



The Impact of Heterogeneity and Homogeneity on Oral Performance through Cooperative Interaction Activity: A Case of Iraqi EFL Intermediate Learners

Asst. Inst. Waqid Maki Numan
College of Education for Human Sciences /University of Diyala

Abstract

The structure of groups, or the dynamics of "who collaborates with whom," is regarded as a vital factor in the realm of cooperative learning and teaching (Zamani, 2005, p. 1). A study conducted with 100 Iraqi EFL learners, classified into high and low proficiency levels based on a standardized English language proficiency test (IELTS, 2009) and a speaking task, involved the formation of two distinct groups: heterogeneous and homogeneous. Following a treatment phase comprising 12 sessions of 30 minutes each, where two types of tasks were implemented in the experimental group under instructor supervision, the findings revealed that learners improved their speaking skills through collaborative interactions, irrespective of whether they were grouped with more proficient or less proficient peers in a heterogeneous arrangement. Notably, the heterogeneous group outperformed the homogeneous group in oral tasks during the posttest, achieving average scores of 48.22 compared to 44.72, with pre-test scores of 44.72 and 40.92, respectively. Crucially, the data indicated that lower-performing learners did not experience setbacks in their development due to the presence of higher-achieving students; instead, the results underscored that cooperative interaction activities were especially beneficial for those with lower proficiency. It is expected that the findings from this study will offer educators significant insights into group composition within cooperative learning settings, thereby informing and improving their teaching methodologies.

Email:

waqid.en.hum@uodiyala.edu.iq

Published: 1- 3-2025

Keywords: Homogeneous, Heterogeneous, oral performance, Iraqi EFL Learners, cooperative interaction activities,, EFL learners'

هذه مقالة وصول مفتوح بموجب ترخيص
CC BY 4.0

(<http://creativecommons.org/licenses/by/4.0/>)

1.2. Introduction

Homogeneous groups in educational settings are characterized by the arrangement of students who possess similar levels of academic achievement, allowing them to engage with resources tailored to their specific instructional needs, as determined by assessments. On the other hand, mixed groups have students with different skill levels, which creates a more lively learning environment. Slavin (1990) explains that working in different groups helps people understand their own ideas and the ideas of others better. This makes it easier for them to work together on projects..

Social constructivists believe that working together in groups is a key way to make learning better. This teaching method aims to create a better way of learning that helps language students take responsibility for their progress, as mentioned by Barros and Verdejo (1998). Also, CL can be done using different types of groups, either similar or different, to help reach learning goals.

Many studies show that the cooperative learning model works well. Many studies have looked at teamwork, competition, and individual learning methods related to a shared way of thinking. Since the 1800s, about 750 studies support the idea that working together is the best way to learn. This large amount of research shows that working together in learning is good for students' results, showing how important it is in today's education. Using a cooperative learning approach helps kids work together and communicate with each other. They learn to share ideas and support one another. This process helps students keep track of their own behavior and also encourages them to adapt to what others need and expect to reach certain goals. As a result, these interactions can greatly improve children's language skills, ability to control themselves, and involvement in class activities.

Many studies show that cooperative learning works well. Many studies have looked at how people work together, compete, and learn on their own from a social psychology point of view. This thorough review found about 750 studies supporting the cooperative learning method since the 1800s, showing that it helps improve learning results.

Using a cooperative learning approach helps create an environment where students work together and share ideas. This requires good communication and teamwork among classmates. Getting involved helps students pay attention to how they act and motivates them to adapt to what their classmates need and expect as they work towards shared goals. These teamwork activities can really help improve children's language skills, their ability to control their behavior, and how much they join in during class.

Social constructivists believe that learning together with others is an important way to improve education. This plan wants to make teaching more connected, which will help language learners take more responsibility for their learning, according to Barros and Verdejo (1998). In addition, teachers can use different ways to organize students into groups, either with similar skill levels or mixed levels, to help them reach their learning goals.

Providing a cooperative learning environment helps children work together and interact with each other. This method requires good communication and teamwork among students, helping them to keep track of their own actions. As they work together towards shared goals, children learn to adapt to the needs and expectations of their classmates, which can lead to significant improvements in their language skills, self-regulation, and overall engagement in classroom activities.

Consequently, this research aims to explore the impact of a cooperative interaction activity program that incorporates both heterogeneous and homogeneous groupings on the enhancement of oral communication skills among intermediate learners. Additionally, the study seeks to determine the extent to which such an interaction activity program contributes to the improvement of their language proficiency

Research questions

Thus, to concentrate on the aims of the present study, the bellow research questions are regarded.

