



## **A Comparative Effect of Using Fishbowl and Carousel Brainstorming Strategies on EFL Learners' Foreign Language Speaking Ability and Anxiety**

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### **Abstract**

This study was an attempt to investigate the effect of two types of cooperative learning modalities, namely Fishbowl and Carousel Brainstorming strategies on EFL learners' foreign language speaking ability and anxiety. To fulfill the purpose of this study, 60 (male and female) EFL learners at Tehran University English School, were selected based on their performance on a sample of piloted PET. They were randomly assigned into two experimental groups, i.e., Fishbowl and the Carousel Brainstorming strategies. The Second Language Speaking Anxiety Scale (SLSAS) and the speaking section of PET were administered as both pretest and posttest to determine the level of the participants' foreign language speaking anxiety, and speaking ability, respectively. In order to analyze the data, ANCOVA and Independent Samples t-test were used. The results revealed that both null hypotheses were rejected implying that Carousel Brainstorming group outperformed Fishbowl group on speaking ability, and reduction of speaking anxiety.

**Keywords:** Fishbowl Strategies, Carousel Brainstorming Strategies, Speaking Ability, Speaking Anxiety, EFL Learners

### **INTRODUCTION**

Speaking is the medium through which we communicate with the world; however, speaking a foreign language fluently and accurately is not an easy task. In fact, a large percentage of language learners around the globe study English to improve speaking proficiency (Rischarids & Renandya, 2002, as cited in Nazara, 2011).

Furthermore, speech communication is the base of development and is not just a tool for practicing the language (Wagner-Gough & Hatch, 1975; as cited in Tsou, 2005). Occasionally, learners claim that they have mental blockage while they are trying to give

a correct answer. Therefore, teachers should provide appropriate opportunities for the language learners to improve their self-confidence and start speaking the new language.

In line with this claim, Patil (2008, as cited in Boonkit, 2010) asserted, “building up the learners’ confidence to eliminate the fear of making errors is a priority that teachers should consider in order to make the learners feel comfortable with their language use”. As Hedge (2001, p. 261) states, learners need to speak competently in order to improve relationships, impress other people, and respond in settlement negotiations. Realizing the high value of speaking skill development, the bulk of studies (Al Hosni, 2014; Ferris & Tagg, 1996; Nazara, 2011; Pathan, 2013; Tanveer, 2007) report learners’ difficulty to master this skill.

Anxiety has been identified as a common emotional reaction in foreign language classrooms. Researchers have found that one-third of foreign language learners experience at least a moderate level of foreign language anxiety (Horwitz, 2001). Scovel (1978) has also found that foreign language anxiety has a wide range of potential negative effects on foreign language learning. Worry could be a very debilitating reaction because it occupies cognitive capacity that otherwise would be devoted to the task in hand, for example, speaking a foreign language (Tobias, 1985). Tobias also puts speaking anxiety as an obstacle that either inhibits the recall of previously learned material at the output stage, or causes problems at the input and processing stages of learning.

The concept of cooperative learning can widely be used in the area of language teaching and learning mainly when it comes to a more effective oral performance. Cooperative learning is significantly “more structured, more prescriptive to teachers about classroom techniques, more directives to students about how to work together in groups, and more targeted to the public schools” (Mathew, Cooper, Davidson, & Hawkes, 1995, as cited in Oxford, 1997, p. 445). In accordance with the purposes of cooperative learning, Oxford (1997, p. 445) argues that cooperative learning promotes motivation, causes critical thinking, improves interest in subjects, develops academic peer norms, increases self-esteem, and decreases anxiety and subjectivity. The results of the study conducted by Lonning (1993) revealed that cooperative learning strategies create a positive atmosphere that encourages participation.

One of the cooperative learning strategies is Fishbowl, which is offered by the researchers for improving speaking skill. This method can create active students in speaking classes and they can practice their speaking skill - Inner Circle/Outer Circle or Socratic method- that is probably effective to create a comforting atmosphere in which learner-learner and learner-teacher relationships are emphasized.

Another cooperative learning subcategory adopted by the researchers is Carousel Brainstorming. This strategy is a questioning technique, in which different questions are asked, to encourage learners to generate lots of ideas, enhance group work and allow physical movement. Regier (2012) claims that Carousel Brainstorming is the best way to get learners out of their chairs. Like many others, Simon (2013, p. 1) believes it can be used “to discover or discuss learned material or to study new topics which allow for Small

group discussion followed by whole-class reflection". As a result, learners can generate and share large amounts of data with an active and participant-centered method.

In this study, the researchers were interested in seeking practical strategies to enable EFL learners to perform practically when learning and speaking English. Accordingly, the purpose of the study was to investigate the comparative level of effectiveness on foreign language speaking ability and anxiety via implementing two techniques of Fishbowl and Carousel Brainstorming.

