Peer-assisted Learning:
Implications for Content-based English Classes[*]

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In recent years, with increased attempts to account for learning within a social-constructivist framework, the association between social context and learning has become a popular topic of L2 research. This paper explores the social and cognitive functions of peer-assisted learning (PAL) tasks in a content-based L2 classroom. Observing the effects of PAL tasks within the theoretical framework of Vygotskian social constructivism, this study highlights the role of language, either L1 or L2, as a tool of semiotic mediation between learners. In addition, this study investigates whether a peer-assisted learning context promotes positive attitudes and increases academic performance, as opposed to a teacher-driven context. The study examines the effects of two classroom contexts by comparing students' attainment of positive attitudes and of content knowledge of the principles of language teaching. For the purpose of the study, a lecture-driven context was compared with a PAL context in light of the effect on students' learning. Findings of the study will be reported, along with their pedagogical implications.

I. INTRODUCTION

Recent studies based on an interactionist approach to language learning view collaborative talk as an opportunity to provide comprehensible input in the L2, which then facilitates L2 acquisition (Gass & Varonis, 1986; Pica, 1994; Pica & Doughty, 1988). These studies have focused on the examination of how L2 input is made comprehensible from meaning negotiation by using communicative devices such as clarification requests, comprehension checks, and confirmation checks. Despite the insights these studies have given us, they fail to show a complete picture of learners' interaction in the L2 classroom setting, in that the objective of such studies is confined only to the acquisition of L2

through interaction (Antón & DiCamilla, 1999). Antón and DiCamilla (1999) further argue that in the framework of socio-cultural theory, a more important goal of studying learners' interaction is to unveil how learners use language in interaction as a cognitive tool. Swain and Lapkin (1998) similarly adopt the social constructivist perspective that language serves not only a communicative function, but is itself, a psychological tool.

The emergence of social-constructivist theories has changed the view of learning and of L2 learning, from a structuralist/generative view of language and the behaviorist/cognitivist paradigm of learning to a functional and constructivist approach to language and learning (Brown, 2000). According to the social constructivist, social interaction is the crucial condition for learning. In accordance with this perspective, the current study aims to examine whether and how experiences of peer-assisted learning help to develop a shared understanding of English content related to the principles of language teaching.

II. THEORETICAL BACKGROUND

1. Social Constructivism

One of the major areas of inquiry in social constructivism has addressed the question of how language is used as a mediating tool between learners (at the inter-psychological level) and within individuals (at the intra-psychological level). With regard to the intra-psychological domain, researchers have examined the content, elliptical form, syntactic structure, and other linguistic properties of speech and writing directed to oneself for directing and organizing one's cognitive activity (Antón & DiCamilla, 1999; DiCamilla, 1991; DiCamilla & Lantolf, 1994). On the inter-psychological plane, researchers have paid attention to how the language of a more knowledgeable person in collaborative interaction fulfills the goal of advancing the learner through his or her zone of proximal development (ZPD) to the point where the learner becomes self-regulating (Ahmed, 1994; Aljaafreh & Lantolf, 1994; De Guerrero & Villamil, 1994; Donato, 1994; Ohta, 1995; cited in Antón & DiCamilla, 1999).

A social constructivist approach to learning is often equated with an interactionist position (Lightbown & Spada, 1999). Some research studies grounded on the interactionist approach (Long, 1983, 1985; Mackey, 1995; Pica, 1994) maintained that the activity of negotiation provides comprehensible input for learners, and that this contributes to second language learning. In a study that provides supportive evidence for cognitive gains, Swain and Lapkin (1998) viewed social dialog as a cognitive activity. Leont'ev (1981) also addressed the same idea: "Higher psychological processes unique to human can be acquired only through interaction with others, that is, through interpsychological processes

that only later will begin to be carried out independently by the individual" (p. 56).

Social constructivism and cognitive constructivism, although they share epistemological origins, differ in the degree to which social interaction is accountable for cognitive development. Piaget, representing the constructivist view of learning, characterized individual construction of knowledge as a result of responding to the physical world, and emphasized the primacy of individual cognitive development as a relatively solitary act separate from the social context (Brown, 2000; Nyikos & Hashimoto, 1997; Russell, 1993; Vygotsky, 1978). Piaget believed learning occurs according to predetermined stages of cognitive development. This suggests formal instruction should play the role of providing learners with the right assistance at the right time.

Moving in the opposite direction from Piaget, social constructivists like Vygotsky (1978) and Wertsch (1991) highlighted the primacy of social interaction as a necessary precondition for individuals' cognitive development. Vygotsky (1978) maintained that knowledge is co-constructed from social interaction and that learning does not take place apart from the social context. Vygotsky situated cognitive development in the ZPD, which is defined as

> the difference between the child's developmental level as determined by independent problem solving and the higher level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers. (p. 86)

Within the zone of one's proximal development, more knowledgeable students can provide new information and ways of thinking for peers so that everyone engaged in interaction can arrive at a mutual understanding of the topic or intersubjectivity (Nyikos & Hashimoto, 1997). The concept of intersubjectivity is well explicated by Tudge (1992):

> Individuals come to a task, problem, or solution with their own subjective ways of making sense of it. If they then discuss their differing viewpoints, shared understanding may be attained….. In the course of communication, participants may arrive at some mutually agreed upon, or intersubjective understanding. (p. 1365)

According to Wertsch (1985, p. 59), intersubjectivity is achieved when "interlocutors share some aspect of their situation definitions," or when learners working in collaboration define the objects and goals of a task in the same way. This mutually shared understanding can be attained through scaffolding or collective scaffolding (Donato, 1994).