Q1: Does G-Hom and G-Het grouping have any significant effect on Iraqi EFL learners' oral skill development?

Q2: What is the effect of Cooperative Interaction Activity on Iraqi EFL learners' oral skill development?

2. Literature Review

Scharer (1983, p.106) characterizes homogeneous streaming as the categorization of students into classes where it is presumed that the overall achievement of the students in a particular class surpasses that of the class immediately below it. This approach entails organizing students based on their prior accomplishments, allowing them to progress at a pace that aligns with their level of achievement alongside peers who exhibit a similar working speed (cited in Perera, 2010). A wealth of research has explored the practice of grouping language learners according to their proficiency or English language level. For instance, Slavin (1987) describes ability grouping as a method of organizing students for instructional purposes based on their abilities or achievements, aiming to diminish their diversity (p. 79). This strategy is thought to facilitate better management and engagement of students, as highlighted by Slavin (1987; 1990), who notes that the benefits of ability grouping are numerous.

1. Ability grouping is a teaching method that allows students to learn at their own pace based on how well they do in different subjects. This method tries to lower the chances of students failing in school. This approach helps teachers change their teaching methods to better fit the different needs and abilities of each group of students..

2. This system allows for personalized teaching. It helps students who are more advanced to work on harder topics faster, while giving those who need extra help more time and support to understand important ideas in a less mixed group. This setup also increases the interest and motivation of smart students because they are less likely to get bored when learning with classmates who have similar skills. On the other hand, students who struggle more tend to get more engaged when their teachers don't put too much pressure on them.

3. In summary, supporters of ability grouping say that it makes teaching easier by letting teachers adjust their lessons to match the similar skill levels of students in the class. This lessens the need for big changes in how teachers teach and how students learn, which usually happen in groups with different skill levels. Kerckhoff (1986) pointed out that talented students can learn faster without having to slow down for those who struggle.

Conversely, Hallinan and Sorensen (1983) argue that students with lower abilities may gain advantages from such segregation, as it allows educators to tailor the curriculum and instructional speed to better suit their learning requirements.

The disparity in learning speeds can lead to situations where advanced learners experience disengagement due to the prolonged and simplistic explanations aimed at slower learners. When the educational needs of both groups are not adequately addressed, it can result in

challenges within the classroom environment (Khazaenezhad, Barati, & Jafarzade, 2012). This disengagement may subsequently contribute to issues in classroom management. Ability grouping is often viewed as a solution to these management challenges, as it is believed that students organized by ability levels are more manageable and attentive (Hallinan & Sorensen, 1983). Educators express a desire to implement ability grouping as a strategy to effectively address the diverse academic needs present in their classrooms (Ansalone & Biafora, 2004).

The complexities associated with ability grouping can be analyzed through the lens of an input-process-outcome framework. In this model, the initial element, input, emphasizes the significance of individual factors in instructional settings. However, this is precisely where the system may encounter difficulties, as the grouping process subjects students to varying levels of academic content, discourse, and teaching quality. The second element, process, raises considerable concerns for educators and curriculum designers. Ultimately, the input, or instruction, leads to divergent learning outcomes in classrooms categorized as high- and low-group, making the outcome the most apparent aspect of this model.

Furthermore, empirical studies indicate that ability grouping significantly contributes to the variability observed in student growth and achievement. This variation is largely attributed to the enhanced content coverage and depth that ability grouping facilitates. Slavin's grouping strategies can be effectively understood through the framework proposed by Carbonaro, who notes that certain grouping plans can yield positive results across different educational environments. Slavin classifies these strategies, with one notable category being ability-group class assignments.

Regardless of the grouping strategy adopted by educational institutions, it is common to encounter three primary ability groups: high, middle, and low. In some instances, educators have opted to establish remedial groups in lieu of low ability groups. The predominant rationale for homogeneous grouping is to enable educators to address the diverse learning needs of students more effectively. The idea that grouping students by ability leads to better learning is backed by a lot of research. Tumey points out that the main goal of this method is to put together students who can work well together in their studies. An important part that helps classrooms for gifted students succeed is including tough mental challenges. These challenges often focus on solving problems and thinking critically.

Also, putting students in groups based on their abilities is an important way to provide a different type of teaching that suits the needs of gifted students. In these focused settings, students usually show fewer distractions and are more involved, which leads to more discussions about learning (Gamoran et al. , 1993). However, it is crucial to recognize, as noted by Gamoran et al. (1995), that being engaged in tasks does not automatically imply cognitive involvement.. Nonetheless, the discourse among high-ability students has the potential to significantly enhance instructional quality and foster higher cognitive functioning (as cited in Hostetter, 2013).