## **LITERATURE REVIEW**

### **Speaking**

While reading and listening are considered the two receptive skills in language learning and use, writing and speaking are the other two productive skills necessary to be integrated in the development of effective communication. Zaremba (2014) claims that among all four macro English skills, speaking is probably the most crucial skill for communication to happen. Building a successful communication by means of speaking usually results in a number of benefits for EFL speakers and even business organizations. For various business purposes, for instance, effective speaking skills cause achievements during ceremonial speaking activities, job training activities, job interviews (Osborn, Osborn, & Osborn, 2008, as cited in Boonkit, 2010).

Zhang (2009) believes there is little opportunities for EFL learners to speak outside the classroom. They are hardly ever exposed to English speakers or interact to the members of the international community. This can be a logical reason for the teachers to provide situations and activities in which their learners' competence is improved. Speaking proficiency also includes the knowledge of how native speakers of one language use the language in the context of structures interpersonal exchange, in which many factors interact (Richards & Renandya, 2002).

The act of speaking is considered more complicated than general everyday conversation considering the audience due to the involvement of a number of other skills. These skills are included the speaking delivery process; for example, choosing topics, organizing thoughts, adjust the message, and adapting to listener feedback (Lucas, 2001, as cited in Boonkit, 2010).

### ***EFL Speakers Strengths and Weaknesses***

A number of factors related to speaking skills like Pronunciation, vocabulary, and collocations are singled out as important to be strengthened in building fluency for EFL learners, which influence English speaking performance. Moreover, Tam (1997, as cited in Khodabakhshzadeh, & Mousavi, 2012) stated that providing variety of situations and frequent speaking tasks for learners plays a significant role in the improvement of their fluency when speaking.

According to Shumin (1997 as cited in Richards & Renandya, 2002), a number of effective elements on the quality of speaking could be included "listening skills, sociocultural factors, affective factors, and other linguistic and sociolinguistic competence such as

grammatical, discourse, sociolinguistic, and strategic competence". Of all major skills, speaking ability is believed to be the most anxiety-provoking skill (MacIntyre & Gardner, 1991), and there is evidence that language-learning anxiety differs from other forms of anxiety.

### **Language Anxiety**

Language Anxiety, is defined as "anxiety only when learning a language that is potentially anxious" (Horwitz et al., 1986), and is expressed as a form of state anxiety, that is not only common among language learners, but also it can cause problems in the process of learning the second language (McIntyre & Gardner, 1991). MacIntyre and Gardner (1991, 1994) also argued that language anxiety might occur in any of three phases of language learning, including "input," "processing," and "output." In the "input" stage, anxiety can lead to poor attention and poor first processing. People with high anxiety seem to be more easily distracted because their time is divided between the processing of relevant and unrelated information. If the activity is simple, the effect of anxiety on processing will be reduced, and the more difficult the assignment, the more anxiety effects will be in the process of processing. New information interferes with old information is an example of the effect of anxiety on processing.

In the output stage, anxiety shows its effect during the data retrieval phase as the experience of emptying the mind during the exam. The three-step pattern of learning shows that increased efforts can cut the negative effect of anxiety in each stage (Tobias, 1985). However, the speed of second-language interconnection is usually faster than allowing such retrieval. If there is no such opportunity for redress, anxiety, agitation will affect all stages of learning.

### ***Anxiety of Foreign Language Learners***

The second language teachers, in the process of learning the second language, commonly examine the important role of emotional factors and the way learners perform in the class. Different cultures of the learners of the second language create a lot of problems that the learning anxiety is one of them (Elkhafaifi, 2005, p. 208).

The first definition of "Second Language Learning Anxiety" was provided by Horwitz et al. (1986, p. 125). In his opinion, this phenomenon is a sense of tension, embarrassment, fear, apprehension, and anxiety about the negative evaluation of others, which sometimes has the ability to put him at risk in different learning situations and prevents him from making contact, direct communication and face-to-face conversation with a learner.

By disrupting the focus and attention of the second language learner, anxiety weakens his ability to learn and reduces his ability to achieve academic achievement (Horwitz et al., 1986). According to them, anxiety shows itself in poor performance of the learner and low scores in different language tests. Sometimes, the person feels high anxiety so he changes his field of study or gives up his desired future career. Thus, changing this negative reaction and reducing the anxiety of the second language learners is possible by creating a calm and pleasant environment. Trying to change these attitudes and

behaviors are among the most important tasks of both instructors and learners (Akhtari, 2013, p. 314).