Citing the original work of Wood et al. (1976), Antón and DiCamilla (1999) present the

six functions of scaffolded help given to the novice learner by the expert:

- Recruitment: enlisting the learner's interest in the task
- Reduction in degrees of freedom: simplifying the task
- Direction maintenance: keeping the learner motivated and in pursuit of the goal
- Marking critical features: highlighting certain relevant features and pointing out discrepancies between what has been produced and the ideal solution
- Frustration control: reducing stress and frustration during problem solving
- Demonstration: modeling an idealized form of the act to be performed by completing the act or by explicating the learner's partial solution

(Wood et al., 1976, p.98)

One learning mode that promotes intersubjectivity and scaffolding is cooperative learning or collaborative learning.

2. Cooperative Learning and Collaborative Learning

Cooperative learning (CL) is defined as "group learning activity organized so that learning is dependent on the socially structured exchange of information between learners in groups and in which each learner is held accountable for his or her own learning and is motivated to increase the learning of others" (Olsen & Kagan, 1992, p. 8). Oxford (1997), differentiating cooperative learning from collaborative learning, states that cooperative learning is more structured, more prescriptive to teachers about instructional techniques, and more directive to students about how to learn together in groups.

The concept of cooperative learning is best captured when it is contrasted with competitive and individualistic classroom structures (Dőrnyei, 1997). Competitive learning fosters a negative interdependence among students by rewarding only the best students, and thus encouraging the survival of the fittest. Similarly, in the case of an individualistic classroom structure where individuals just work independently, there is no interdependence.

Unlike these two classroom-learning structures, cooperative learning is characterized by a positive interdependence of the students. Johnson, Johnson and Smith (1995) use the metaphor of "sink or swim together" to account for the concept of positive interdependence (p. 31). In addition to positive interdependence, Johnson and Johnson (1995) suggest three other conditions for maximizing the effectiveness of cooperative learning: individual accountability, mastery of social skills, and regular group processing. These conditions are also addressed in Oxford's (1997) summary of the principles of cooperative learning:

1) Positive interdependence: Gains for one person are associated with gains for others;

can be attained through structuring the goals, rewards, roles, materials, or rules.

2) Accountability: Every person is accountable through individual grading and testing; the group is accountable through a group grade; improvement scores are possible.

3) Team formation: Teams are formed in various ways—randomly; by student interest; by the teacher using specific criteria (heterogeneously, representing different characteristics such as aptitude or gender; or homogeneously)

4) Team size: Groups of smaller than 7 members usually work best.

5) Cognitive development: This is often viewed as the main goal of cooperative learning.

6) Social development: Developments of social skills such as turn taking, active listening, and so forth can be as important as cognitive development.   (p. 445)

As Dőrnyei (1997) explains, cooperative learning as a highly effective instructional approach, is "superior to most traditional forms of instruction in terms of producing learning gains and students' achievement, higher-order thinking, positive attitudes toward learning, increased motivation, better teacher-student and student-student relationships accompanied by more developed interpersonal skills and higher self-esteem on the part of students" (p. 482). Thanks to these potential benefits, cooperative learning has received increased attention among educators and researchers in the field of L2 teaching. Many studies report cooperative learning is more effective than competitive or individualistic learning in enhancing intrinsic motivation and academic achievement, developing higher-order thinking skills, promoting positive affect (heightening self-esteem, lowering anxiety, etc.), and constructing altruistic relationships (Holt, 1993; Johnson, Johnson & Holubec, 1990; Kessler, 1992, cited in Oxford, 1997). Johnson et al. (1990) further argue "cooperative learning should be used when we want students to learn more, like school better, and learn more effective social skills" (p. 5).

Collaborative learning differs from cooperative learning in many aspects, although they share some properties: both being group-based and task-oriented. Oxford (1997), in a comparison of collaborative learning and cooperative learning, summarizes the differences between the two, in terms of the purpose, degree of structure, relationship among group members, and prescriptiveness of activities. First, while cooperative learning aims to develop cognitive and social skills via a set of classroom techniques, the purpose of collaborative learning is to acculturate learners into knowledge communities. In addition, cooperative learning is more structured with classroom activities prescribed by teachers, whereas collaborative learning is variable and less structured. In cooperative learning, the individual is accountable to the group and vice versa; in the case of collaborative learning, the learner engages with "more capable others," who provide assistance and guidance (p. 444). Collaborative learning is beneficial, in that it not only promotes learners' social skills and thinking skills but also helps them to make decisions about the learning materials they

study and the ways they should study (Beatty, 2003). Collaborative learning derives from a social constructivist framework, which views learning as an acculturation into knowledge communities. Bruffe (1993) states, collaborative learning is "a reacculturative process that helps students become members of the knowledge communities whose common property is different from the common property of knowledge communities they already belong to" (p. 3).

Other studies that explained the difference between cooperative and collaborative learning include Biggs and Moore (1993) and Nunan (1992). Biggs and Moore (1993) distinguished one from another in terms of the prescriptivenss of activities: cooperative learning as an activity set by the teacher and collaborative learning as one set up by the learners. Nunan (1992) accounted for the difference between the two in terms of the control learners have over the process of learning, with more power and control allowed for collaborative learning than for cooperative learning. Despite the differences, some studies used the two types of learning interchangeably (Kohonen, 1992). The two learning modes will also be used interchangeably in this study.

3. Effectiveness of Cooperative/Collaborative Learning in EFL Contexts

Regarding the effects of cooperative/collaborative learning in EFL contexts, not many studies have been conducted. In a study with 4 ninth grade students from a girls' middle school, Kyunghee Ko (1998) examined whether a collaborative listening task was more beneficial than an individual listening task. For the purpose of the study, the participants were asked to repeat verbatim what they heard and state what they comprehended in their L1, after viewing and listening to a four-minute episode from a children's TV program. They were required to perform the two tasks for the four parts of the episode: individually for the first two parts and cooperatively for the next two parts for one dyad, and vice versa for the other dyad. The study found that the collaborative task created a more enjoyable and supportive learning environment, induced a higher order thinking, and produced better performance, compared to the individual task.

