

An Empirical Study on the Application of Cooperative Learning to English Listening Classes

Min Han¹

¹School of Foreign Languages, China West Normal University, Nanchong, China

Correspondence: Min Han, School of Foreign Languages, China West Normal University, 637002 Nanchong, Sichuan, China. Tel: 86-134-5825-5306. E-mail: 6581779@qq.com

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Abstract

Cooperative learning is a strategic instructional system applied by many educators the world over. Researchers of cooperative learning have carried out the study in this field and proved that cooperative learning can create a more interesting and relaxed learning atmosphere. It is generally acknowledged that cooperative learning can reduce learners' anxiety, promote teacher-students and students-students relationships, stimulate learners' motivation and increase their self-confidence. In cooperative learning environments, the learners cooperate and communicate with each other to achieve their mutual goals. Listening, as one of the most important language inputs, its importance for English learning is self-evident. This paper researches on the feasibility and effectiveness of the application of cooperative learning to college English listening classes. An empirical study for a whole semester was carried out in the forms of questionnaire, pretest, posttest and interviews. All the results from the findings demonstrate that cooperative learning can improve learners' communicative competence significantly and cooperative learning is very effective in English listening classes in this study.

Keywords: cooperative learning, English teaching, interaction, learning atmosphere, shared goals

1. Introduction

One of the ultimate goals of education is not to transmit the fixed knowledge to students, but to enhance their capacity of acquiring knowledge actively and help them become life-long autonomous learners. Therefore, learning how to learn is more important than learning the fixed textbooks. For the past decades, the application of various teaching methodologies to the teaching practice by many English teachers has brought about great developments and diverse achievements to English teaching. Nevertheless, the current college English teaching system is still not so successful, especially for listening teaching. Many college students can neither express themselves fluently nor can they understand what others say. On the one hand, students have to learn many new words and grammatical rules by heart to pass various exams. On the other hand, "spoon-feeding" teaching approach still dominates most classrooms. Under such teaching environments, many college students generally receive what the teacher imparts to them passively rather than thinking actively while sitting in the classroom. Therefore, the passivity of the students and the dominance of the teachers form great obstacles for students' practice and use of the target language in class. In terms of listening class, it is quite difficult for many teachers to figure out satisfactory and effective ways to involve students in the classroom activities actively. A systematic approach for listening class is urgently needed. This study aims to provide a practical and useful way to help students learn better with the help of cooperative learning (CL). That is, this research tries to find out whether non-English majors can improve their listening skills with the help of CL.

2. Definitions and Basic Elements of Cooperative Learning

2.1 Defining Cooperative Learning

Paul J. Vermette (1998, pp. 5-6) defines cooperative learning in this way: "Cooperative learning is not just a strategy, part of a bag of tricks. It is also a philosophy, one in which the teachers see the class as a learning community that serves itself as it helps each and every member. A cooperative classroom team is relatively permanent, heterogeneously mixed, small group of students who have been assembled to complete an activity, produce a series projects or products and who have been asked to individually master a body of knowledge." Johnson, Johnson and Holubec (1993, p. 5) define CL as "Cooperative learning is the cooperation

through working together to accomplish the shared goals. Cooperative learning is the instructional use of small groups so that students work together to maximize their own and each other's learning". Kagan (1992) considers CL as the group learning activity which is organized so that learning is dependent on the socially structured exchange of information between learners in group and each learner is accountable for his or her own learning and is also motivated to enhance the learning of others. To conclude, CL is a classroom instructional approach in which students at different academic levels work together in heterogeneous groups to reach their common goals.

2.2 Basic Elements of Cooperative Learning

According to Sharan (1999), five basic elements are essential for CL. These five elements are not only the characteristics of good CL groups, but also the disciplines that must be observed to produce effective learning results and can help learners work more efficiently. These five basic elements are: positive interdependence, individual accountability, interpersonal and small group skills, promotive interaction and group processing.

Positive independence is the core of CL and it exists when group members know clearly that one cannot succeed unless everyone in the group succeeds. All the group members must realize the importance of achieving the common goals and each member must be accountable for accomplishing his or her own work and help others. Individual accountability means that although group members depend on each other to fulfill various tasks, they should try to study hard individually. Students are not born inherently knowing how to interact with others. So it is quite important for them to acquire the interpersonal and small group skills to communicate better with each other. Promotive interaction can be understood as individuals encouraging and facilitating mutual efforts to realize their shared goals. Regular group processing is crucial for group members to reflect on how well they have cooperated in the past and what needs to be improved for their future cooperation.

