

The Role of Think-Pair-Share Interactional Activity on Improving Iranian EFL Learners' Willingness- To-Communicate

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Abstract

Think-pair-share (TPS) is a collaborative teaching activity first proposed by Frank Lyman of the University of Maryland in 1981. It can be used to help learners form individual ideas, discuss, and share with others in small groups. Willingness-to-communicate (WTC) can be defined as "an individual's volitional inclination towards actively engaging in the act of communication in a specific situation, which can vary according to interlocutor(s), topic, and conversational context, among other potential situational variables" (Kang, 2005, p. 291). The adopted design for this study was a mixed-methods one in a small sample size and was conducted in *Kish Language Institute*. For this purpose, nine upper-intermediate female learners participated in the study. During five sessions, voice recording and a willingness-to-communicate questionnaire were used. It was found out that the number of turn-takings and interruptions fluctuated between groups during sessions, but the main inclination was toward elevation. Furthermore, in terms of the questionnaire, learners' perceptions were more promising in posttest in comparison with the pretest. Finally, the results of the statistical analyses revealed that the willingness-to-communicate of EFL learners in fifth session was significantly higher than their performance in the first session. At the end, some classroom implications are provided.

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1. Introduction

Producing the target language is a significant factor contributing to desired achievements in language acquisition. Many language teachers around the globe, however, have experienced the difficulties of encouraging learners to produce the target language, to feel at ease, and not to worry about making mistakes. Many have also experienced the nervousness that learners feel about speaking in front of other learners (Swain & Lapkin, 1995). As a result, classrooms often do not provide learners with proper opportunities to engage in communicative practice (Ebadi & Saeedian, 2019). Learners mostly encounter with problems such as expressing their true feelings about daily issues or academic aspects of their lives and they tend to be reserved sometimes, although they may be highly educated or extremely talented. Previous studies have considered many factors including affective and social elements. Issues like autonomy, anxiety, learning orientations and personal preferences in terms of styles and strategies have been shown to have influences on learners' eagerness to start a conversation or to express feelings and ideas. Trying to start a conversation and expressing one's opinions is a challenging issue; however, some may feel comfortable uttering speech or initiating discussion. The problem is not a total restriction to a particular geographical area or culture, although, the relationship may not be denied. It is always present in human beings in that not everyone is capable of freely speaking and demonstrating conforming ideas, let alone producing different and contrasting ideas. Iranian learners mostly suffer from rigid and teacher-fronted atmosphere in the classroom. They always memorize vocabularies and structures and doing whatever their teacher tells them to do. Thus, this must be changed by shifting some weight and focus on peer interaction (Fathi & Derakhshan, 2019).

This study intends to determine the role of think-pair-share interactional activity on the willingness-to-communicate of Iranian learners. It sets out to examine EFL learners' discussions as voice-recorded files and clarify whether their performance in self-expression is improving or not by means of think-pair-share activity in which they are required to form groups and discuss ideas. This study addresses the problem of EFL learners being reserved or shy or not willing to communicate by implementing an interactional activity. The activity is designed basically for preparing learners for the main lesson to be taught or as a kind of warm-up activity, although, the primary goal of this activity and the purpose of this research are not mutually exclusive and they are in line with triggering some ideas and making learners initiate discussion and brainstorm opinions and demonstrate different stances. Also, it is hoped to try to make learners express what they have in their minds but cannot utter what they know by putting them in small groups and providing them with thought-provoking issues or topics within a short amount of time.

2. Review of the Related Literature

2.1 Definitions and Explanations

2.1.1 Think-pair-share

An activity in which to foster collaborative learning, pair and share, can take different forms in classrooms. The most commonly practiced and studied is *Think-Pair-Share*, developed by Frank Lyman of the University of Maryland (Lyman, 1981). In this activity, learners have a minute to think through a response to a question (Think) proposed by the instructor or teacher – often one "demanding analysis, evaluation, or synthesis" – before turning to partners for discussion (Pair) and subsequently sharing "with a learning team, with a larger group, or with an entire class during a follow-up discussion" (Millis, 1990, p. 49). In the third step, the instructor may ask selected pairs to share their positions and stances and how or why they disagree, or request a

joint answer from a pair based on each other's ideas (Barkley, Cross, & Major, 2014). It can be used before reading or teaching a concept and works better with smaller groups. This type of activity at the beginning wants learners to consider a question on their own, and then provides an opportunity for learners to discuss it in pairs, and at the end together with the whole class. The success of these activities usually depends on the nature of the questions posed. This activity mostly works ideally with questions to entice deeper thinking, problem-solving, and/or critical analysis. The group discussions are beneficial as they allow learners to articulate their thought processes.