There are some more studies that have examined the effects of cooperative learning but most of them are limited to primary (Soo-Hae Ahn, 2001; Soo-Jin Park, 2000) or secondary school settings (Soon-Hee Hwang, 2000), and geared toward the effects of computer-supported collaborative learning or collaborative learning in multimedia environments (Hee-Jeong, Ihm, 2000; Yang-soo Jung, 2000, 2001; Sung-Yeon Kim, 1999). There has been little research that has tested for the effects of collaborative learning in higher education settings, particularly in a content-based course.

III. METHOD

1. Research Questions

The purpose of this study is to examine whether different instructional contexts are associated with different levels of academic achievement and attitudes. More specifically, this study aims to explore whether and how experiences of peer-assisted learning (PAL) promote students' attitudes and academic performance, as opposed to a teacher-driven context. PAL in this study refers to peer-assisted teaching that employs language (either L1 or L2) as the medium of social interaction for the purpose of enhancing the participants' higher-order thinking skills as well as content knowledge. This purpose is specified in the following research questions:

1) Does the experience of participating in PAL tasks influence the learners' attainment of content knowledge?
2) Does the experience of participating in PAL tasks influence the learners' attitudes toward content-based instruction?
3) Do the students' reactions to each classroom context differ? If so, how?

2. Context of the Study

The subjects of this study were 44 students in the college of education at a university in Seoul. They were enrolled in a course entitled "Principles of English Language Teaching." The classes met twice a week for a period of two hours. The course was offered in two different versions: one for English Education majors and the other for English Education minors, although the classes in practice had a mixed composition of English major and minor students.

Most of the students were juniors, and all the students were taking the courses to fulfill the curriculum requirements of their respective programs. All these students were prospective English teachers, preparing to take the secondary school teacher certification exam. Regardless of their primary major, these students were highly competent and motivated, in that they all had been admitted to one of the top-tier colleges at the university, i.e., the college of education. In addition, they showed a strong learning goal orientation toward the course content, in that it was a fundamental subject in preparing for the teacher certification exam.

The students in the teacher-led class (n=16) listened to lectures given by the instructor, and the only time they were given opportunities for group work was when they in a group gave oral presentations on teaching methodologies. The students in the PAL context (n=28)

were given peer-assisted learning tasks as well as the oral presentations. One factor that may confound the effects of collaborative learning is the issue of grading: how students were to be evaluated. Luckily, this was not a problem, because unlike other schools this particular university allowed a criterion-referenced evaluation system for major-related courses. The fact that the students were not graded on a normal curve in comparison with their classmates induced more voluntary and active participation from learners.

3. Instrument

Two sets of tests were designed to measure students' comprehension of the content covered in the course: one for midterm and one for final. The instructors in charge of the classes collaboratively constructed and revised the test items. Each test included items in five different formats: multiple choice, true-false, short-answer, sentence-completion, and essay questions.

In addition to the two tests, a questionnaire asking for student feedback about the course was developed. The questionnaire was composed of ten items on a five-point Likert scale and six open-ended questions. The ten items measured the students' perception of the effectiveness of the course in general, and the open-ended questions attached at the end asked what the students enjoyed most and least in the course.

4. Procedure

The data were collected from two different classroom contexts: one in which the students received teacher-directed lectures about English language teaching (ELT) related content (n=16), and the other context where the students in groups of four were given a peer-assisted learning task (n=28). The students in the teacher-led classroom context received lectures from their instructor, and as a group activity they were asked to give oral presentations on teaching methodologies.

In the context of peer-assisted learning, readings to be covered in a class period were allocated to each group member so that each one was responsible for one fourth of the readings. To monitor an individual learner's accountability, the instructor required each student prepare for the summary of the readings that she or he is responsible for and bring five hard copies to class: One for the instructor and the others for the group members. For peer-assisted teaching, groups were formed twice during the semester. Groups were formed randomly by giving each student a number, from 1 to 7. The students with the same number stayed together until the midterm. Each group had one or two high achievers, with the others being almost equal across the groups in terms of their academic performance. As a result, not much difference was observed across the groups, but each group was

moderately heterogeneous in nature. The students in the PAL context were required to participate in 80 minutes of collaborative teaching, and 20 minutes of question-and-answer exchanges between the instructor and the students. For a closer observation of the students' peer assisted teaching, the instructor sat in on one of the groups randomly chosen for that day.

The students in the two contexts used the same textbook: *Teaching by Principles* by H. D. Brown (2001), and in addition to either instructor-driven teaching or peer teaching, they were required to give presentations on teaching approaches in the book: *Techniques and Principles in Language Teaching* by D. Larsen-Freeman (2000). As for the teachers, two Korean instructors with doctoral degrees in ELT (one male and one female) taught the classes. The two instructors had many things in common in terms of educational background. They both received doctoral degrees in TEFL from the same institute in the United States, and had similar research interests. They were both in their mid thirties, but the female instructor had three and a half more years of teaching experience than the male instructor. To even out possible effects of the teaching experience, the two instructors have consulted with each other on all the instruction-related matters, such as chapters to be covered, instructional procedure, grouping, time for the exams, time for the questionnaires, grading, etc. Prior to the beginning of the semester, the instructors met together to discuss the course schedule and classroom procedures. They reached a consensus about classroom procedures to keep every classroom factor under their control, other than the learning mode. In addition, during the semester, they met several times to collaboratively construct and revise test items. They also collaboratively evaluated the students' performance on the exams: The midterm exam sheets were first graded by the male instructor and then checked again by the female for confirmation; the final exam sheets were first scored by the female instructor and then reviewed by the male.