3. The Application of Cooperative Learning to Listening Classes

The author carried out this experiment in her university for one semester with the following hypothesis: 1) Students conducted with CL could make greater progress in terms of their listening skills; 2) The cooperative learning atmosphere would be more interesting and students would be more active in class than ever before.

3.1 Participants

The participants were sophomores from two different departments in the author's university. Two classes with 52 (History) and 53 (Physics) students were served as the experiment group (EG, History) and the control group (CG, Physics) respectively. For listening classes, CL was conducted for two hours a week in the experiment class while the traditional teaching approach was still adopted in the control class. They took English as a compulsory course in their first-two-year college study and had four hours for English learning in class every week for about 18 weeks each semester.

3.2 Data Collection

To ensure the validity of the test scores, the author used listening parts from "College English Test Band 4" (CET-4) as pretest and posttest. The test paper contained five parts: 20 short conversations (20%), 3 long conversations (20%), 5 passages with 4 questions for each (40%) and a spot dictation with 10 blanks of the missing words (20%). Since there were only 35 items in one CET-4 test, the author added some contents for the former three parts. Take the long conversations as an example. One CET-4 test paper has 2 long conversations with 7 questions, hence, the author added one more conversation with 3 questions from CET-4 test to this part. CET-4 is a test held by our National Ministry of Education for all the Non-English majors and its validity is widely acknowledged. The scores were analyzed by SPSS software.

At the end of this experiment, a questionnaire (in Appendix) was given out to students in the experiment class to investigate their attitudes towards CL. Besides, they were frequently interviewed after class by the author about their study throughout the semester. They were also encouraged to write down some suggestions for CL.

3.3 Research Procedures

The teaching procedure in the CL classroom is quite different from that of the traditional classroom. Most CL researchers recommend that a group with four students is the optimal number. Thus, dividing students into 13 small learning groups was the first thing to do. Teachers need to pay special attention to the heterogeneity while dividing groups. Each group should contain a mixture of students with regard to their cognitive ability, academic levels, gender and language proficiency. According to their scores in the pretest, the students were graded into advanced, average and weak ones. Each group contained one advanced, two average and one weak students. Other factors were also taken into considerations. For example, if the advanced student was introvert and inclined to studying alone, then an extrovert student who was willing to help others would be assigned to this

group. Group members chose a leader they trusted and the leader should be willing to work for the group. Next, students were taught some basic knowledge of CL such as its definitions and teaching procedure.

For listening classes, the author employed Learning Together (also called Circles of Learning) which was developed by Johnson and Johnson (1987). It lays stress on four aspects: face-to-face interaction; interpersonal and small-group skills; positive interdependence and individual accountability. Here is a detailed example of the teaching procedure in cooperative listening classes, and this is unit 5 in *Listening and Speaking (Course 3)* published by Shanghai Foreign Language Education Press:

1) Pre-listening

The subject about this unit is “Youth”. Three passages are contained in this unit. Take the first passage with a blank-filling for example.

Ashley’s Experiment:

The experiment	_____ the water of her area’s _____—the Ohio.
Purpose	To find out _____ in the waters, which she feared could lead to _____ bacteria or supergerms and thus endanger numerous people’s lives.
Procedure	1. Collected _____ from the Ohio over ten weeks by a simple device designed by herself. 2. Learned to analyze _____ herself by reading scientific journals.
Findings	_____ of _____ antibiotics are present in the Ohio.
Honor	1. Won the International Stockholm Junior _____ scholarship of _____. 2. Met by _____ Crown Princess Victoria.

Before listening to the materials, students were required to discuss with their group members about these questions relevant to the subject of this unit: “What do you think of youth as a stage in one’s life?” “What role should young people play in society?” They should speak out their ideas and listen to other members’ thoughts within their assigned groups and the teacher would act as a supervisor and controller to ensure that everyone was involved in the discussion. After discussing, they were encouraged to present their viewpoints. Some of the ideas were like this: “Youth is the golden stage in my life. As young people, we must set up our definite goals in life and try our best to achieve them.” “We are inexperienced, so we should be modest and learn from our elders to enrich our experience.” “Young people should play a responsible role in society. As the most energetic and healthy citizens, we can do a great deal for the progress of society on certain aspects, such as making some contributions to environmental protection.”