Second language learning anxiety may occur during learning of each of the four language skills, namely, hearing, speaking, reading and writing or interacting in different stages of these skills. With regard to the anxiety of speaking and speaking a second language in class, one can only point out the research conducted by Young (1991, p.426) on English language learners. Young's results indicated that learners generally refused to take part in the class because of the great fear and anxiety of speaking in English.

### **Cooperative learning**

One of the most productive and outstanding areas in education is Cooperative learning. Cooperative learning is the act of working with other students' to realize shared learning goals (Johnson & Johnson, 1987). According to Deutsch (1962), each student can then reach his or her learning goal only if the other group members achieve theirs. Besides, Dotson (2001) defined Cooperative Learning as a "teaching arrangement that refers to small, heterogeneous groups of students working together to achieve a common goal". In other words, learners are not only responsible for their own learning but also for their partners.

### ***Fishbowl Strategy***

There is a verity of instructional methods in the area of cooperative learning one of which is called 'Fishbowl' strategy. Fishbowl is a communicative conversation activity, which presents stimulating ways to solve learning hurdles. As Cholewinski (1999, p. 1) says this method is "Very dynamic and intensely demanding at the cultural and the conversational level, this activity casts new light upon issues dealing with reticent communicative English students.

Elsewhere in the literature, Fishbowl is considered as a technique to discuss hot topics (Johnson, 2011). Similarly, Silberman (2002, as cited in Andriana & Syarfi, 2015) maintained that it is a teaching strategy, in which most of the participants in the process of discussion form a big circle around a smaller circle. In fact, the smaller circle members are the active conductors of the discussion. In sum, the aforementioned method is specialized to practice discussion in groups. Siagian and Surya (2017) claimed that Fishbowl strategy requires students to use personal knowledge and opinions; therefore, it can be adopted in classes with students of different range of skills and experiences.

According to Priles (1993, p. 49), Fishbowl strategy or inner-outer circle strategy has two circles, one of which is bigger as places around the smaller one. They also added that Fishbowl is traditionally a classroom discussion group in which the 'inner circle' or Fishbowl is responsible to ask the questions, present opinions and share information. While the 'outer group', which comprises the majority, are called observers. The observers should listen carefully to the ideas presented by the inner group and pay attention to process. She also pointed that sometimes there are two diametrically vacant chairs available behind the inner circle in order to let the outer participants to join the discussion.

The observers have zero involvement in the discussion and act as inanimate object. Inevitably, during most of the time of the discussion, the observers remain silent just listening to others' ideas (Beck, 1999, p.79). This group is permitted to share their questions, opinion or inferences only by teachers consent. Ideally, members of the outer circle should be anxious to participate.

### ***Carousel Brainstorming Strategy***

Osborn coined the term brainstorming in his 1953 book. He claimed that students could improve their creativity by the help of brainstorming. In a brainstorming session, a number of rules like, no criticism of idea is allowed; imaginary and even wild ideas are accepted; a large quantity of ideas is welcomed, should be observed.

MacDowell (1999, as cited in Mogahed, 2011, p. 3) describes Brainstorming as "the act of defining a problem or idea and coming up with anything related to the topic. No matter how remote a suggestion may sound. All of these ideas are recorded and evaluated only after the brainstorming is completed". Therefore, it means thinking quickly about anything related to a topic. Furthermore, other researchers (Levine, Heuett, & Reno, 2015; Furner, 1995) defined brainstorming as a technique to generate ideas and solve problems. In other words, it is a technique to develop many ideas for future use.

A specific type of brainstorming which is also a method of cooperative learning is called Carousel Brainstorming. Bellal (2015) believes that "the students' schema can be activated through the use of a strategy called Carousel Brainstorming which is a cooperative work technique; it gets students rising, moving and conversing with each other, it is used to facilitate discussion and imitate the conversation".

Carousel Brainstorming strategy was first proposed in Brooklyn on April 22, 1997, at Manhattan University by its academician, Mr. Sylvor Carousel (as cited in Latifah, 2012, p. 7). Later, Lestari (2016) claimed Carousel Brainstorming technique is a kind of graphic organizer, which is an effective pedagogical tool to arrange the order of material to present, organize ideas and thoughts, and ease learners' understanding of recent acquired knowledge.

Elsewhere Carousel Brainstorming is considered as a questioning technique in which learners can work together to ask and answers the questions and then produce a lengthy list of related ideas to the topic (Duarte 2008 & Sejnost, 2009, as cited in Bellal, 2015, p. 53). That is to say that the students can ask all types of questions relevant to the topic, share these thoughts and finally present them to the teacher. In line with this claim Altieri (2011, as cited in Moyle, 2013), stated that Carousel Brainstorming is a fascinating technique to present a topic to students. She believes that brainstorming ideas with peers create an opportunity to produce a longer list of ideas than students' individual brainstorming.