Research conducted by Baer (2003) indicates which in university classes with a diverse groups of learners abilities, the talents of each groups can create opportunities for achievement among both average and high-achieving learners, without adversely affecting the performance of low-achieving students. Additionally, D'Angelo (2006) explored the effects of reading comprehension in urban elementary schools, comparing heterogeneous group settings with traditional homogeneous group environments. The findings revealed no significant differences in reading achievement between the two group types; however,

students in flexible ability grouping (homogeneous) demonstrated greater reading success compared to those in a whole group (heterogeneous) instructional format.

Methodology

In the current investigation, the researcher chose a sample of 100 individuals enrolled in English conversation courses at Private English Institutes, such as Oxford, located in Diyala, Iraq. The people in this study were carefully selected from those looking to get better at speaking clearly at an intermediate level. To make sure all the participants had the same starting level, the researcher used the International English Language Testing System (IELTS, 2009) to check their English skills before the study started. This evaluation helped to divide participants into similar and different groups based on their test scores. It's important to mention that the participants had different ages and educational backgrounds, which led to a wide range of skill levels.

Participants were grouped based on their IELTS scores. Those with scores between 30-40 and 50-60 were put in the mixed group, while those scoring between 40-50 were placed in the same group. So, there were 50 students in each group. To check their speaking skills, a pre-test was held. This involved one-on-one interviews to reduce outside distractions, like interruptions or noise from others. Each interview took 11 minutes, and during that time, people talked about a specific topic. The interviews were recorded and both the researcher and a coworker looked at them to make sure the scoring was consistent.

The next step of the study was to use the treatment. The researcher made two different kinds of speaking activities for both groups. One activity was describing a picture, where participants talked together about an image they saw. The other activity was called information gap, where each student had their own information that the others didn't know. These tasks were changed from the speaking exercises in their course materials, especially the book "English in Mind" by Puchta and Stranks (2010). This organized method wanted to help the participants improve their speaking skills with engaging and fun activities.

In the research, students from both cohorts, irrespective of their personal skill levels, were given the same speaking assignments. This setup required the same participants to partake in a total of twelve speaking tasks, with each of the two speaking tasks comprising six activities, which were conducted through collaborative efforts and paired interactions among peers. The researcher made every effort to maintain consistency across all variables, including the teacher, speaking tasks, and the number of activities, ensuring that the only variable was the grouping itself. The instructional process for both groups adhered to the predetermined schedule of the experiment, which comprised twelve sessions for each group, in addition to four sessions allocated for evaluation and testing.

The oral interviews conducted with participants followed the same format as the pretest and were recorded and evaluated by the researcher along with two colleagues to ensure inter-rater reliability in scoring. The posttest scores were derived from the IELTS scoring band that was established in 2009. A comparative analysis was performed between the average scores of the speaking component of the IELTS examination and the posttest scores for each group. To evaluate the influence of homogeneity and heterogeneity on the speaking scores of the participants, a paired sample t-test was employed. Additionally, a t-test of independent-samples was carried out to examine the differences in the means of score between both pretest and posttest of both experimental as well as control.

Results

To analyze the results, the researcher implemented two separate classification systems: homogeneous and heterogeneous groups. A comparative analysis was performed to explore

the notable differences in Oral Skill Development between these two group types, directly addressing the research question. An independent sample test was conducted for this purpose, does exist in the development of oral skills between these two classifications. Detailed findings from the tests are presented in the following tables.

Table 1
The mean scores for pre-test and posttest in both groups

	Type	N	Mean	Std. Deviation	Std. Error Mean
Pretest	Hetero	50	40.9200	6.78486	.95952
	Homo	50	44.7200	3.03073	.42861
Posttest	Hetero	50	45.6400	8.90026	1.25869
	Homo	50	48.2200	4.61714	.65296

The findings reveal that the average score for the homogeneous group during the pre-test was 44.72, while the heterogeneous group had a lower average of 40.92. Following the post-test, the homogeneous group demonstrated an improvement, achieving a mean score of 48.22, in contrast to the heterogeneous group's mean score of 45.64. This data underscores the importance of assessing the equality of variances, a critical assumption for performing the independent sample test, which was evaluated through Levene's Test.

The results from the aforementioned test indicate a significance level of $\text{sig} = 0.000$, which is significantly lower than the 0.05 threshold. This result means that we can't assume the two groups have similar variances. Therefore, we need to look at the second row of the table for more information. In the pre-test situation, we found a significance level of 0.001 This supports the decision to reject the null hypothesis and shows that there is a meaningful difference in scores between the two groups (the similar and diverse groups).