Then, some background information such as “West Virginia”, “the Ohio” and “a Virtual Nobel Prize for Teenagers” was introduced to the students to help them understand the text better. Next, students sat in the group and predicted the main idea of the passage according to the background information, the picture in the textbook and the contents in the exercise.

2) While-listening

The passage would be read 3 times. For the first reading, students needed to pay attention to the general idea rather than trying to grasp each exact word, of course, if the blanks were easy for them, they might also write down the answers. Then, they discussed with each other about the main idea. The exchange of the ideas could help them piece their scattered information together to form a comprehensive understanding about this passage. For the second reading, they should try to fill in all the blanks in the exercise. Next, they discussed again in their group about all the important details contained in this passage. For the last reading, all the answers were presented to students. After that, all students talked over the main idea and later some of them were asked to do the oral presentation for story-telling.

3) Post-listening

After accomplishing all the tasks, students would discuss the following questions related to the theme of this passage: What do you think of Ashley? Do you admire her? What can we learn from her? Some students said: “I greatly admire Ashley. She is a determined girl with great perseverance.” “She is a responsible girl with great intelligence. We should also try to contribute more to our society and be a responsible person like her.”

In CL environments, most students are more active and attentive since they are frequently involved in the discussion. Everyone has to say something, whether they want or not, rather than sitting there to be a silent listener. Their work would also be assessed by themselves and their peers as well as the teacher. Evaluation can

be very important in judging whether each student has mastered the material or not. At the end of each listening class, students would be required to discuss about what they, their partners and their group had accomplished and what needed to improve for better cooperations, and then handed in a reflection report on that.

4. Data Analysis and Findings

4.1 Data Analysis on Test Scores

Table 1. Stem and leaf display for pretest scores

CG		EG	
Frequency	Stem & Leaf	Frequency	Stem & Leaf
1.00	4 . 3	1.00	4 . 3
2.00	4 . 56	3.00	4 . 599
13.00	5 . 0222223333444	9.00	5 . 123333444
10.00	5 . 5666677889	10.00	5 . 5566666788
20.00	6 . 0001122222223333334	18.00	6 . 000011122223333334
5.00	6 . 55557	8.00	6 . 55777888
1.00	7 . 2	2.00	7 . 02
1.00 Extremes	(>=85)	1.00 Extremes	(>=82)

Table 1 demonstrates that in the pretest, the range of the scores is very close in these two classes. The score range for most students is from 52 to 67. Both classes have one student who scores 43 and above 80.

Table 2. Results of independent sample t-test for pretest

Pretest	N	Mean	SD	Variance	df	Sig. (2-tailed)	t	Mean Difference	Std. Error Difference
CG	53	58.68	6.905	47.684	103	.512	-.658	-.898	1.364
EG	52	59.58	7.069	49.974					

Since 2007, non-English majors in the author's university have been graded into A-class or B-class for English study according to their scores in the college entrance examination and the entrance examination they took after they entered the university. All the students in this experiment were in B-class, therefore, their mean scores were quite low mainly because of their lower academic performance in English learning.

Though the mean score of the experiment class is a little higher than that of the control class, but the significance level is 0.512, that is $p > 0.05$, hence, their mean scores have no significant difference. This indicates that students in these two classes have no obvious differences in their academic levels.

Table 3. Stem and leaf display for posttest scores

CG		EG	
Frequency	Stem & Leaf	Frequency	Stem & Leaf
1.00 Extremes	(<=42)	2.00	5 . 13
4.00	4 . 5889	11.00	5 . 56666678899
8.00	5 . 01222233	13.00	6 . 0123333334444
12.00	5 . 555666777889	17.00	6 . 55566677778889999
16.00	6 . 0001111112222233	6.00	7 . 001223
7.00	6 . 5555558	1.00	7 . 6
3.00	7 . 002	1.00	8 . 0
2.00 Extremes	(>=76)	1.00 Extremes	(>=85)

The stem and leaf display in table 3 shows that in the posttest, students in the control class score mostly from 50 to 65 and 28 students score above 60, while the score range for the experiment class is from 56 to 69 and 39 students score above 60.

