi equivalent]
1.1. A: Inspire *means*?
1.1. B: *It is a verb…*
1.1. B: *It means* encourage.
1.1. A: Monarchy *means?*
1.1. B: /saltanati/ [Farsi equivalent]
1.1. C: Their (line 5) *refers to what?*
1.1. B: "Their" *refers to* multimillionaires.

4.2.1.5. Interaction Management Utterances

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As mentioned before, each group had a leader, a recorder (or reporter) and two or more collaborators. To play their roles appropriately, every student had to make use of certain interaction management utterances. The leader of the group was supposed to be the most active person in this respect.

Example:

Transcript 4.2, Paragraph (5)

4.2.B: [to the others] *Read to this point.*

4.2. C: *Let's read to the end.*

4.2. C: *Forget about the details.*

4.2. B: *Translate the last part.*

4.2 A: [probably to the reporter] *Read to us what you have written.*

4.2.1.6. Other Utterance Types

Most of the transcripts contained utterances with other communicative functions, such as *making positive/negative claim to understand*, *eliciting confirmation* and *confirming*. These, however, were fairly infrequent, and appeared to play little if any part in students' developing understanding of the text.

Examples:

Transcript 3.1, Paragraph (1)

3.1. C: Wrap-up *means summarise. It doesn't make sense here.* (Negative claim to understand)

Transcript 1.2, Paragraph (1)

1.2. B: Is it right? (Eliciting confirmation)

1.2. A: Yes, that's it. It is correct. (Confirming)

4.2.2. The Interviews

The recorded interviews, held in Farsi, were transcribed verbatim and analysed. In the analysis process, attempts were made to identify and group together the co-occurring and similar statements under some general categories. Eventually, six dominant but overlapping themes emerged from the interviews:

- affective outcomes
- multiple perspectives
- social interaction
- efficiency
- linguistic development, and
- reservations about collaborative learning.

A number of interviewees commented that collaborative reading provided them with an enjoyable and relaxed learning environment, thus leading to the removal of affective filters. One interviewee said-

In collaborative reading, students' anxiety is reduced and students develop more self-confidence. A major factor was that through collaboration, they could have access to multiple perspectives, which in turn made learning more effective for them.

One of the interviewees said,

> We shared our understanding of the text and thus, we had a better comprehension. Sometimes, when I compared my interpretation with my peers' interpretations, I came to the conclusion that mine was wrong.

A few of the students believed that what made learning fun was the mere fact of social interaction in the group discussions. Others stressed the efficiency of collaborative reading, especially with regard to saving time and energy.

One student said,

> It took me longer to read a text privately. But we managed to save time considerably while we were reading a text collaboratively.

Some interviewees felt that collaborative reading developed their lexical knowledge and reinforced other language skills, particularly listening comprehension and speaking. Almost all of the interviewees expressed a positive attitude towards collaborative reading, but some also pointed out its potential limitations. For example, some interviewees felt they needed more time for reading strategy training and more practice in applying the strategies. A few of them also pointed out that they were able to concentrate better on the text during their private reading.

5. Discussion and Conclusions

The results of this study suggest that students reading collaboratively consistently outperform students reading privately. The effects of collaborative reading appear to be salient in enhancing the reading comprehension ability of Iranian EFL university students. These findings corroborate those of Chang (1995) that the average scores of students in cooperative learning were about two points higher than those of students in a traditional teacher-oriented English reading class.

The gains of the collaborative readers can be grouped under the following categories:

1. the increase of student talk in the collaborative reading context
2. the supportive and communicative learning available in collaborative reading context, and
3. the presence of interactive processes in the collaborative reading context naturally stimulating the students' cognitive, linguistic, and social abilities.

In a collaborative learning context, students were able to maximize the level of their peer interactions, which was an essential feature of learning when the learners were in the action of interacting with people in their environment and in cooperation with their peers (Vygotsky 1978). Students in collaborative reading groups had more opportunities to interact with their peers and, therefore, they had more chances to be corrected by their peers whenever they made mistakes. Collaborative reading created natural, interactive contexts in which students were engaged in interactive processes such as brainstorming, listening to one another, asking questions, eliciting self-disclosure, making reflexive comments, eliciting confirmation, asking for explanation, clarifying issues, collective summarising of paragraphs, and collective paraphrasing of the utterances. Such frequent interaction among students increased the amount of student talk and student participation in the classroom, which, in turn, played a role in developing the students' encyclopedic and linguistic knowledge. The private readers, on the other hand, were deprived of these interactive processes.