### **RESEARCH QUESTIONS**

Based on the purpose of the study, the following research questions were raised:

**RQ1:** Is there any significant difference between the effect of using Fishbowl and Carousel Brainstorming strategies on EFL learners' speaking skill?

**RQ2:** Is there any significant difference between the effect of using Fishbowl and Carousel Brainstorming strategies on EFL learners' foreign language speaking anxiety?

## **METHOD**

### **Participants**

The participants of the current study were 90 adult EFL learners, 45 males and 45 females, who were invited to enter a speaking course in English at Tehran University English School, Department 3. The age range of these EFL learners was between 20 to 40 years. These learners were also from different majors such as psychology, economics, engineering, chemistry, physics, and teaching. The original population of participants was selected through convenience sampling. Then, based on the results on Preliminary English Test (PET), 60 homogeneous participants randomly assigned into two experimental groups comprising of 30 participants each. Inevitably, the main participants of the study were 37 females and 23 males.

### **Instrumentation and Materials**

A number of instruments and a series of materials were utilized in this study as follow.

#### ***Preliminary English Test (PET)***

Considering the participants of the study, Preliminary English Test (PET), which is designed by Cambridge ESOL, was employed as a valid means of estimating the participants' level of proficiency. This test had been initially piloted to 30 participants with similar characteristics of the participants in this study. The PET for proficiency test has thirty-five reading questions in five formats, eight questions in 3 parts for writing (1 hour and 30 minutes), twenty-five questions in 4 parts for listening (36 minutes, including 6 minutes transfer time) and 4 parts for speaking (10-12 per person). It might take the test takers about 2 hours and 20 minutes to complete the test.

#### ***The Second Language Speaking Anxiety Scale (SLSAS)***

In order to assess the participants' speaking anxiety level, The Second Language Speaking Anxiety Scale (SLSAS) developed by Woodrow (2006) was administered. The questionnaire comprises 12 items on five-point Likert type scale ranging from point 1 (not at all anxious) to 5 point (extremely anxious). The items show the possible communicative situation the learners' encounter according to the communicative setting, speaker and listener as variables, and the nature of communication. The items related to the communicative setting reflect the in-class/out-of-class distinction. According to Woodrow (2006), reliability for in-class anxiety was .89, for out-of-class .87 and for the combined scales .94.

#### ***Textbook***

The material employed by the researchers were "Contemporary Topics 1: Academic Note Taking and Listening Skills 3rd Edition" by Helen Solorzano and Laurie Frazier (2009), a

textbook which is published by Pearson Longman to target intermediate level EFL students. The book centers around 12 different academic lectures with different topics, each of which designed to simulate the subjects discussed in a university classroom. Each unit also provides the learner with up to 14 vocabulary items that will be utilized in the lecture, comprehension questions based on the lecture, and supplemental activities, and projects which expand on the lecture topics. In addition, the book provides a supplemental audio CD so that students can review the lecture and vocabulary for each unit outside of class. It is worthy of mention that the book was not a part of the language school's syllabus because the students were invited to participate in a voluntary and complimentary speaking course. The researchers chose this book based on learners' needs and covered 10 chapters of the book during 10 session of 60 minutes.

### **Procedure**

In order to meet the research purpose of the present study, the following procedure was employed. In the first step, a sample PET was piloted among 30 intermediate EFL learners with similar characteristics of the original sample of the study. Based on the results of the piloted test, the researchers went through item analysis to eliminate the malfunctioning items. In addition, the reliability of the test was calculated through Cronbach's alpha analysis. Furthermore, two experienced teachers were asked to score the papers. Here in piloting phase, and later in administration of PET the sets of scores given by the raters on writing and speaking were calculated.

In the second step, the researchers selected the original sample of 90 participants through convenience sampling which was then followed by the administration of the piloted PET. Out of 90 learners taking the test, 60 learners, whose scores on the test were one standard deviation above and below the mean were randomly assigned to two experimental groups as intermediate participants of the study. The scores on speaking section of PET were also calculated separately as the pretest to determine the main participants' speaking ability. Moreover, the Second Language Speaking Anxiety Scale (SLSAS), which consists of twelve items on five-point Likert type scale, was administered to all 60 participants as their pretest.

In the third step, the teacher taught speaking using the book *Contemporary Topics 1: Academic Note-Taking and Listening Skills 3rd Edition* in both groups but in one through Fishbowl and in the other through Carousel brainstorming strategies. 10 units in 10 sessions of 60 minutes were covered in both groups. It should be noted that the overall procedure was implemented during 12 sessions in which the first and the last sessions were allocated to data collection so they were lengthier.