2.1.2 Willingness-to-communicate

The current Willingness To Communicate (WTC) construct has evolved from the articles and researches done by Burgoon (1976) on WTC, Mortensen, Arntson, and Lustig, (1977) on predispositions toward verbal behavior, and McCroskey and Richmond (1982) on shyness. All of these works focus on a presumed trait-like predisposition toward communication. Burgoon (1976) established and probed the first construct in this area. She labeled her construct unwillingness to communicate. She described this predisposition as "a chronic tendency to avoid and/or devalue oral communication" (p. 60). To challenge the existence of such a term, Burgoon (1976) dealt with the areas of anomie and alienation, introversion, self-esteem, and communication apprehension (CA). All of these areas of research designate variability in willingness to talk in different communication settings. McCroskey and Baer (1985) assumed that there is a trait-like and personality-based predisposition that is almost consistent across a variety of communication contexts and types of receivers. This concept forms the basis for WTC and is the reason why people communicate more or less across communication situations. They devised WTC scale and could demonstrate its validity; therefore, they

could operationalize what they had claimed. WTC can be defined as "an individual's volitional inclination towards actively engaging in the act of communication in a specific situation, which can vary according to interlocutor(s), topic, and conversational context, among other potential situational variables" (Kang, 2005, p. 291). Two orientations toward the field of WTC can be seen. The earlier works pay more attention to a trait-like predisposition for WTC; however, later researches pay more attention to the situational construct for WTC (Kang, 2005). Nonetheless, WTC is considered as being a dual characteristic construct (Cao & Philp, 2006), namely trait-like WTC and situational WTC, and they are considered as complementary and should be investigated both in studies that have to do with WTC (MacIntyre, Babin, & Clement, 1999).

2.2 Related Studies

In a study by Raba (2017) the influence of think-pair-share (TPS) on improving learners' oral communication skills in EFL classrooms was investigated. For this purpose, the researcher interviewed the EFL teachers who taught English for Workplace at the English Language Center, An-Najah National University and observed learners' classroom interaction. After analyzing the data, it was apparently observed that think-pair-share strategy plays a supportive role in improving learners' oral communicative skills, creating a cooperative learning environment and enhancing learners' motivation to learn properly. After the implementation of the activity in speaking classes, learners became more cooperative and they enjoyed interacting and working with others. They began to demonstrate progress in speaking and became more fluent. Furthermore, it enhanced learners' self-confidence. Learners who were shy started to speak and express themselves gradually. Moreover, learners consumed less time in thinking afterwards due to the fact that they started to learn how to organize their thoughts and ideas.

In another study by Usman (2015) the effect of think-pair-share (TPS) on improving learners' speaking ability was measured. This study was conducted at the Islamic Education Department of STAIN Ternate in Indonesia in 2010/2011 academic year. Based on the results of the data analysis in the research, it can be found out that the think-pair-share activity was successful to develop the speaking ability of the first year learners at the Islamic Education Department of STAIN Ternate after being applied in two phases that considers two criteria, namely the learners' spoken test results and the learners' active engagement during the implementation of the activity.

According to a study by Narzoles (2012), the effect of think-pair-share (TPS) on the academic performance of ESL learners was revealed. Results indicated that the learners had improved their performances in the English Communication Skills course. Furthermore, analysis of covariance (ANCOVA) results on the posttest mean scores of the learners reported that there is a significant effect on the academic performance of the experimental group in which the Think-Pair-Share activity had been employed.

In a study by Sampsel (2013), the effect of TPS on learners' confidence and participation in doing mathematics was experimented. For studying think-pair-share and the influence it has on learners, a pre-survey was given to the learners to measure how often they think that they are participating in class, what is their feeling about participating in class discussion, and the matter of their confidence in mathematics capabilities. Also, the same survey was given as a post-survey. In this study, field tapes (notes) and video recording and observation were used as means of data gathering. The results indicated that think-pair-share had a positive influence on learners' views pertaining to taking part in discussion in math class. Every item demonstrated an elevation in the post-survey in comparison with the pre-survey. The surveys' results revealed that learners believe employing the think-pair-share

activity contributes to more learner participation and leads to taking part in discussions with more enthusiasm and joy (Farrokhi, Zohrabi, & Chehr Azad, 2018).

In an article by Kothiyal, Majumdar, Murthy and Iyer (2013) the effect of TPS in a large computer science class was investigated. The C++ programming language was used to develop and foster programming expertise in the learners. The course was conducted in Spring 2013 over 14 weeks in India and was organized into labs, exams, and lectures. Learners participated in the discussion to verify their solution, propose other solutions, and argue *what-if* scenarios. To triangulate the results, a self-report survey in the study was applied. All the questions were to be answered on a five point Likert scale. The engagement in the think phase lied between 70% and 95% depending on the problem, in the pair phase it varied between 75% and 90% and the share phase also between 75% and 90%. Particularly 29% of the learners were never engaged, 60% of the learners were sometimes engaged and 47% of learners were mostly engaged in the think phase became fully engaged in the pair phase. Findings pertaining to the participation behavior patterns of learners confirm the benefits of TPS activity.

This study tried to find answers to the following questions:

- 1) How can think-pair-share interactional activity be effective in terms of improving Iranian EFL learners' turn-taking opportunities?
- 2) How can think-pair-share interactional activity lead to more interruptions on the part of Iranian EFL learners?
- 3) How can think-pair-share interactional activity be effective in terms of improving Iranian EFL learners' willingness-to-communicate?
- 4) What are the differences between initial and subsequent perceptions of Iranian EFL learners' willingness-to-communicate?