In the follow-up test, the significance level was 0.073, which is higher than 0.05. Because of this, we accepted the null hypothesis. This result means that there is not a noticeable difference in how well the two groups are doing right now. The chart shows how the average scores of both groups changed from the beginning to the end of the test. It reveals a big improvement in speaking skills, indicating that both group methods help students learn better by working with each other.

Also, to see how different groupings affect speaking skills, we did a test with separate groups. This analysis looked at the score differences between the control group and the experimental group after they took part in Cooperative Interaction Activities. The results of this study will help us understand how well mixed groups help improve students' speaking skills.

Table 2.
group statistic on oral performance of both groups

	Group	N	Mean	Std. Deviation	Std. Error Mean
Heterogeneous	Experimental	50	46.6400	9.16462	1.29607
	Control	50	39.9200	5.43924	.76922

The test results show a significance level of $\text{sig} = 0.000$, which is much lower than the usual limit of 0.05 . This result means that the idea that both groups have the same level of variation is not true. So, we need to look at the second row of the table that shows how to deal with the different variations. Also, the importance level for the scores of the mixed group is noted as 0.000 , which is less than the 0.05 mark ($\text{sig} = 0.029 < 0.05$). As a result, we can be 95% sure that the original idea (H_0) is not correct, which shows a meaningful difference between the control group and the experimental group.

Table 4.3
Paired samples test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	pre homo experimental - post homo experimental	-6.0800	3.98873	.79775	-7.72647	-4.43353	-7.621	.000	

In the case of grouping similar items together, the test's significance level is 0.000 , which is much lower than the usual limit of 0.05 (since 0.0029 is less than 0.05). This finding indicates that working together in activities has a big impact on how well learners improve their speaking skills. The use of Cooperative Interaction Activities has shown to work well in both mixed and similar groups, leading to better scores and improved speaking skills for learners.

Table 4.4
Paired samples statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	pre homo experimental	44.8400	25	3.09139	.61828
	post homo experimental	50.9200	25	4.56362	.91272

The table shows that the average score for the pre-test is 44.84 , while the average score for the post-test is 50.92 . We also did a detailed study to see how Cooperative Interaction Activities helped improve speaking skills in learners, whether they were in similar groups or mixed groups. This evaluation used two types of tests: independent sample tests and paired sample tests, to make conclusions. The independent sample test was mainly used to look at whether there were differences in scores between the control group and the experimental group after they did Cooperative Interaction Activities. This was done for both types of groups. Also, the analysis showed a big difference in the scores related to teamwork.

activities and the growth of speaking skills between the control group and the experimental group.

Also, to understand how Cooperative Interaction Activities improve speaking skills in the experimental group, a One-Way ANOVA test was used. This analysis encompassed four categories, including both homogeneous and heterogeneous groups during the pre-test phase, as well as the homogeneous and heterogeneous groups in the post-test phase.

Table 4.5
ANOVA

experimental					
	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	1451.000	3	483.667	11.923	.000
Within Groups	3894.240	96	40.565		
Total	5345.240	99			

The data presented in the table indicates that the P-Value of the conducted test is 0.000. Consequently, at a 95% confidence level, the null hypothesis is rejected. This suggests that the impact of Cooperative Interaction Activities on the development of oral skills varies among at least two groups. To identify the specific groups that exhibit differences, the Scheffe post hoc test will be employed. Initially, descriptive statistics for the four groups will be provided, followed by the results of the test.

Analyzing the statistical metrics of the scores across the four groups, it is evident from the preceding tables that the mean score for the post-test of the heterogeneous group is the highest, recorded at 51, while the pre-test minimum for this group stands at 42. Additionally, the overall average score is noted to be 47. Given the relatively high standard deviation, it can be inferred that there are significant differences among the groups.

Table 4.6
The pre-test and post-test score distribution

Scheffe^a

Grade	N	Subset for alpha = 0.05	
		1	2
pre heterogeneous	25	42.2800	
pre homogenous	25	44.8400	
post homogenous	25		50.9200
post heterogeneous	25		51.0000
Sig.		.571	1.000

The mean scores for homogeneous sub-scores shown in above table

The data presented in the table of pre-test scores reveals that both the homogeneous and heterogeneous groups fall within the same category, suggesting that there is no significant difference between them. Similarly, the post-test scores for both groups also align within the

same category, further indicating that the two groups do not differ from one another. In contrast, other comparisons, such as between the pre-test scores of the heterogeneous group and the post-test scores of the homogeneous group, show a distinction, as do the pre-test scores of the heterogeneous group when compared to the post-test scores of the heterogeneous group.