### ***Fishbowl Group***

Based on Fishbowl strategy, the group\_ including 19 females and 11 males\_ can be split into two smaller and distinct subgroups \_such as male or female, or older and younger participants\_, who convene separately and come up with three to four questions for the other group, which are written on the book and teacher made posters. The teacher made posters \_ same as the ones in Carousel Brainstorming experiment\_ are also set on the walls so that students have richer input to form their ideas. Before the students take their



seats in the circles, they are allowed to take a walk around the class to study the posters and when they are all ready for the fishbowl practice, they listen to the audio of the session to help them come up with the right questions.

Then, the participants reconvene and exchange questions, and form two circles \_inner circle and outer circle\_. There were 15 students in either circle, which included both males and females. The inner group including the teacher sat in a circle in the center of the class while the outer group formed a bigger circle around them\_ one subgroup inside the other\_, both groups facing inwards in the way that the inner circle could not easily see the outer ones because they turned their backs on them.

Now, when they were all set, the teacher played the audios of the session. It is noteworthy that all the students had already had the audio programs prepared by the book. The input presented by the audios considered essential for the students' speech productivity. Afterwards, the Fishbowl group reads a question and discusses it, while those in the outside circle listen but do not speak because they are considered as observers. The teacher can stop the discussion in the Fishbowl circle and invite those not in the inner circle to offer their thoughts and comments on what they are hearing in the inner circle. Each question is discussed in this way to make sure everyone is following the discussions. The circles are then reversed so that everyone has a chance to participate in discussions.

Here, the questions that the groups generate can be on the same subject or not, at the discretion of the organizer. Moreover, the teacher is a member of the inner circle whose role is as the facilitator of discussion and information source. Regardless of the particular rules to establish, the teacher made sure they were explained to students beforehand. For example, the teacher provided instructions for the students in the audience; what should they be listening for? , or should they be taking notes? Before beginning the Fishbowl activity, the teacher reviewed adult EFL learners studying English guidelines for having a respectful conversation. Sometimes the teacher asks audience members to pay attention to how these norms are followed by recording specific aspects of the discussion process, such as the number of interruptions, examples of respectful or disrespectful language being used, or speaking times \_ who is speaking the most or the least\_.

After the discussion, the teacher asks the students to reflect on how they think the discussion went and what they learned from it. Students can also evaluate their performance in both linguistic and nonlinguistic ways and as listeners and participants. They can also provide suggestions for how to improve the quality of discussion in the future. These reflections can be in writing, or they can be structured as a small or large group conversation.

### ***Carousel Brainstorming Group***

In Carousel Brainstorming group\_ 18 females and 12 males\_, all the participants were provided with some teacher made posters from the book materials including different questions or topics related to the subject under consideration, which were similarly used in the other group. The content of posters were exactly in line with the topic presented by the book. Therefore, the teacher had to make three to four new posters each session that covered only one chapter.

After the posters were stick to the walls, the teacher divided the group into teams of four to six participants and gave each team a different colored marking pen. The teams quickly brainstormed their responses to the questions or issues mentioned in the posters. In fact, there was an empty space below each question on the posters that allowed participants to record their ideas in a few sentences and even more space for the other groups' comments. After two or three minutes, the teams were expected to rotate to the next set of information. The markers remained with the teams as they traveled around the carousel. This technique shows the groups progress and builds in accountability.

After each group rotated one full cycle, they read over what had already been written on the posters and added ideas of their own. The rotations continued until each group has contributed to every chart on the posters. When teams returned to their original place (station), they were supposed to review items written on the first poster they took note on. Teams categorized items on their original posters and reported verbally to the entire group.

Finally, the teacher debriefed with a whole group discussion. (i.e., did you observe anything on someone else's work you wish you had thought of? Did you see anything you would change?). According to the above-mentioned points, the teacher used two types of feedback in each experimental groups, namely: teacher-led feedback and student led feedback. Not only the students were given opportunities to comment and provide feedback but also the teacher provided them with written feedbacks on their speaking abilities such as the degree of involvement, fluency, accuracy (by paying attention to a particular structure), pronunciation, vocabulary.

It is worthy of mention that, at the end of the 10 sessions, in order to see the possible effect of two treatments on learners' level of foreign language speaking and anxiety, the researchers administered the post-tests, i.e., the SLSAS, and another sample speaking section of PET.

### **Statistical Analysis**

In this study, the possible effect of Fishbowl and Carousel Brainstorming strategies on EFL learners' foreign language speaking ability and anxiety were calculated using Independent Samples t-test and ANCOVA, respectively.