3. Methodology

3.1 Design

The study employed a mixed-methods type of research. There are a number of subdivisions pertaining to this type, which are Triangulation, Concurrent embedded, Explanatory, Exploratory and Sequential embedded design. This study is a concurrent embedded design. The WTC questionnaires as quantitative measurement tool were deployed once at the beginning of the first session and once at the end of the last session as pretests and posttests. However, voice recording, which yields qualitative data, was put to action during the intervention part of the process. This study is mixed-methods because it utilized both quantitative and qualitative measures for reaching a solid and robust interpretation so that the claim could be proven validly and the nature of study in accordance with the measures of collecting data. A concurrent embedded design is made up of a quantitative measurement tool, one at the beginning and another at the end of data collection procedure, also it consists of one qualitative measurement tool as the main process of data collection.

It is essential to bear in mind that this is not a quasi-experimental research, although the term Effect in the title may be sort of misleading. We are dealing with conducting the study in a small sample size and employing quantification for clear presentation of data. Consequently, it has been an effort to find a pattern and reach some justifications based on the changes occurring during five sessions of the implementation processes. Thus, pattern finding in a small sample size seems to be of higher significance and preference than generalizing the findings to other situations, populations or conditions.

3.2 Participants

The participants were nine female upper-intermediate EFL learners from Kish language institute between ages of eighteen to twenty-five. The teachers were present in the class but did not have a practical role in the implementation process. The researchers provided the learners with the topics to discuss and administered the sessions and observed the processes and managed the time and recorded the processes. Meanwhile, the participants were not allowed to use their first language (native language). Additionally, they were not allowed to use dictionaries and they should not have written down keywords about the topic for supporting their talks subsequently.

Table 1
Participants; Characteristics

Number of Participants	Nine
Age	18-25
Gender	Female
Level	Upper-intermediate

3.3 Framework of Analysis

Willingness-to-communicate is considered as a behavior which is divided into trait-like and situational subcategories. Trait-like WTC is dealing with inherent characteristics of human beings that influence their WTC like their inherent shyness and also factors such as background information about the topic being discussed like the amount of vocabulary they possess or their general proficiency level. Situational WTC is pertaining to dynamic features of the situation. In other words, the second by second functioning of participants is a matter of focus. Each moment matters and may change their behavior and WTC. In the literature, researchers have utilized different tools of measuring the changes of WTC. For example, they used observation checklists which include different questions regarding the practical behavior of participants, and the researcher and/or observer could just specify the

degree of the behavior based on options in Likert scale. Or they have measured the situation by means of questionnaires which included the participants' perceptions. Most of these tools were subjective and didn't provide a solid basis on which anyone could rely and so the results were not as valid as expected.

Some scholars believe that interruption is a rude and impolite act which hinders proper communicative act. For instance, "by waiting your turn to speak and avoiding interrupting another person, you not only show your desire to work together with the other members of your society, you also show respect for your fellow members" (Cook, 2008, p. 196).

"Linguistic options are seen as being determined by social circumstances, confirming and consolidating the organizations which shape it" (Fairclough, 1992, p. 26). "In addition to seeing discourse as reproducing and perpetuating existing social relations and structures, it views it as a kind of social struggle which could result in change, both in the mode of discourse and of wider social and cultural domains" (Fairclough, 1992, pp. 28-29).

"Change enters the picture in the form of transgressions and breaking rules" (Fairclough, 1992, p. 96) and "a primary form of such challenges comes in the form of interruptions, especially deliberate and violative intrusions, which break the normal rules of turn-taking in an effort to take more floor-space for oneself" (Klerk, 1995, p. 6).

In this study, two categories from conversation analysis, which are turn-taking and interruption, are employed as the framework of analysis. "The goal of conversation analysis is not to quantify data (i.e. the conversation). However, quantitative analyses can be employed for presenting regularities in numerical form, yielding a mixed analysis" (Onwuegbuzie, Dickinson, Leech, & Zoran, 2009, p. 14)

The coding and counting of interactional events is possible to occur by means of the categories that arise from conversation analysis (Boyd, 1998; Heritage & Greatbatch, 1986; Heritage & Roth, 1995; West, 1984) and the quantitative utilizations of CA concern specific interactional practices found in specific settings (Peräkylä, 2004) rather than naturally occurring situations. So we are using some categories that arise from CA for the purpose of investigating the effect of think-pair-share on improving the willingness to communicate among Iranian EFL learners in specific classroom setting rather than naturally occurring conversations in everyday situations.

This is not a study for meticulous behavior analysis or deep discourse analysis surrounding mentalities or particular intentions pertaining to specific patterns of thought and patterns of specific vocabulary use or individuals' emotions. Rather, this study is dealing with counting number of turns and number of interruptions in group interactions using voice-recorded files as transcriptions, thus it is not an absolute CA and it has just utilized some elements of CA and quantifying, then comparing them in five sessions. So the researchers do not consider strict CA notation system for transcription process.