Upon completing 7 weeks of instruction, the students in both contexts took a midterm exam, after which the instructor in the PAL context allotted more time to the Q and A session so that she could give an overall summary of the readings. Seven weeks later, the students were asked to take a final exam, and respond to the questionnaires designed to measure their attitudes toward the learning experiences in the classroom context they were in.

5. Data Analysis

For data analysis, descriptive statistics were obtained to summarize the participants' performance in the midterm and the final exams, which were designed to assess the students' knowledge of the ELT-related content, and their responses to the attitude questionnaire. Also, independent sample t-tests were performed to compare students'

academic performance across the two instructional contexts. Open coding was used for the open-ended items; the participants' responses were coded and categorized.

IV.   RESULTS AND DISCUSSION

In answers to the research questions stated earlier, this section presents the results from both descriptive and inferential analyses of data. It also presents the participants' responses to the open-ended questions in the attitude questionnaires.

1. PAL and Attainment of Content Knowledge

Table 1 summarizes the mean scores for the PAL group and the control group for both the midterm and the final. As shown in the table, there is an increase in overall mean scores from 39.01 to 42.47. It is interesting to note that the between-group mean difference is much greater in the final exam than in the midterm. While the PAL group scored 1.1 points higher than the control group in the midterm exam, it scored 4.32 points higher than the control group in the final exam.

TABLE 1
Mean Scores for the Two Contexts

Test	Context	Mean	SD
Midterm	+ PAL	39.41	7.04
	- PAL	38.31	8.02
	Total	39.01	7.34
Final	+ PAL	44.04	5.54
	- PAL	39.72	8.64
	Total	42.47	7.05

To see if the mean difference for the midterm is statistically significant, independent t-tests were performed, but the difference was non-significant [t (42) = .473, p = .638, p > .05]. However, the difference between means for the final exam was found to be significant at p less than .05, as shown in Table 2. In other words, the PAL group performed significantly better than the control group in the final.

TABLE 2
t-test for the Group Effect on the Final Exam Scores

Group	N	M	SD	MD	t	df	Sig.
+ PAL	28	44.04	5.54	4.32	2.022	42	.05
- PAL	16	39.72	8.64				

To sum up the findings of the study, although the mean score differences on the midterm exam were not significant, the differences on the final were significant. This seems to indicate that peer-assisted learning was not so effective as teacher-led instruction up to the midterm but that it eventually turned out to be more effective over time. Although the students in the PAL context did slightly better than those in the teacher-led class in the midterm exam, the difference was not significant. However, when applied for a long period of time, the students in the PAL context greatly surpassed those in the teacher-driven class. It is not clear whether it was the extended PAL experience or more time for Q and A that caused such a difference. The finding indicates that the students needed a longer duration of PAL experience and more time for Q and A sessions.

2. PAL and Learners' Attitudes Toward Content-based Instruction

As for the students' attitudes, for all the items in the attitude questionnaire, means were slightly higher for the PAL context, although significant differences were noted for only two items: Item No. 2 and Item No. 4. The following 10 items were included in the attitude scale.

1. The instructional approach used in this course was effective.
2. I gained confidence.
3. I enjoyed studying core courses.
4. I improved collaborative learning skills.
5. I improved presentation skills
6. I acquired some useful learning strategies.
7. I overcame public speaking anxiety.
8. I learned a lot about ELT theories and methods.
9. I learned a lot from my peers.
10. I learned a lot from my teacher.

Among those 10 items, in Item 2 asking about the increase in confidence, the between-group effect was found to be significant. As you can see in the mean scores for both contexts, the mean for the PAL context was higher than for the control group. Table 3 summarizes the result.

TABLE 3
t-test for the Group Effect on the Attitude Measure (Item No. 2)

Group	N	M	SD	MD	t	df	Sig.
+ PAL	28	3.75	.70	.56	2.62	42	.012
- PAL	16	3.19	.66				

Also, in Item 4 that asked about self-perceived improvement in collaborative learning skills, the group factor was found to be significant. The result from the t-test is shown in Table 4.

TABLE 4
t-test for the Group Effect on the Attitude Measure (Item No. 4)

Group	N	M	SD	MD	t	df	Sig.
+ PAL	28	4.32	.72	.63	2.82	42	.007
- PAL	16	3.69	.70				

3. Students' Reactions to Each Classroom Context

This study also examined the students' responses to open-ended questions in the questionnaire. While the purpose of the quantitative approach was to investigate the effects of classroom contexts on the students' academic performance and attitudes, this qualitative component sought to provide more in-depth insight into how the students perceived each classroom context. The final part of the questionnaire consisting of seven open-ended items was used for qualitative data analysis.

First, with regard to the teaching approaches employed in each classroom context, a number of students in the PAL context indicated peer teaching, cooperative learning, task-based learning (TBL), content-based instruction (CBI), communicative language teaching (CLT), interactive learning, and learner-centered approach, whereas the students in the non-PAL context noted lecture and constructivism as distinctive approaches. The frequencies of the students' responses as to each classroom context are summarized in Table 5.

TABLE 5
Teaching Approaches Used in Each Classroom Context: From the Students' Perspectives

-PAL	f	+PAL	f
Lecture	5	Peer teaching, cooperative learning	20
Constructivism	5	CBI, CLT, TBL	9
Presentation	2	Interactive learning	2
Discussion	2	Learner-centered approach	2
CLT, CBI, TBL	1	Confidence raising	1

The second open-ended question asked the subjects to write down the major classroom activities used in each classroom context. As expected, the students' perceptions of classroom activities differed according to the contexts. The responses of the students in the PAL context indicated a more wide range of activities--from peer-assisted learning to lecture--with most of the responses centered around PAL tasks, such as peer teaching, presentation, and summarizing.