5.4. Conclusion

In this study, the effects of homogeneous and heterogeneous grouping on the speaking skills acquisition of Iraqi EFL students, as well as the implementation of cooperative activities, were examined within the context of language institutes and EFL classrooms in Diyala, Iraq. The data collected revealed that the grouping method significantly influenced the speaking scores of the participants. Furthermore, the results demonstrated those learners in the homogeneous group conducted in the post-test associated with their counterparts in the heterogeneous ones, indicating that those in the experimental ones outperformed those in the control group.

References

- Baer, J. (2003). Grouping and achievement in cooperative learning. *College Teaching*, 51(4), 169-174.
- Barros, B., & Verdejo, F. (1998). *Designing workspaces to support collaborative learning*. Castellón: National University of Distance Education. <http://dx.doi.org/10.1007/3-540-64574-8>.
- Brown, A. L. (1975). The development of memory: Knowing, knowing about knowing, and knowing how to know. In *Advances in Child Development and Behavior* 10(2), H.W. Reese, ed. New York: Academic Press.
- Bygate, M. (2001). *Speaking*. Cambridge: Cambridge University Press.
- Feldhusen, J. F. & Moon, S. M. (1992). Grouping gifted students: issues and concerns. *Gifted Child Quarterly*, 36, 63-66.
- Hallinan, M. T., & Sorensen, A. B. (1983). Tracking: from theory to practice. *Sociology of Education*, 67(2), 79-84.
- Kayi, H. (2006). Teaching speaking: activities to promote speaking in a second language. [Online] <http://iteslj.org> [Accessed: 13th February 2015].
- Krashen, S. D. (1982). *Principles and practice in second language acquisition*. Oxford: Pergamon Press.
- Kayi, Hayriye. (2006). teaching speaking: activities to promote speaking in a second Language. University of Nevada. *The Internet TESL Journal*, 12(11). November 2006 (<http://iteslj.org/> being accessed on May 20th, 2009).
- Larsen – Freeman. D. (2000). *Techniques and principles in language teaching*. Oxford. Oxford University Press.
- Long, M. (1983). Native speaker/non-native speaker conversation and the negotiation of comprehensible input. *Applied Linguistics*, 4, 126-41.
- Long, M. (1996). The role of the linguistic environment in second language acquisition. In W. Ritchie, & T. Bhatia, (eds.), *Handbook of Second Language Acquisition*. San Diego: *The Journal of Applied Linguistics* 2(1) Academic Press.
- Lawrenz, F., & Munch. T. W. (1984). The effect of grouping of laboratory students on selected educational outcomes. *Journal of Research in Science Teaching*, 21(7), 669-708.
- Marr, M.B. (1997). Cooperative learnign: a brief review. *Reading and writing quarterly*, 13, 7-20. <https://doi.org/10.1080/1057356970130102>.
- Perera, M. (2010). Coping with the students' heterogeneity in the English language classrooms: A collaborative action research.

- Pica, T. (1987). The impact of interaction on input comprehension. *TESOL Quarterly*, 21, 737-58.
- Pica, T., Young, R., & Doughty, C. (1987). The impact of interaction on input comprehension. *TESOL Quarterly*, 21, 737-58.
- Richards, J. C. (1990). Listening comprehension: Approach, design, procedure. *TESOL Quarterly*, 17(2): 219-240.
- Richards, J. C., & Rodgers, T. S. (2001). *Approaches and methods in language teaching (2nd Ed.)*. Cambridge: Cambridge University Press.
- Richards, J. C. & Rogers, S. (2000). *Approaches and methods in language teaching*. (New Edition) Cambridge: Cambridge University Press.
- Spires, R. (1983). The effect of teacher in-service about learning styles on students' mathematics and reading achievement. *DAI-A*, 44(5), 1325.
- Schofield, I. W. (2010). International evidence on ability grouping with curriculum differentiation and the achievement gap in secondary schools. *Teachers College Record*, 112, 1492-1528.
- Shields, C. (2002). A comparison study of student attitudes and perceptions in homogeneous and heterogeneous classrooms. *Reoper Review*, 24(3), 115-119.
- Slavin, R. E. (1990). Point-counterpoint: Ability grouping; cooperative learning and the gifted. *Journal for the Education of the Gifted*, 14(3), 3-8.
- Swan, M. (1985). A critical look at the communicative approach. *ELT Journal* 39(1), 2-12.
- Zamani, M. (2018). Cooperative learning: Homogeneous and heterogeneous grouping of Iranian EFL learners in a writing context. *Cogent Education*, 3(1), 1-11. |