Turns were considered as separate turns where the speaker continued after some sort of interruption. Also, it doesn't matter what kind of Turn it is or under which category does the interruption falls. In other words, the researchers do not consider whether it is self-selected turn or selected by others, or whether it is cooperative or competitive overlap, they just consider the umbrella terms of Turn and Interruption as the categories of analysis.

Frequency analysis can be described as a process that breaks down complex behaviors into smaller units, assigns them to categories, and then counts their occurrences. Complex behaviors include communication in teams when team members perform a collaborative task, often within a

complex socio-technical system (e.g., pilots in a cockpit who prepare the landing of an aircraft, Hutchins, 1995; architects working on a joint construction project, Kvan, 2000; or learners building knowledge in a learning group, Zahn, Pea, Hesse, & Rosen, 2010). By doing so, qualitative (e.g., behavior coding) and quantitative research procedures (e.g., counting occurrences of pre-defined behaviors) are combined (Rack, Zahn, & Mateescu, 2018).

It is often more intuitive for researchers to quantify qualitative data by transformation than to translate quantitative into qualitative data (Rack, Zahn, & Mateescu, 2018). For example, Witcher and colleagues (2001) transformed their qualitative data into quantitative results by counting themes and calculating frequencies. Thus, the authors determined which themes or topics were mentioned more frequently in their study. Based on a similar strategy, Crone and Teddlie (1995) carried this procedure a step further by quantifying qualitative themes and then conducting statistical analyses on these datasets.

Frequency analysis is considered as an essential building block to bridge the gap between qualitative and quantitative methods in mixed method research (Rack, Zahn, & Mateescu, 2018). To this end, the researchers counted the number of turn-takings and the number of interruptions in the transcriptions. In other words, they specified the frequency of turn-taking and interruption in descriptive form, then discerned the changing patterns during five sessions by means of inferential statistics.

3.4 Procedure

First, nine learners were homogenized by means of *Oxford Quick Placement Test* (OQPT). Before administering the test to the main group, the test had been piloted in order to have essential modifications, though it didn't require serious editing. Before implementing the think-pair-share interactional activity, they were given WTC measurement questionnaire and were asked to

write percentages based on their willingness to initiate conversations in different situations with different interlocutors mentioned in the questionnaire. This is a self-report scale, and a qualitative data collection tool was a necessity for having a reliable and valid data based on which results and responses to be produced. Then, there were five questions which required the learners to think deeply and discuss it. There was one question for each day of whole five days. At the beginning of each session, a question was asked and learners were required to first think about it, then make groups of three and share their controversial and contrasting opinions with each other. Finally, they were regrouped as one class and some ideas were solicited randomly.

The process was the same in all five days and at the end of the fifth day, again the learners were given the WTC measurement questionnaire to be answered. In all sessions, the researchers managed the process of implementing the TPS and also managed the time allocated for the process which was fifteen minutes because the TPS activity necessitated it. A cell phone with a voice recorder application was put next to each group, and recorded the final part of each session. "What is needed to make the data work must be there, what is not can be forgotten" (Cook, 1990, p. 2). So, the recording was only applied when they were sharing their ideas and having interaction in groups rather than the whole process. Then, the recorded files were transcribed. At the beginning of the first day, the learners were informed that their voices were kept private and confidentiality of the data was confirmed.

4. Results

4.1 Examining the Normal Distribution of the Data

The Kolmogorov-Smirnov test was used to examine the normal distribution of variables. The null hypothesis in this test is the normal distribution of

variables. If the significance level of the test is greater than 0.05, then the null hypothesis is confirmed and it is concluded that the distribution of the desired variable is normal.

Table 2

The Result of One-Sample Kolmogorov-Smirnov Test

	N	Kolmogorov-Smirnov Z	p-value
Stranger.pre	9	.704	.704
Acquaintance.pre	9	.808	.531
Friend.pre	9	.557	.916
WTC.pre	9	1.057	.214
Stranger.post	9	.752	.623
Acquaintance.post	9	.525	.946
Friend.post	9	.590	.877
WTC.post	9	.800	.544
Turn_taking	1	.707	.700
	5		
Interruption	1	.550	.922
	5		
Total WTC	1	.512	.956
	5		

With regard to the significance levels obtained (Table 2), it is concluded that all the variables have a normal distribution ($P\text{-value} > 0.05$).

4.2 Response to Question (1):

As shown in Table 3, for this purpose, repeated measures ANOVA is used. The level of significance is 0.045. Considering that the level of significance is less than 0.05, it is concluded that there is a statistically significant difference in the mean of the turn-takings of the five sessions ($P\text{-value} < 0.05$).

As it is indicated in Table 4, pairwise comparisons of Turn-takings in five sessions are conducted. The results of the LSD post hoc test indicated that the turn-taking mean in the fifth session was significantly higher than the first one, because significance level is 0.018 which is less than 0.05. Therefore, think-pair-share interactional activity is effective in terms of improving learners' turn-taking opportunities.