TABLE 6
Classroom Activities Used in Each Context: From the Students' Perspectives

-PAL	f	+PAL	f
Presentation	19	Peer teaching, cooperative learning	30
Lecture	8	Presentation	11
Exam	1	Summarizing	5
		Self-study	3
		Top-down reading	1
		Lecture	1

The third open-ended question asked the students to report which of the classroom activities was effective for themselves. As shown in Table 7, while most of the students in the control group perceived the group presentation task as effective, the students in the PAL context indicated more varied activities as effective, such as, collaborative learning, group presentation, pre-reading, and summarizing.

TABLE 7
What Was Effective: From the Students' Perspectives

-PAL	f	+PAL	f
Group presentation	12	Peer teaching, cooperative learning	17
Lecture	1	Group presentation	9
Note-taking	1	Preview/Pre-reading	6
		Summarizing	4
		Instructor's help	3
		Diverse activities	2

With regard to the question about what they enjoyed most, the students in the control group indicated group presentation, challenging content (recent ELT theories), lecture, comfortable classroom dynamics, and intermission. On the other hand, the students in the PAL context reported peer teaching, group presentation, summary, pre-reading, absence of competition, autonomy, lecture, and exam. The comparison of the students' responses is given in Table 8.

TABLE 8
What They Enjoyed Most

-PAL	f	+PAL	f
Group presentation	7	Peer teaching	10
Challenging content	3	Group presentation	5
Lecture	2	Summary	1
Classroom atmosphere	2	Preview (Pre-reading)	1
Intermission	1	No competition (Cooperation)	1
		Autonomy	1
		Lecture	1
		Exam	1

The fifth open-ended question addressed what the students in each classroom context enjoyed least. Interestingly, while the students in the PAL context enjoyed peer-assisted learning most, they did not enjoy the processes involved in preparing for peer teaching, such as pre-reading, summarizing, printing handouts for group members, etc. By contrast, the students in the non-PAL context indicated group presentation, massive content, limited English proficiency, exam, and lack of interaction as the things they enjoyed least.

TABLE 9
What They Enjoyed Least

-PAL	f	+PAL	f
Group presentation	7	Preparation for peer teaching	10
Massive content	2	Massive content	4
Limited proficiency	2	When I couldn't make myself understood	3
Exam	1	Group presentation	3
Not so interactive	1	Nothing	3
		Exams	3

As to the last question asking about the most important experience the students had in each context, those in the PAL context mentioned collaboration, developing the habit of study, group presentation, autonomous learning, acquisition of content, and use of learning strategies, whereas in case of those who were in the non-PAL context, most of the responses were geared toward group presentation and self-reflection. More detailed descriptions of the students' responses are given in Table 10.

TABLE 10
The Most Important Experience the Students Had

-PAL	f	+PAL	f
Group presentation	10	Collaboration	11
Self-reflection	6	Habit of study	7
-Importance of preview & review	(2)		
-Limited language proficiency	(1)		
-Raised confidence	(1)		
-Importance of reflection	(1)		
-Improved presentation skill	(1)		
Studying for exams	1	Group presentation	4
Acquisition of content	1	Autonomous, responsible learning	3
		Acquisition of content	2
		Use of learning strategies	1

V. CONCLUSION

This study was conducted to investigate whether and how experiences of peer-assisted

learning environment foster students' academic performance and positive attitudes, as opposed to a teacher-led learning environment. For the purpose, the effectiveness of two different instructional contexts (teacher-led, -PAL vs. students-led, + PAL) was examined in terms of the students' attainment of content-specific knowledge and constructive learning attitudes.

The findings of the study indicate that peer-assisted learning can be as effective as teacher-led instruction when applied for a longer duration of time. Although the students in the PAL environment performed slightly better than those in the teacher-directed class in the midterm exam, statistically significant differences were not obtained for the midterm. However, in the final exam, the students in the PAL context excelled compared to those in the teacher-led learning environment.

The finding about the significant contextual difference obtained in the final exam should be interpreted with some caution. The significant difference might be ascribed to the fact that more time was allowed for Q & A after the midterm exam. At the same time, the extended PAL experience might have resulted in the significant difference across the contexts. With some caution, it can be inferred from the findings that the PAL context is as beneficial as the teacher-driven context, or even better over time.

With respect to the students' attitudes, the study found significant group differences in students' self-perceived improvement of confidence and collaborative learning skills. More specifically, the PAL experience was found to be effective in enhancing learners' confidence and developing collaborative learning skills or social skills as measured by the questionnaires.

The qualitative analyses of the students' responses to the open-ended questions resulted in an interesting comparison of the students' perception of each classroom environment. While the students in the non-PAL context reported group presentation as the key feature of their classroom environment, those in the PAL context perceived peer-assisted learning or collaboration as the most distinctive feature. Although the students in the PAL context found the preparation for peer teaching demanding, they believed that the PAL experience was effective, and they enjoyed participating in the process of peer-assisted learning.

The findings of the study seem to validate the social constructivist view of learning. In line with Vygotsky's (1978) ZPD, Wertsch's (1985) intersubjectivity, and Johnson et al.'s (1995) cooperative learning, the findings of the study suggest that scaffolded help fostered by group learning dynamics plays a crucial role in reaching intersubjectivity. The students in the PAL context reported they had benefited from their peers, collaboratively leading one another to a higher level of actual development.