## **RESULTS**

### **First Research Question**

In order to answer the first research question of the study, Independent Samples t-test was run. As stated earlier, the scores of the speaking section of PET used for homogeneity purposes were regarded as the pretest of the study. Table 1 below shows the descriptive statistics of the two experimental groups (i.e., Fishbowl and Carousel Brainstorming) concerning their speaking test pretest.

**Table 1.** Descriptive Statistics of the Two Groups on the Speaking Test Pretest

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error
Fishbowl	30	5.00	13.50	9.4667	2.46679	.032	.427
Carousel Brainstorming	30	7.00	14.00	10.0000	2.12943	.017	.427
Valid N (listwise)	30						

As is seen in the table above, the mean and the standard deviation of the Fishbowl group's speaking scores were 9.46 and 2.46, respectively, while those of Carousel Brainstorming group were 10.00 and 2.12, respectively. Additionally, the scores represented normalcy ( $0.032 / 0.427 = 0.074$  and  $0.017 / 0.427 = 0.039$ ). Moreover, the speaking pretest scores of the two groups were compared through an Independent samples t-test.

**Table 2.** Independent Samples t-Test on the Speaking Pretest Scores of the Two Groups

		Levene's Test for Equality of Variances		t-test for Equality of Means					
Speaking Pretest		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference
									Lower Upper
Speaking Pretest	Equal variances assumed	.892	.349	-.896	58	.374	-.5333	.5949	-1.724 .6576
	Equal variances not assumed			-.896	56.78	.374	-.5333	.5949	-1.724 .6581

As shown in Table 2, the difference between the two mean scores turned out to be non-significant ( $t(58) = -0.896$ ,  $p = .374 > .05$ ), which implies that there was no significant difference between the two groups' speaking ability prior to the treatment. Thus, it can be stated that any difference between the two groups at the end of the study would be the results of the treatment.

Moreover, Table 3 below indicates the results of the posttest administration for both groups.

**Table 3.** Descriptive Statistics of the Two Groups on the Speaking Test after the Treatment

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error
Fishbowl	30	7.00	15.00	10.6833	2.07399	.230	.427
Carousel Brainstorming	30	10.00	18.00	14.2833	2.28067	-.068	.427
Valid N (listwise)	30						

As shown in the above table, the mean and standard deviation of the Fishbowl group's speaking scores were 10.68 and 2.07, respectively, while those of the Carousel Brainstorming group were 14.28 and 2.28, respectively. Moreover, the skewness ratios of two groups fell within the acceptable range ( $0.230 / 0.427 = 0.538$  and  $-0.068 / 0.427 = -0.159$ ) thus running a parametric test was legitimized so far.

The speaking posttest scores of the two groups were compared through an Independent samples t-test again after the normality condition was verified. The following table shows the result of Independent samples t-test:

**Table 4.** Independent Samples Test on the Speaking Test of the Groups after the Treatment

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Speaking Posttest	Equal variances assumed	.210	.648	-6.396	58	.000	-3.600	.56282	-4.726	-2.473
	Equal variances not assumed			-6.396	57.484	.000	-3.600	.56282	-4.726	-2.473

As is evident in Table 4, the variances were homogeneous ( $F=1.210$ ,  $p=0.648>0.05$ ), and the difference between the mean scores turned out to be significant ( $t(58) = -6.396$ ,  $p=0.000<0.05$ ). Thus, the first null hypothesis is rejected implying that the participants in the Carousel Brainstorming group ( $M=14.28$ ;  $SD=2.28$ ) significantly outperformed those in the Fishbowl group ( $M=10.68$ ;  $SD=2.07$ ) concerning their speaking performance.

## Second Research Question

In order to answer the second research question of the study, a set of ANCOVA was run on both groups' scores on SLSAS pre- and posttests. Table 5 below shows the descriptive statistics for the SLSAS pretest. The mean and the standard deviation of the Fishbowl group were 50.40 and 4.56, respectively, while those of the Carousel Brainstorming group stood at 47.96 and 6.12, respectively. Furthermore, the skewness ratios of both groups fell within the acceptable range ( $0.025 / 0.427 = 0.058$  and  $-0.524 / 0.427 = -1.227$ ) thus running a parametric test was legitimized so far.

**Table 5.** Descriptive Statistics of the Two Groups on the SLSAS Pretest

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error
Fishbowl	30	42.00	58.00	50.4000	4.56826	.025	.427
Carousel Brainstorming	30	34.00	58.00	47.9667	6.12222	-.524	.427
Valid N (listwise)	30						

Table 6 below shows the descriptive statistics for the SLSAS posttest. The mean and the standard deviation of the Fishbowl group were 40.83 and 5.27, respectively, while those of the Carousel Brainstorming group stood at 35.00 and 4.81, respectively. Furthermore, the skewness ratios of both groups fell within the acceptable range ( $0.262 / 0.427 = 0.613$  and  $0.393 / 0.427 = 0.920$ ) thus running a parametric test was legitimized so far.