Table 3
The Result of Repeated Measures ANOVA for Turn-taking

Source	Mean	Std. Error	Type III Sum of Squares	df	Mean Square	F	P-value	Partial Eta Squared
Session1	38.333	.882	843.067	4	210.7	4.01	.04	.66
Session2	38.667	8.09						
Session3	48.667	3.93						
Session4	45.000	3.51						
Session5	58.667	1.85						

Table 4
The result of LSD test for Pairwise Comparisons of Turn-taking

(I) session	(J) session	Mean Difference (I-J)	Std. Error	Sig.
1	2	-.333	7.881	.970
	3	-10.333	3.180	.083
	4	-6.667	2.728	.135
	5	-20.333*	2.728	.018
2	1	.333	7.881	.970
	3	-10.000	6.000	.238
	4	-6.333	9.207	.563
3	5	-20.000	8.505	.143
	1	10.333	3.180	.083
	2	10.000	6.000	.238
4	4	3.667	3.283	.380
	5	-10.000	5.508	.211
	1	6.667	2.728	.135
5	2	6.333	9.207	.563
	3	-3.667	3.283	.380
	5	-13.667	5.333	.124
5	1	20.333*	2.728	.018
	2	20.000	8.505	.143
	3	10.000	5.508	.211
	4	13.667	5.333	.124

This way, the mean of Turn-takings in five sessions. As it can be inferred, there is not much difference between the first and second sessions. However, it is increased in the third session and demonstrated a small reduction in the fourth session. Ultimately, there can be observed an acceptable amount of increase in the fifth session.

Likewise, the second group has the highest amount of all the groups. Their performances in the fifth session are more than any other group in any session. It is interesting to notice that the lowest amount is again from the second group, and this time it is their performance in the second session and after that session, they are improving until the last session. It is worthwhile to mention that all the groups are almost the same at the first session and also all of them have the best performance at the last session.

4.3 Response to Question (2):

As shown in Table 5, for this purpose, repeated measures ANOVA is used. The level of significance is 0.046. Considering that the level of significance is less than 0.05, it is concluded that there is a statistically significant difference in the mean of interruptions of the five sessions (P -value < 0.05).

As it is presented in Table 6, pairwise comparisons of Interruptions in five sessions are conducted. The results of the LSD post hoc test indicated that the interruption mean in the fifth session was significantly higher than the first one, because significance level is 0.001 which is less than 0.05. Therefore, think-pair-share interactional activity leads to more interruptions on the part of the learners.

Table 5

The result of Repeated Measures ANOVA for Interruption

Source	Mean	Std. Error	Type III Sum of Squares	df	Mean Square	F	p-value	Partial Eta Squared
Session1	29.00	4.359	2121.06	4	530.2	3.96	.046	.66
Session2	34.000	6.245						
Session3	40.333	14.310						
Session4	53.000	3.215						
Session5	61.000	3.606						

Table 6
The Result of LSD Test for Pairwise Comparisons of Interruption

(I) session	(J) session	Mean Difference (I-J)	Std. Error	Sig.
1	2	-5.000	7.000	.549
	3	-11.333	14.847	.525
	4	-24.000	7.024	.076
	5	-32.000*	1.000	.001
2	1	5.000	7.000	.549
	3	-6.333	8.172	.519
	4	-19.000	5.132	.066
	5	-27.000	7.211	.065
3	1	11.333	14.847	.525
	2	6.333	8.172	.519
	4	-12.667	12.347	.413
	5	-20.667	15.235	.308
4	1	24.000	7.024	.076
	2	19.000	5.132	.066
	3	12.667	12.347	.413
	5	-8.000	6.506	.344
5	1	32.000*	1.000	.001
	2	27.000	7.211	.065
	3	20.667	15.235	.308
	4	8.000	6.506	.344

As it is demonstrated, it has a steady increase which steps up to session three. Then, we have a noticeable increase in the fourth session. At last, again we observe an increase when we get to the fifth session.

The first group has the highest amount of all the groups and it is their performances in the fifth session. The second group has the lowest amount and it happens in the third session. As it is observed, the first group has an increasing trend up to the third session, and then, they face a little reduction, again moving upward at the fifth one. In contrast, the second group shows a decreasing trend until the third session, although, they rise considerably afterwards in sessions four and five. The third group maintains their improving trend until the fourth session, but they exhibit a slight reduction at the end.

4.4 Response to Question (3):

Comparison of the total WTC (number of turn-takings + number of interruptions) in five sessions:

As shown in Table 7, for this purpose, repeated measures ANOVA is used. The level of significance is 0.030. Considering that the level of significance is less than 0.05, it is concluded that there is statistically significant difference in the mean of total WTC of five sessions (P-value < 0.05).

As it is obvious in Table 8, pairwise comparisons of total WTC in five sessions are conducted. The results of the LSD post hoc test indicated that the total WTC mean in the fifth session was significantly higher than the first one, because significance level is 0.002 which is less than 0.05. Therefore, think-pair-share interactional activity is effective in terms of improving Iranian EFL learners' willingness-to-communicate.