Thus far, the findings of the study have been summarized and discussed. Although the findings are informative and suggest some useful pedagogical implications, the study has some limitations. First, although the researcher tried to equalize the two classroom contexts,

there might have been some other factors involved, such as teacher effect and entry-level differences among students. In order to minimize the intervening effects of instructor, from the beginning, the researcher communicated with the other instructor, and reached a consensus about classroom procedures. Nonetheless, the instructor factor might have played a role in blurring the effects of the classroom context. Therefore, caution is required in interpreting the results of the study. In the same vein, because the students' entry level of understanding of content was not obtained, it is necessary to interpret the findings of the study with some caution. Another limitation of the study is in the difference in the number of participants in each learning context. This might have influenced the variance across the groups. For a follow-up study, it is recommended that students' entry-level content knowledge be measured and tested for equality of variance across the contexts. If the pretest measure had been obtained prior to the treatment, the repeated measures ANCOVA could have been used instead of two t-tests in a row. Multiple t-tests would have increased the Type I error.

Despite the limitations noted, the findings of the study have some beneficial implications for college level content-based English courses. PAL can be actively employed as an effective instructional approach, in that it empowers learners and makes courses more enjoyable by promoting learner autonomy and peer collaboration. For instance, the students in the PAL context increasingly enjoyed learning from their peers, although they first had difficulty adjusting themselves to the student-centered learning environment. In fact, many of them indicated that the PAL context was useful and beneficial. PAL does not involve passively receiving information transmitted by an authoritative instructor who likes to control the classroom learning structure. Instead, it represents the type of learning that constructivism or social-constructivism aims at: learner-directed, autonomous learning that ensures active construction of knowledge. Learners can achieve this together while they are engaged in collaborative learning tasks. Unlike the learning that occurs from the spoon-fed delivery of instruction, peer-assisted learning or cooperative learning leads to self-regulated study.

REFERENCES

Ahmed, M. K. (1994). Speaking as cognitive regulation: A Vygotskian perspective on dialogic communication. In J. P. Lantolf & G. Appel (Eds.), *Vygotskian approaches in second language research* (pp. 157-171). Norwood, NJ: Ablex.

Ahn, Su-Hae. (2001). *Investigating elementary school learners' English reading process.* Unpublished master's thesis. Seoul National University of Education, Seoul.

Aljaafreh, A., & Lantolf, J. (1994). Negative feedback as regulation and second language learning in the zone of proximal development. *The Modern Language Journal, 78*, 465-483.

Antón, M., & DiCamilla, F. J. (1999). Socio-cognitive functions of L1 collaborative interaction in the L2 classroom. *The Modern Language Journal, 83*(2), 233-247.

Beatty, K. (2003). *Teaching and researching computer-assisted language learning*. Harlow, UK: Pearson Education Limited.

Biggs, J., & Moore, P. (1993). *The process of learning* (3rd ed.). New York: Prentice Hall.

Brown, H. D. (2000). *Principles of language learning and teaching* (4th ed.). White Plains, NY: Addison Wesley Longman.

Brown, H. D. (2001). *Teaching by principles* (2nd ed.). White Plains, NY: Addison Wesley Longman.

Bruffe, K. A. (1993). *Collaborative learning: Higher education, interdependence, and the authority of knowledge*. Baltimore: Johns Hopkins University Press.

DiCamilla, F. (1991). *Private speech and private writing: A study of given/new information and modality in student compositions*. Unpublished doctoral dissertation, University of Delaware, Newark.

DiCamilla, F., & Lantolf, J. P. (1994). The linguistic analysis of private writing. *Language Sciences, 16*, 347-369.

Donato, R. (1994). Collective scaffolding in second language learning. In J. P. Lantolf & G. Appel (Eds.), *Vygotskian approaches in second language research* (pp. 33-56). Norwood, NJ: Ablex.

Dőrnyei, Z. (1997). Psychological processes in cooperative language learning: Group dynamics and motivation. *Modern Language Journal, 81*(4), 482-493.

Gass, S., & Varonis, E. (1986). Sex differences in NNS/NNS interaction. In R. Day (Ed.), *Talking to learn: Conversation in second language acquisition* (pp. 327-351). Rowley, MA: Newbury House Publishers.

Holt, D. D. (Ed.). (1993). *Cooperative learning: A response to linguistic and cultural diversity*. Washington, DC: Center for Applied Linguistics.

Hwang, S. H. (2000). A study on the development of the communicative competence in elementary school through cooperative group work. Unpublished master's thesis. Hanyang University, Seoul.

Ihm, Hee-Jung. (2000). A case study of collaborative learning in a Web-based writing program. *Multimedia-Assisted Language Learning, 3*(2), 175-197.

Johnson, D. W., & Johnson, R. T. (1995). Cooperative learning and nonacademic outcomes of schooling. In J. E. Pederson & A. D. Digby (Eds.), *Secondary schools and cooperative learning* (pp. 81-150). New York: Garland.

Johnson, D. W., Johnson, R. T., & Holubec, E. (1990). *Circles of learning: Cooperation in the classroom*. Edina, MN: Interaction Book.

Johnson, D. W., Johnson, R. T., & Smith, K. A. (1995). Cooperative learning and individual students' achievement in secondary schools. In J. F. Pederson & A. D. Digby (Eds.), *Secondary schools and cooperative learning* (pp. 3-54). New York: Garland.

Jung, Yang-Soo. (2000). Effects of cooperative learning approach to MALL. *Multimedia-Assisted Language Learning, 3*(1), 9-46.

Jung, Yang-Soo. (2001). A review of the practical considerations of CALL from the viewpoint of cooperative learning. *English Teaching, 56*(4), 373-395.

Kessler, C. (Ed.). (1992). *Cooperative learning: A teacher's resource book*. Englewood Cliffs, NJ: Prentice Hall.