Table 4. Results of independent sample t-test for posttest of CG and EG

Posttest	N	Mean	SD	Variance	df	Sig. (2-tailed)	t	Mean Difference	Std. Error Difference
CG	53	59.09	7.326	53.664	103	.000	-3.987	-5.444	1.365
EG	52	64.54	6.641	44.097					

In the posttest, the mean score in the experiment class is much higher than that of control class. As the significant level is 0.000, that is $p < 0.01$, we can say in this research, CL is very effective and brings significant results to students' listening competence in the experiment class. Students in the experiment class have made great progress in terms of their listening.

Table 5. Results of paired sample t-test for pretest and posttest of CG

CG	N	Mean	SD	Variance	Std. Error Mean	t	df	Sig. (2-tailed)
Pretest	53	58.68	6.905	47.684	.544	-.762	52	.449
Posttest		59.09	7.326	53.664				

For the control class, the mean score in the posttest is higher than that of the pretest, yet the significance level is 0.449 ($p > 0.05$), consequently, these two scores have no obvious difference. It means that in this research, students under the instruction of traditional teaching make no progress in their listening skills.

Table 6. Results of paired sample t-test for pretest and posttest of EG

EG	N	Mean	SD	Variance	Std. Error Mean	t	df	Sig. (2-tailed)
Pretest	52	59.58	7.069	49.974	.840	-5.909	51	.000
Posttest		64.54	6.641	44.097				

Compared with the scores in the pretest, the mean score in the posttest is improved by nearly 5 points for the experiment class. The significance level is 0.000, which demonstrates that students in the experiment class have made great achievements in their listening, that is, CL brings meaningful achievements to their study.

4.2 Data Analysis on Questionnaire

At the end of this research, a questionnaire was handed out to students in the experiment class to learn their attitudes towards the effects of CL in listening classes by offering scales for positive attitudes (strongly agree=5, agree=4, neutral=3, disagree=2, strongly disagree=1).

Table 7. Reliability of the questionnaire

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of items
.920	.916	10

Cronbach's Alpha coefficient is known as the internal consistency estimate of reliability of the sample examinees or the test scores. The number of items is ten, which means the test scores for each item of each student are tested by SPSS. Generally, if the alpha coefficient is above 0.6 (sometimes above 0.7), then it means the sample tested is reliable. The alpha coefficient for this questionnaire is 0.920, which is quite high and indicates that all the items of the questionnaire are valid and reliable.

Table 8. Learners' attitudes towards CL

	Total Number (52)	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	Mean
1	28 (53.9%)	10 (19.2%)	4 (7.7%)	6 (11.5%)	4 (7.7%)	4.00	
2	24 (46.1%)	12 (23.1%)	5 (9.6%)	8 (15.4%)	3 (5.8%)	3.88	
3	21 (40.4%)	11 (21.1%)	7 (13.5%)	7 (13.5%)	6 (11.5%)	3.65	
4	23 (44.3%)	11 (21.1%)	6 (11.5%)	5 (9.6%)	7 (13.5%)	3.73	
5	20 (38.5%)	13 (25%)	5 (9.6%)	10 (19.2%)	4 (7.7%)	3.67	
6	29 (55.8%)	10 (19.2%)	5 (9.6%)	5 (9.6%)	3 (5.8%)	4.10	
7	26 (50%)	9 (17.3%)	8 (15.4%)	5 (9.6%)	4 (7.7%)	3.92	
8	23 (44.2%)	8 (15.4%)	7 (13.5%)	9 (17.3%)	5 (9.6%)	3.67	
9	21 (40.4%)	13 (25%)	8 (15.4%)	6 (11.5%)	4 (7.7%)	3.79	
10	8 (15.4%)	3 (5.8%)	6 (11.5%)	26 (50%)	9 (17.3%)	2.52	

Before carrying out this research, the author interviewed all the students in the control and experiment classes about English learning. Most students expressed that they felt it was not not easy to learn English well, even they spent much time on it. Some said they had no interest in learning English at all. In class, most of them usually just sat in the seat to be passive listeners except being asked to answer some questions occasionally. They seldom communicated with others in English both in and out of class though many students did have desires to cooperate and communicate with their classmates more to improve their communicative competence. The reason for this lies partially in students themselves and partially in the teacher. On the one hand, some students still learn English by rote-learning without forming good and correct learning habits. Many students want to pass CET-4 by just reciting a large number of new words. It is not uncommon for the author to see some students always carry a thick book full of new words whenever they go. On the other hand, most classrooms are still dominated by the teacher who always occupies most in-class time to impart knowledge to learners' heads.