Table 7

The Result of Repeated Measures ANOVA for Total WTC

Source	Mean	Std. Error	Type III Sum of Squares	df	Mean Square	F	p-value	Partial Eta Squared
Session1	67.333	3.756	5271.333	4	1317.833	4.695	.030	.701
Session2	72.667	14.193						
Session3	89.000	18.037						
Session4	98.000	6.557						
Session5	119.667	5.364						

Table 8

The Result of LSD test for Pairwise Comparisons of Total WTC

(I) session	(J) session	Mean Difference (I-J)	Std. Error	Sig.
1	2	-5.333	12.875	.719
	3	-21.667	18.022	.352
	4	-30.667	9.735	.088
	5	-52.333*	2.603	.002
2	1	5.333	12.875	.719
	3	-16.333	7.126	.149
	4	-25.333	14.310	.219
	5	-47.000	15.044	.089
3	1	21.667	18.022	.352
	2	16.333	7.126	.149
	4	-9.000	15.373	.618
	5	-30.667	20.513	.274
4	1	30.667	9.735	.088
	2	25.333	14.310	.219
	3	9.000	15.373	.618
	5	-21.667	11.837	.209
5	1	52.333*	2.603	.002
	2	47.000	15.044	.089
	3	30.667	20.513	.274
	4	21.667	11.837	.209

Figure five illustrates the mean of the total WTC in five sessions. As can be seen, it gradually steps up as it moves on to the fifth session. The growth manner is almost the same at intervals of the first and second sessions and also the third and fourth sessions. In comparison to them, however, from the second to the third and also from the fourth to the fifth sessions there can be observed a noticeable change.

The first group has the highest amount of all and it is in the fifth session. The lowest one belongs to the second group in session two. As it is obvious, the first group is increasing in terms of their total WTC until the third session but they get downwards in the fourth session, from which we can detect a considerable elevation toward the fifth session. Apparently, the second group's performance is diminishing in the second session, however, from that point on they are improving until the last session. It is worth noticing that the third group has an upward moving manner up to the fourth session, it shows a slight reduction in the fifth session, though.

Table 9 is presenting the descriptive elements of Turn-taking, Interruption and total WTC in a whole unit. As it is shown, all the groups have their number of Turn-takings, Interruptions and total WTC in each of the five sessions. Also every group has a total mean, which is the mean of the values of all sessions. It is worth to mention that the highest total mean belongs to the first group and within the category of total WTC which is 99.60 and the lowest total mean belongs to the second group and within the category of Interruption which is 35. Standard deviation is a mathematical tool which aids us assess how far the values are spread above and below the mean. A high standard deviation indicates that the data are widely spread and a low standard deviation demonstrates that the data are clustered closely around the mean. Each group has a standard deviation for the total mean and for each category. As it can be observed, the lowest standard deviation belongs to the

third group within the category of Turn-taking which is 8.136 and the highest standard deviation belongs to the second group within the category of total WTC which is 31.428. These total means and standard deviations are written horizontally in rows. However, there are total means and standard deviations for each session and for each category which are written vertically in two last columns. Total means of this trend have been demonstrated in previous figures and appropriate descriptions were provided for them. As it is indicated, in terms of sessions, the highest total standard deviation belongs to the third session within the category of total WTC which is 31.241 and the lowest total standard deviation belongs to the first session within the category of Turn-taking which is 1.52. In terms of categories, the highest total standard deviation belongs to total WTC which is 25.28 and the lowest one belongs to Turn-taking which is 10.09. Obviously, the total standard deviation for Interruption stands between those two categories, which is 16.557.

Table 9

Descriptive Statistics of Turn-taking, Interruption, Total WTC

	Session	Group 1			Group 2			Group 3			Total		
		N	Mean	Std. Deviation	N	Mean	Std. Deviation	N	Mean	Std. Deviation	N	Mean	Std. Deviation
Turn-taking	1	1	38.00	.	1	37.00	.	1	40	.	3	38.33	1.528
	2	1	53.00	.	1	25.00	.	1	38	.	3	38.67	14.012
	3	1	51.00	.	1	41.00	.	1	54	.	3	48.67	6.807
	4	1	41.00	.	1	42.00	.	1	52	.	3	45.00	6.083
	5	1	60.00	.	1	61.00	.	1	55	.	3	58.67	3.215
	Total	5	48.60	9.017	5	41.20	12.969	5	47.80	8.136	15	45.87	10.099
Interruption	1	1	36.00	.	1	30.00	.	1	21	.	3	29.00	7.550
	2	1	43.00	.	1	22.00	.	1	37	.	3	34.00	10.817
	3	1	58.00	.	1	12.00	.	1	51	.	3	40.33	24.786
	4	1	52.00	.	1	48.00	.	1	59	.	3	53.00	5.568
	5	1	66.00	.	1	63.00	.	1	54	.	3	61.00	6.245
	Total	5	51.00	11.874	5	35.00	20.469	5	44.40	15.421	15	43.47	16.557
Total WTC	1	1	74.00	.	1	67.00	.	1	61	.	3	67.33	6.506
	2	1	96.00	.	1	47.00	.	1	75	.	3	72.67	24.583
	3	1	109.00	.	1	53.00	.	1	105	.	3	89.00	31.241
	4	1	93.00	.	1	90.00	.	1	111	.	3	98.00	11.358
	5	1	126.00	.	1	124.00	.	1	109	.	3	119.67	9.292
	Total	5	99.60	19.347	5	76.20	31.428	5	92.2	22.742	15	89.33	25.280