Kim, Sung-Yeon. (1999). Computer-support for collaborative learning: Software tools. *Multimedia- Assisted Language Learning, 2*(2), 47-68.

Ko, Kyong-Hee. (1998). Cooperative learning in noninteractive listening tasks. *English Teaching, 53* (4), 3-30.

Kohonen, V. (1992). Experimental language learning: Second language learning as cooperative learner education. In D. Nunan (Ed.), *Collaborative language learning and teaching* (pp. 14-39). Cambridge: Cambridge University Press.

Larsen-Freeman, D. (2000). *Techniques and principles in language teaching* (2nd ed.). Oxford, UK: Oxford University Press.

Leont'ev, A. N. (1981). The problem of activity in psychology. In J. V. Wertsch (Ed.), *The concept of activity in Soviet psychology* (pp. 37-71). Armonk, NY: Sharpe.

Lightbown, P. M., & Spada, N. (1999). *How languages are learned* (2nd ed.). Oxford: Oxford University Press.

Long, M. (1983). Native speaker/non-native speaker conversation and the negotiation of comprehensible input. *Applied Linguistics, 4*, 126-141.

Long, M. (1985). Input and second language acquisition theory. In S. Gass & C. Madden (Eds.), *Input in second language acquisition* (pp. 377-393). Rowley, MA: Newbury House Publishers.

Long, M. H., & Porter, P. A. (1985). Group work, interlanguage talk, and second language acquisition. *TESOL Quarterly, 19*, 207-228.

Mackey, A. (1995). *Stepping up the pace: Input, interaction and interlanguage development: An empirical study of questions in ESL*. Unpublished doctoral dissertation, University of Sydney, Australia.

Nunan, D. (Ed.). (1992). Collaborative language learning and teaching. Cambridge: Cambridge University Press.

Nyikos, M., & Hashimoto, R. (1997). Constructivist theory applied to collaborative learning in teacher education: In search of ZPD. *The Modern Language Journal, 81*(2), 506-517.

Olsen, R. E. W. B., & Kagan, S. (1992). About cooperative learning. In C. Kessler (Ed.),

Cooperative language learning: A teacher's resource book (pp. 1-30). Englewood Cliffs, NJ: Prentice Hall.

Oxford, R. L. (1997). Cooperative learning, collaborative learning, and interaction: Three communicative strands in the language classroom. *The Modern Language Journal, 81*(4), 443-456.

Park, Su-Jin. (2000). *The effects of cooperative learning on the elementary school students' English communicative competence and affective factors*. Unpublished master's thesis. Gyoungin National University of Education, Inchon.

Pica, T. (1994). Research on negotiation: What does it reveal about second-language learning conditions, processes and outcomes? *Language Learning, 44*, 493-527.

Pica, T., & Doughty, C. (1988). Variations in classroom interaction as a function of participation pattern ands task. In J. Fine (Ed.), *Second language discourse: A textbook of current research* (pp. 41-55). Norwood, NJ: Ablex.

Rusell, D. R. (1993). Vygotsky, Dewey, and externalism: Beyond the student/discipline dichotomy. *Journal of Advanced Composition, 13*, 173-197.

Swain, M., & Lapkin, S. (1998). Interaction and second language learning: Two adolescent French immersion students working together. *The Modern Language Journal, 82*(3), 320-337.

Tudge, J. R. H. (1992). Processes and consequences of peer collaboration: A Vygotskian analysis. *Child Development, 63,* 1364-1379.

Vygostky, L. (1978). *Mind in society: The development of higher psychological processes*. Cambridge, MA: Harvard University Press.

Wertsch, J. V. (1979). The regulation of human action and the given-new organization of private speech. In G. Zivin (Ed.), *The development of self-regulation through private speech* (pp. 79-98). New York: Wiley.

Wertsch, J. V. (1985). *Vygotsky and social formation of mind*. Cambridge: Harvard University Press.

Wertsch, J. V. (1991). *Voices of the mind: A sociocultural approach to mediated action*. Cambridge, MA: Harvard University Press.

Wood, D., Bruner, J. S., & Ross, G. (1976). The role of tutoring in problem solving. *Journal of Child Psychology and Psychiatry, 17*, 89-100.

APPENDIX
Tests used to Measure the Students' Academic Performance

<u>Midterm Exam</u>

I. Multiple Choice (3 x 5 = 15)

   1. Choose one that is related to Direct Method.

    (1) Structural patterns are taught using repetitive drills.
    (2) The students' native language may be used when necessary.
    (3) The teacher should explain when s/he provides answers to students' questions.
    (4) Oral communication skills are built up around question-and-answer exchanges.

2. Choose one that is NOT related to Grammar-Translation Method.
    (1) Much vocabulary is taught in the form of lists of isolated words.
    (2) Inductive application of an explicit grammar rule is a useful pedagogical technique.
    (3) It does virtually nothing to enhance a student's communicative ability in the language.
    (4) There is no literature that offers a rationale or justification for it or that attempts to relate it to issues in linguistics, or psychology.

3. Choose one that is NOT related to Audio-Lingual Method.
    (1) Contextualization is a basic premise.
    (2) Native-speaker-like pronunciation is sought.
    (3) The use of the students' native language is forbidden.
    (4) Structures are sequenced by means of contrastive analysis.

4. Choose one that is NOT related to Silent Way.
    (1) Students gain autonomy in the language by exploring it and by making choices.
    (2) Students depend on the teacher to develop their own inner criteria for correctness.
    (3) The teacher uses student errors as a basis for deciding where further work is necessary.
    (4) The teacher should start with something the students already know and build from that to the new.