**Table 6.** Descriptive Statistics of the Two Groups on the SLSAS Posttest

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error
Fishbowl	30	31.00	52.00	40.8333	5.27246	.262	.427
Carousel Brainstorming	30	24.00	45.00	35.0000	4.81377	.393	.427
Valid N (listwise)	30						

All sets of scores, of course, enjoyed normalcy as demonstrated earlier, hence, this prerequisite need not be discussed. With the first assumption of normalcy in place, the second procedure was testing the homogeneity of variance for which the Levene's test was run; as is shown in Table 7 below, the variances were not significantly different ( $F(1,58) = 0.848, p = 0.361 > 0.05$ ).

**Table 7.** Levene's Test of Equality of Error Variances

F	df1	df2	Sig.
.848	1	58	.361

a. Design: Intercept + Group + SLSA pretest

As one covariate is being investigated (the pretest), the third assumption of the correlation among covariates did not apply in this case. The fourth assumption is that of homogeneity of regression slopes. Table 8 below shows that the interaction (i.e. Group\* SLSA Pretest) is 0.131 which is larger than 0.05 thus indicating that the assumption of homogeneity of regression slopes has not been violated.

**Table 8.** Tests of Between-Subjects Effects

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	605.921	3	201.974	8.180	.000	.305
Intercept	704.837	1	704.837	28.547	.000	.338
Group	94.830	1	94.830	3.841	.055	.064
SLSA pretest	13.725	1	13.725	.556	.459	.010
Group * SLSA	57.976	1	57.976	2.348	.131	.040
Error	1382.663	56	24.690			
Total	88249.000	60				
Corrected Total	1988.583	59				

R Squared = .305 (Adjusted R Squared = .267)

With the above assumptions in place, running an ANCOVA was legitimized. According to Table 9 below, the pretest scores (the covariate in the model) came out not to be significant ( $F = 1.485$ ,  $p = 0.228 > 0.05$ ) thus demonstrating that prior to the treatment, there was no significant difference between the two groups in terms of their foreign language speaking anxiety. With the eta squared of 0.025, the pretest covariate accounted for two percent of the overall variance.

**Table 9.** Tests of Between-Subjects Effects

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	547.945	2	273.972	10.840	.000	.276
Intercept	647.135	1	647.135	25.604	.000	.310
Group	426.581	1	426.581	16.878	.000	.228
SLSA pretest	37.528	1	37.528	1.485	.228	.025
Error	1440.638	57	25.274			
Total	88249.000	60				
Corrected Total	1988.583	59				

R Squared = .276 (Adjusted R Squared = .250)

Furthermore, there was a significant relationship between the covariate (the SLSA pretest) and the dependent variable (the SLSA posttest) while controlling for the independent variables ( $F = 16.878$ ,  $p = 0.000 < 0.05$ ). Hence, the null hypothesis of the study which stated that there was no significant difference between the effect of using Fishbowl and Carousel Brainstorming strategies on EFL learners' foreign language speaking anxiety was rejected with those in the Carousel Brainstorming group who gained a lower mean bearing a significantly lower degree of foreign language speaking anxiety than those in the Fishbowl group.

## DISCUSSION

This study was an attempt to systematically compare the impact of using Fishbowl and Carousel Brainstorming strategies on EFL learners' foreign language speaking ability and anxiety. The researchers examined these two modalities of cooperative learning due to various reasons that are discussed in the following paragraphs.

As stated earlier, Fishbowls could be used as tools to facilitate speaking skill (Wood, & Taylor, 2007). Therefore, the researchers chose this strategy because it has many benefits in learning process. The researchers found the benefits of this method from the article of Annenberg Foundation. First, the teacher creates an environment in which students discuss cultural issues. Fishbowls also allow analysis in post group discussions. Then, participants in the outer circle of a Fishbowl can observe how specific individual's question and responses are. Additionally, students can practice group discussion skills in Fishbowls. Another benefit for this strategy is that it also teaches observation, listening, and community-building skills. One last point is that Fishbowls provide students with the opportunity to identify small group discussion habits.

On the other hand, the researchers employed Brainstorming strategy because as Henningsen and Henningsen (2013, p. 44) believe, it could be used as a technique to

develop rapport with senior members of a group by the stressful members. Furthermore, there are some claimed advantages for Brainstorming (Napier & Gershenfeld 1985; as cited in Furnham, 2000, p. 22). One is to reduce dependence on a single authority figure. Other benefits are encouraging open sharing of ideas; stimulates participation among group members; providing individual safety in a competitive group; maximizing output for a short period; ensuring a non-evaluative climate, and tending to be enjoyable and stimulating.