4.5 Response to Question (4):

Describing the variables:

For the variables of the WTC measurement scale (questionnaire), the mean, standard deviation, minimum and maximum were calculated. The results are presented in Table 10.

In the pretest, the mean for Stranger is 39.14, the minimum is 17.75 and the maximum is 52.50. In the posttest, the mean for Stranger is 53.47, the minimum is 31.25 and the maximum is 67.50.

In the pretest, the mean for *acquaintance* is 52.14, the minimum is 32.50 and the maximum is 85.0. In the posttest, the mean for Acquaintance is 67.78, the minimum is 48.75 and the maximum is 90.0.

In the pretest, the mean for Friend is 74.17, the minimum is 57.50 and the maximum is 90.0. In the posttest, the mean for *friend* is 89.44, the minimum is 77.50 and the maximum is 100.

In the pretest, the mean for WTC is 55.15, the minimum is 48.33 and the maximum is 74.16. In the posttest, the mean for WTC is 71.01, the minimum is 63.33 and the maximum is 89.50.

Table 10

Descriptive statistics of WTC questionnaire

	N	Mean	Std. Deviation	Minimum	Maximum
Stranger.pre	9	39.1389	12.59285	17.75	52.50
Acquaintance.pre	9	52.1389	17.02255	32.50	85.00
Friend.pre	9	74.1667	12.74755	57.50	90.00
WTC.pre	9	55.1456	7.46004	48.33	74.16
Stranger.post	9	53.4722	13.07696	31.25	67.50
Acquaintance.post	9	67.7778	13.31379	48.75	90.00
Friend.post	9	89.4444	8.45741	77.50	100.00
WTC.post	9	71.0056	8.82794	63.33	89.50

Comparison of Stranger, Acquaintance, Friend and WTC in the pretest and posttest:

To compare variables in the pretest and posttest, Paired Samples t-Test was used. The results are indicated in Table 11 and Figures 7 up to 10.

The mean of *Stranger* in the pretest is 39.14 and in the posttest is 53.47 and the significance level is less than 0.001 (0.000429). Considering that the significance level of T-Test is less than 0.05, the rate of 'Stranger' in the posttest was significantly higher than the pretest.

The mean of *Acquaintance* in the pretest is 52.14 and in the posttest is 67.78 and the significance level is 0.007 (0.006). Considering that the significance level of T-Test is less than 0.05, the rate of *Acquaintance* in the posttest was significantly higher than the pretest.

The mean of *Friend* in the pretest is 74.17 and in the posttest is 89.44 and the significance level is less than 0.001 (0.000020). Considering that the significance level of T-Test is less than 0.05, the rate of *Friend* in the posttest was significantly higher than the pretest.

The mean of *WTC* in the pretest is 55/15 and in the posttest is 71/01 and the significance level is less than 0.001 (0.000429). Considering that the significance level of T-Test is less than 0.05, the rate of *WTC* in the posttest was significantly higher than the pretest.

Table 11

The Result of Paired Samples T-Test for Comparison of Pretest and Posttest

		N	Mean	Std. Deviation	t	df	Sig.
Stranger	pretest	9	39.1389	12.59	-	8	.000
	posttest	9	53.4722	13.07	5.7		
Acquaintance	pretest	9	52.1389	17.02	-	8	.007
	posttest	9	67.7778	13.31	3.6		
Friend	pretest	9	74.1667	12.74	-	8	.000
	posttest	9	89.4444	8.45	8.9		
WTC	pretest	9	55.1456	7.46	-	8	.000
	posttest	9	71.0056	8.82	5.7		

5. Discussion

In this section, the researchers are going to discuss the results and compare them with similar studies conducted in the field. In this research, the first and second questions were subcategories of the third question. Also, the fourth

question was a complementary one for enriching the main findings. Therefore, all of them were trying to answer one important question which is 'what is the effect of think-pair-share interactional activity on improving Iranian EFL learners' WTC. Thus, the answer to this question and the results of similar studies, which were included in the literature, are going to be compared and discussed.

For answering the question what is the effect of think-pair-share interactional activity on improving Iranian EFL learners WTC, voice recording and corresponding transcriptions were employed. In addition, a WTC questionnaire was used. The figures and descriptions in the results section presented some fluctuations in terms of different groups and also in terms of different sessions, although the general tendency was toward improvement and the inferential statistics proved that the results were statistically significant. Thus, think-pair-share interactional activity improved learners' willingness-to-communicate in a small sample size in a particular context.