5. Choose one that is NOT true.
    (1) Competition can function as an extrinsic motivator.
    (2) Extrinsic rewards cannot have an effect on intrinsic motivation.
    (3) Intrinsically motivated behaviors aim at feelings of competence and self-determination.
    (4) Learners with instrumental orientation learn a language to further a career or academic goal.

II. True or False? If false, explain why false? (2 x 5 = 10)
  1. The ALM was not firmly grounded in linguistic and psychological theory.

  2. Community Language Learning emphasizes the use of music to create the relaxed concentration.

  3. In Communicative Language Teaching (CLT), sequencing is determined by the consideration of content function or meaning that maintains interest.

  4. The Natural Approach maintains that learners benefit from producing utterances in the earlier stage of language development, and that they should be as relaxed as possible in the classroom.

  5. We commonly attribute children's success to their widely observed tendency to acquire language subconsciously, that is, without overtly analyzing the forms of language themselves. This subconscious processing is similar to McLaughlin's (1990) controlled processing with focal attention to language forms.

III. Sentence Completion   (2 x 5 = 10)

1. (   ) refers to the concurrent teaching of language and subject matter. It uses the target language as the medium to convey informational content of interest and relevance to the learner.

2. (   ) learning--taking in isolated bits and pieces of information that are not connected with ones' existing cognitive structure—has little chance of creating long-term retention.

3. (   ) theory claims that motivation is highest when one can make one's own choices. It focuses on the importance of people deciding for themselves what to think or feel or do.

4-5. Linguist Noam Chomsky argued that language must not be considered a product of (   ) formation, but rather of (   ) formation.

IV.   Explain.   (4 x 3 = 12)

1. Explain the difference between a notional-functional syllabus and a structural syllabus.
2. Define the term, *motivation* from both behavioristic and cognitive perspectives.
3. Account for the situation below, using the following terms: integrative/instrumental orientation, and intrinsic/extrinsic motivation.

Situation
"Chulsu wants to study English hard because he wants to get a well-paid job after graduation."

V. Essay.   (1 x 3 = 3)

1. Discuss how strategies-based instruction (SBI) can contributes to language learning and teaching.

Final Exam

I. Multiple Choice (3 x 5 = 15)

1. Choose one that is NOT related to Desuggestopedia.
   (1)   Vocabulary is not emphasized.
   (2)   Students' mother tongue can be used.
   (3)   Music and fine arts play an important role.
   (4)   The teacher is the authority in the classroom.

2. Choose one that is NOT related to Community Language Learning (CLL).
   (1)   CLL evolved from the more general Counseling-Learning approaches.
   (2)   CLL is a humanistic approach based on a structural and a lexical syllabus.
   (3)   The teacher's use of the students' native language enhances student security.
   (4)   The teacher should work in a non-threatening way with what the learner has produced

3. Choose one that is NOT related to Total Physical Response (TPR).
   (1) It reflects the principles of child language acquisition.
   (2) The teacher uses the imperative to direct student behavior.
   (3) Spoken language should be emphasized over written language.
   (4) Error correction in the beginning stage helps to prevent fossilization.

4. Choose one that is NOT related to Communicative Language Teaching (CLT).
   (1) Native-like pronunciation is sought.
   (2) Drilling may occur, but peripherally.
   (3) Language learning is learning to communicate.
   (4) Grammatical explanation can be given when necessary.

5. Choose one that is NOT true.
   (1) Both CBI and a task-based approach aim to provide a natural context for language use.
   (2) In a task-based instruction, class activities have a perceived purpose and a clear outcome.
   (3) CBI states that language is learned most effectively when used as a medium to convey informational content of interest to the students.
   (4) A task-based approach is in line with the principles of the Whole Language Approach, in that it also supports the bottom-up approach to language acquisition.

II. True or False? If false, explain why false? (2 x 5 = 10)
   1. The most useful implication of Vigil and Oller's (1976) model for determining how you will administer error treatment is that cognitive feedback must be minimal in order to be effective.

   2. "Desuggestion," the key concept in Desuggestopedia refers to the strengthening of unwanted /blocking memories or psychological barriers learners bring to the learning situation.

   3. Top-down listening techniques typically focus on sounds, words, intonation, grammatical structures, and other components of spoken language.

   4. With the rapid spread of English as an international language, native-like accents have become a first and foremost goal in cross-cultural communication. Our goal as teachers of English pronunciation should therefore focus on developing accent-free speech that is indistinguishable from that of a native speaker.

   5. Current views of second language classroom methodology are almost universally agreed on the importance of some form-focused instruction within the communicative framework, ranging from explicit treatment of rules to noticing and consciousness-raising.

III. Sentence Completion   (2 x 5 = 10)
   1. Hendrickson (1980) recommended that (1   ) errors usually need not be corrected since the message is clear and correction might interrupt a learner in the flow of productive communication.

   2-4. While reading, readers bring what is called (2   ), that is, information, knowledge, emotion, experience, and culture to the printed word. There are two categories of

this: (3   ) include what we know about people, the world, culture, and the universe, while (4   ) consist of our knowledge about discourse structure.

5. According to *Bachman's (1990) model of language competence*, (5   ) competence is an intricate, complex array of rules, some of which govern the sentence (grammar), while others govern how we string sentences together (discourse).

IV. Explain.   (4 x 3 = 12)
  1. Explain <u>the difference(s) between intensive reading and extensive reading</u>.
  2. Explain <u>what the "Language Experience Approach" is</u>. Also, provide <u>an example</u> of it.
  3. Explain <u>what controlled writing is</u>, and give at least <u>one example</u> of it.

V. Essay.   (1 x 3 = 3)
  <u>Compare the process approach to writing instruction</u> with the product-oriented one.

Applicable levels: tertiary education
Key words: content-based instruction, cooperative learning, collaborative learning,
           peer-assisted learning, social constructivism

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