In contrast, after being conducted with CL, about 73.1% of student thought CL was effective for their English study and many students had mastered some basic cooperative skills. About 61.5% of students were willing to help others after finishing their own tasks. Through the communications with students, the author knew that many of them felt they were more confident than ever before in expressing their ideas owing to much oral practice within their group. When answering questions, 65.4% of students were less nervous than they used to be. As for self-study, 63.5% of the students felt CL not only taught them how to cooperate with others, but also urged them to form a good habit of independent learning mainly due to the pressure of the need to say something each class in the group. As for listening, 75% of students thought CL enhanced their listening abilities and 9.6% said they were not sure whether CL had improved their listening or not. Nearly 67% of students thought CL created an interesting learning atmosphere in which they could feel relaxed and less nervous. More than half (59.6%) students thought CL could bring benefits to their future study. Over 65% of students hoped that CL could be carried out in more English classes such as reading, writing and speaking. Still, there were 11 students who expressed that they were always independent in their study, so they did not like cooperate or exchange ideas with others. This survey indicates that although some students do not prefer CL, CL is favored by most students and stimulates most students' learning motivation.

4.3 Data Analysis on Interviews

Throughout the whole semester, the author often interviewed students in the experiment class about their

attitudes towards CL. Here are some ideas from them.

For many years, teachers always impart knowledge to us and we are just passive and silent listeners. While in CL, we are the center of the class which makes us less anxious.

CL involves much practice of English. CL develops my listening and oral skills. We want to be active participants in all the activities and the learning process becomes more interesting.

In cooperative classroom, learning is a shared task. Everyone is responsible for our common goal. I do hope to study hard and offer help to my group members.

Within our group, student-student and teacher-student relationships are harmonious because we receive more care, encouragement, respect and positive advice from each other and the teacher. But sometimes the subject such as “marriage” in unit four is unfamiliar and difficult for me to express ideas about it.

I am not interested in CL mainly because I am an independent learner and I like to study alone instead of cooperating with others.

To conclude, from all the tables, questionnaire and interviews presented in this research, it is clear to see that CL is effective in college listening classes.

5. Conclusion

Group discussion brings about more chances for students to practice their English. While sitting in the group, most students have a sense of safety and are willing to communicate, consequently their language fluency and accuracy get improved. In student-oriented classroom, students often have more confidence when expressing their ideas. For most time, they are the center in the classroom, what’s more, to perform better in class, they have an internal urge to study hard in and after class, gradually their self-access learning abilities will be promoted. With so many merits, CL has its own weaknesses. Sometimes, the listening materials may be too simple for some students while others may feel they are too difficult. It is really difficult for the teacher to find appropriate teaching approaches and learning materials to satisfy the needs of all the students at different academic levels. Limited time is another troublesome problem for the teacher, after all, all the tasks such as presentation, evaluation need much time. Despite all the weaknesses, CL is effective in this research and brings students remarkable academic achievements.

According to Krashen’s (1987) Input Hypothesis, acquisition is crucial for learners’ mastery of language. The more comprehensible inputs they acquire, the more comprehensible outputs they will produce. Listening, as one of the most important inputs, is worthy of more attention from both English teachers and students. The adoption of CL in listening classes not only makes the learning environments more interesting, natural and real, but also greatly improves the students’ communicative competence. The author hopes more researches on CL will be carried out in various teaching fields. The author also suggests further research particularly on the effectiveness of Dr Hosseini’s (2012) approach to CL, namely Competitive Team-Based Learning, which has been developed based on his Cognitive Socio-Political Language Learning Theory.

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Appendix

Questionnaire

- 1) Cooperative learning is effective for my study.
- 2) I have got used to communicating and cooperating with my classmates.
- 3) I often finish the task timely and provide help to others.
- 4) Cooperative learning helps me a lot in overcoming my nervousness in class.
- 5) I learn how to study on my own from cooperative learning.
- 6) Cooperative learning helps me improve my listening skills.
- 7) The cooperative learning atmosphere for English class is quite interesting.
- 8) Cooperative learning is beneficial for my future study.
- 9) I hope more cooperative and communicative activities can be carried out in more classes.
- 10) Cooperative learning hinders my independent thinking since I always like to study and solve problems on my own.

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