In the collaborative reading class, students had opportunities to receive feedback and modelling from their peers. According to Vygotsky (1978), an essential feature of learning is that

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it awakens a variety of internal developmental processes that are able to operate only when the learner is in the action of interacting with people in his or her environment and in collaboration with his or her peers. Therefore, when it comes to collaborative reading comprehension, the authenticity of the environment and the affinity between the participants are essential elements to make the learner feel part of this environment. These elements are absent in private reading. Much of the value of collaborative reading, in effect, lie in the way that group activities encourage students to engage in such high-level cognitive skills as analysing, explaining, synthesizing, and elaborating. The study provides some evidence that collaborative learning can be effectively implemented in a reading comprehension class with Iranian university students who are majoring in English as a foreign language. It also gives evidence to the potential impact collaborative learning can have on students' development of linguistic and encyclopedic knowledge. The linguistic knowledge in this research is interpreted in terms of lexical knowledge and knowledge of the grammatical structures. The encyclopedic knowledge is interpreted in terms of the concepts and the overall purpose or meaning contained in the texts.

The study had some limitations. Firstly, the participants were restricted to two classes comprising 36 university students. With such a small sample of students it is difficult to generalize the results to other populations. Further studies on more student participants implementing collaborative reading in more classes are recommended in order to generate more evidence on the effects of collaborative reading. Secondly, students received direct instruction on specific reading comprehension strategies for only one session. As some of the students noted in the interviews, they needed more time for strategy training. Thirdly, the students experienced collaborative reading for only two sessions, which cannot be considered enough as the students need more practice to implement the reading comprehension strategies. Despite these limitations, we believe that the findings are sufficiently clear to suggest that collaborative reading has an important place in the EFL classroom, and that this approach to language teaching would repay further research in a variety of institutional and cultural contexts.

References

August, D.L.(1987). Effects of peer tutoring on the second language acquisition of Mexican American children in elementary school. *TESOL Quarterly, 21*(4), 717-736.

Bejarano, Y. (1987). A cooperative small-group methodology in the language classroom. *Tesol Quarterly, 21*(3), 483-504.

Bruffee, K.A. (1981). Collaborative learning. *College English,* 43(7), 745-747.

Chang, M. (1995). Teacher-oriented learning vs Cooperative learning in English reading class. *Journal of Pingtung Polytechnic Institute, 4*, 271-277.

Chen, R. & Hird, B. (2006). Group work in the EFL classroom in China: a closer look. *RELC Journal, 37*(1), 91-103.

Flowerdew, L. (1998). A cultural perspective on group work. *ELT journal,* 52(4), 323-329.

Freeman, D. (1988). Collaboration: Constructing Shared Understandings in a Second Language Classroom. In D. Nunan (ed.), pp. 56-80.

Klingner, J.K. & Vaughn, S. 1998, "Using Collaborative Strategic Reading." *Teaching Exceptional Children, 30*(6), 32-37.

Lan, Y.J., Sung, Y.T. & Chang, K.E. (2006). What makes collaborative early EFL reading effective? A mobile dynamic peer-assisted learning system". *Proceedings of IADIS International Conference Mobile Learning 2006*, ed. Lan, Language learning and technology, pp. 185.

Liang, T. (2002). *Implementing Cooperative Learning in EFL Teaching: Process and Effects.* The graduate Institute of English, National Taiwan Normal University.

Murray, D.E. (1992). Collaborative Writing as a Literacy Event: Implications for ESL Instruction In D. Nunan (ed.), pp. 100-117.

National Institute for Science Education - College Level One (2006). *What is collaborative*

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learning? Retrieved November 14, 2006 from the World Wide Web:
http://www.wcer.wisc.edu/archive/cl1/CL/moreinfo/MI2A.htm

Nelson, G. & Schmid, T. (1989). ESL reading: Schema theory and standardized tests. *TESOL Quarterly, 23(* 3), 539-543.

Ney, J.W. (1991). Collaborative learning in university grammar courses. *Innovative Higher Education, 15(* 2), 153-165.

Nunan, D. (1992). *Collaborative Language Learning and Teaching,* 1st Edition, Cambridge University Press, Cambridge.

Roskams, T. (1999). Chinese EFL students' attitudes to peer feedback and peer assessment in an extended pairwork setting. *RELC Journal, 30*, (1), 79-123.

Smith, B.L. & MacGregor, J.T. (1992). What is collaborative learning. *Collaborative learning: A sourcebook for higher education,* pp. 9-22.

Tinzmann, M., Jones, B., Fennimore, T., Bakker, J., Fine, C. & Pierce, J. (1990). What is the collaborative classroom. *North Central Regional Educational Laboratory, Oak Brook, IL, USA,* , pp. 1-35.

Vygotsky, L.S. (1978). *Mind in Society. The Development of Higher Psychological Processes,* 1st Edition. Cambridge (Mass.), London:. Harvard University Press.

Wong Fillmore, L., Ammon, P., McLaughlin, B. & Ammon, M. (1985). Learning English through bilingual instruction. *Final report submitted to the National Institute of Education.* Berkeley: University of California.