Besides, Osborn developed a number of rules (1957, as cited in Putman & Paulus, 2009, p. 23) that ensure a Brainstorming session is properly conducted are as follows. Group size should be limited to five to seven people. Criticism is not allowed and the more impractical and imaginary the idea, the better. Quantity and variety of ideas matter and an essential part is to Combine and improve others ideas. Besides, taking notes during the sessions, either manually or with an electronic recording device is suggested. Another rule is that the most frequent ideas should later be edited for possible implementation. Finally, brainstorming is a small-group process, which should be fun.

Now in this study, based on the obtained results, it can be claimed that there was a significant difference between Fishbowl and Carousel Brainstorming groups' means on the posttest of speaking ability and anxiety. Carousel Brainstorming group significantly outperformed the Fishbowl group on the speaking posttest. The obtained results showed a noticeable increase in students' performance in speaking ability due to the effect of Carousel Brainstorming strategy.

The finding of Lestari (2016), that Carousel Brainstorming strategy can be an excellent way to brainstorm students' ideas supports the results. It combines focused discussion and kinesthetic movement and conversation to brainstorm, review, or synthesize. Similarly, the participants of the present study expressed enthusiasm to be able to move around the class and discuss the topics. They considered this technique as a more dynamic and less stressful way of learning compared to the common techniques in majority of the English learning classroom in Iran. Besides, the participants in Carousel Brainstorming group claimed to feel more comfortable in sharing ideas in smaller groups than the ones in Fishbowl group.

Yet the finding of the current study is in contrast to the results of Camacho and Paulus (1995) that may be due to different characteristics of the context. The current study was implemented in the EFL context while the study for Camacho et al. was done in the native speakers' context. According to the data observed in their study, it seems that EFL learners' free will and comfort in generating ideas decline the level of anxiety.

According to Horwitz (2010, P. 154), anxiety is a natural intuition which inhibits learning or production of second language. It is necessary to enhance the ability of learners to control their nervousness by using suitable strategies. The more our students are exposed to strategies, the sooner we as teachers reach our purposes. Students' autonomy will increase by assisting them in being efficient in the use of applicable strategies.

One of the good characteristics of brainstorming is that the students are not criticized for their ideas while speaking. The participants of the study were positive about this

characteristics so they were more productive in Carousel Brainstorming group and opened up to share their thoughts. Additionally, the results on independent samples t-test for speaking ability revealed that the Carousel Brainstorming participants did better which was consistent with the researchers' observations. This finding was also in line with the work done by Khodadady, Shirmohammadi, and Talebi (2011).

In conclusion, the result of this study suggests that Carousel Brainstorming strategy can result in lower speaking anxiety, and better oral performance. As a result, there should be attempts to provide learners with situations in which better oral performance is achieved through the application of Carousel Brainstorming strategy in the context of speaking courses.

## CONCLUSION AND IMPLICATIONS

To conclude, it seems that applying Carousel Brainstorming strategy makes the learners have higher oral performance, and lower SLSA in speaking courses. Therefore, as Stix (2004) stated teaching speaking through cooperative learning strategies, like Carousel Brainstorming, directly can have considerable values for teachers and students. Studies proving the effectiveness of strategy training are likely to convince English teachers, teacher trainers, English learners, course book writers, and curriculum developers to be more aware of the benefits of strategy training and include these strategies in their lessons, course books, and curricula.

By means of this study, teachers can understand the importance of their teaching and its effect on learners' level of anxiety; they will become familiar with the sources of teaching options, and will consequently think about them consciously and improve their practices. Unfortunately, most of the cooperative learning strategies have remained unknown, so there is a need to introduce these strategies and teach the learners the correct ways of applying them. Perception of the teachers' role is to create an environment which is less stressful and more meaningful (Wang, 2005, p. 27). The results of such an atmosphere are that students will be more encouraged to freely participate in class discussions knowing that sharing all types of ideas are allowed to be share even the imaginary one without being criticized. Therefore, using the findings of this study, teachers should use positive strategies, which lead to their students' progress correctly and avoid negative ones. Using Carousel Brainstorming strategy can help teachers manage the class activities more interesting for the students and they become more focused on the tasks. Moreover, EFL syllabus designers should value the significance of using Carousel Brainstorming strategy in the process of developing speaking skill in a less stressful environment. EFL syllabi should be designed in a way that learners are exposed to a variety of speaking tasks and numerous opportunities to work in cooperative tasks.



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