In a study by Raba (2017) the influence of think-pair-share (TPS) on improving learners' oral communication skills in EFL classrooms was investigated. In this research, interview and observation were used for collecting data. Data analysis revealed that the TPS had a positive influence on the elevation of learners' oral communication skills. They were more motivated and more fluent and so the learning process evolved. This is in line with the current study because the TPS activity plays a positive role in making learners develop better communication skills.

In another study by Usman (2015) the effect of think-pair-share (TPS) on improving learners' speaking ability was measured. In this study, observation method was used and it was done in three cycles. The results revealed that the think-pair-share activity was successful in meliorating the speaking ability of

the learners. This is in line with the current study because TPS is improving learners' speaking ability and enhancing their performance.

In a study by Sampsel (2013) the effect of TPS on learners' confidence and participation in doing mathematics was experimented. Pre-surveys and post-surveys, also field notes, video recordings and observations were used as means of data gathering. The results of the pre-survey and post-survey suggested that think-pair-share had a positive effect on learners' viewpoint about engaging in discussion in math classes. This is in line with the current research's results regarding the willingness-to-communicate questionnaires in which learners' perceptions were improved toward their choices of initiating discussion in different situations. In the study by Sampsel, the learners produced more comments and initiated longer responses, and, as a result, the TPS was effective. This is also in line with the current study because of the facilitating function of TPS toward increasing confidence and participation.

In a research by Kothiyal, Majumdar, Murthy, and Iyer (2013) the effect of TPS in a large computer science class was investigated. The topic was programming concepts and skills and learners participated in the argumentation to express and test their solutions, propose alternate answers, and discuss 'what-if' circumstances. Also a self-report survey was used. All the questions were to be answered on a five point Likert scale. The engagement in the think phase was between 70% and 95% depending on the problem, in the pair phase it varied between 75% and 90% and the share phase also between 75% and 90%. Findings concerning the participation behavior patterns of learners support the positive points of TPS activity. These results are in line with those of the current research because they demonstrate the benefits of TPS in the sense that it increases participation.

6. Conclusion

The findings are anticipated to have useful implications for many stakeholders in the educational field. For teachers, it is beneficial in that they are getting to know the value of peer interaction and keeping distance from traditional teacher-fronted routines so that they can truly embrace and admire the power of learners negotiating around the topic. They may be enlightened in terms of how such activities can be practically applied and what modifications and revisions might be needed for a robust and flawless process of enacting such interactional activities.

For learners, it is useful in that they become aware of such activities and by challenging themselves to initiate such discussions or showing enough courage to respond and react to different ideas. They can develop their self-confidence, also they remake what they initially utter at the subsequent turns of talk and by such means they get closer to having a critical view toward an issue and investigate the problem from different angles of visions. They themselves may have opinions regarding the reformulations of the activity and their creativity may come in handy for much better conducting the whole process.

For syllabus designers and materials writers, all the critiques and reshaping of the ideas and practical considerations can be seen as a tool for producing content which seems to be more in accordance with the real needs and challenges of learners in the classroom context. It is worth mentioning that in this world, it is very significant to make individuals grow up in a way that they can express their existence, emotions, mentalities and knowledge by triggering their interest toward willingness to initiate talk and breaching the obstacles that hinder such efforts.

Arnold et al. (1991, p. 50) stated that "People retain:

- 20 percent of what they **hear**

The Role of Think-Pair-Share ...

- 30 percent of what they **see**
- 50 percent of what they **see** and **hear**
- 70 percent of what they **see**, **hear**, and **say** (e.g., discuss, explain to others)
- 90 percent of what they **see**, **hear**, **say**, and **do**".

Thus, when learners are negotiating in groups, they retain much more than the time when they are only receivers of information. Think-pair-share works best with smaller groups (Lyman, 1981). These groups are less threatening to most of the participants, and this atmosphere is helpful for learners to discuss perceptions, opinions, and thoughts (Krueger & Casey, 2000). Reducing group size seems to be a crucial factor, as it has exhibited to reduce tension and anxiety (De Léger & Storch, 2009); particularly groups of three or four learners can result in elevated WTC, according to Cao and Philp (2006).

Through conversing with their peers, learners get more comprehensible input (Seliger, 1983) and they can produce more comprehensible output (Swain, 1983). Learners are more active in negotiating message meaning (Doughty & Pica, 1984) and in repairing their errors (Porter, 1983) when talking to other speakers rather than when talking to the teacher. Porter (1983) ascertained that in small group work just 3% of the errors are incorporated into the speech of peers.

Through this study, it was revealed that by implementing TPS activity and making learners have discussions in small groups, their turn-takings fluctuated over time and generally demonstrated an increasing trend as sessions were passing. Additionally, the more they try to involve themselves, the more interruptions occur, and during these sessions, their interruptions were elevating and as a result, they were more willing to communicate. Totally, this research figured out that TPS activity made learners have more

turn-takings and interruptions. Consequently, their willingness to initiate talk received proper momentum.

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