

The Impact of Kagan's Cooperative Group-work Structures on Iranian Upper-Intermediate EFL Learners' Willingness to Communicate

Ali Bahojb Habibi*

Shadi Mohammadali Zadeh Fard

Payame Noor University of Tabriz, Iran

(Corresponding author. Email: Bahojb.habibi.ali@gmail.com)

Received: 7 July 2023; Accepted: 1 October 2023; Published: 22 November 2023

<https://doi.org/10.58304/tc.20240102>

Abstract

Effective communication is essential, but it is even more important to be willing to communicate. A promising method that promotes EFL students' willingness to communicate is Kagan's Cooperative Structures. The present study aimed to investigate the impact of group-work techniques based on Kagan's cooperative structures on Iranian upper-intermediate EFL learners' WTC. From among 75 initial EFL students, 60 were selected using the convenience sampling method based on the results of the Nelson proficiency test. Then, the participants were randomly assigned into one control group and one experimental group. A WTC questionnaire developed by MacIntyre et al. (2001) including 27 items on a 5-point Likert scale was administered as a pretest. Afterward, the different group-work techniques based on Kagan's cooperative structures were instructed as a treatment to 30 participants in the experimental group only. The instructional treatment took 15 sessions, and in each session, 20 minutes were devoted to the treatment. Analyzing the WTC scores obtained through an independent sample t-test after the treatment instruction indicated that Kagan's cooperative structures significantly improved EFL learners' WTC. The obtained results have some implications for teachers in order to promote learners' WTC and hence, improve their learning through applying Kagan's cooperative learning structures.

Keywords

Second language acquisition, cooperative learning, willingness to communicate, Kagan's cooperative structures, group-work

Introduction

Nowadays, in the field of English language teaching (ELT), communication is believed to be one of the most significant areas for improving English proficiency. As a matter of fact, for enhancing learners' language competence, communication interactions have established a niche in the education environment. Based on Canale and Swain (1980), the significance of promoting communicative competence in second language learners has been highlighted in modern language teaching. Furthermore, classroom tasks which focus on meaningful communication, real-world simulation, and authenticity have become the major characteristics of classroom conversation after the arrival of communicative language teaching (CLT) (Brown, 2001). Therefore, for CLT to be effective, there should be an interaction between students and teachers as well as learners and their peers. To this end, students may need motivation and willingness to initiate interaction (Heng, 2014). In so doing, a new construct called willingness to communicate (WTC) has been proposed so as to assess students' tendency toward communication in a second or foreign language.

As said by McCroskey, Bayer, & Richmond, (1985) and McCroskey and Richmond (1990), willingness to communicate is defined as “an individual’s general personality orientation towards talking”. However, the concern which has to be taken into consideration by the instructor as an independent participant, as proposed in CLT, is that how a good classroom talk can be created in which all the learners are engaged and they easily communicate in the target language. To do so, a student-centered classroom environment is needed in which students fear nothing to communicate. Such a community requires a skilled instructor who can veer from the traditional model of Initiate-Respond-Evaluate (IRE), which aims to create a classroom discussion dominated by the teacher, to CLT in which students’ communication is the priority of the whole teaching (Coultras, 2015).

It is believed that communication is the main goal of learning a language and therefore numerous studies have been done to assess the ways to increase the rate of language learning to foster communication worldwide. Many studies have been carried out on how different techniques can promote communication in a target language in the classroom and subsequently in real life. However, communication and willingness to communicate are still dominant issues in most EFL classes considering that most of the students lack communicative competence due to the lack of confidence, boring topics, and lack of proper facilitation from the teacher. In most cases, the topics proposed in classrooms by the teachers are not exciting enough to be discussed and as a result, students prefer to remain silent during class talks. In addition, teachers do not properly engage the students in classroom discourse. Furthermore, in most cases, applying the traditional models to prompt willingness to communicate and communication, teachers fail to trigger the students’ interaction and desire to share and be involved in classroom talks. The mentioned problem is caused by different reasons such as utilizing traditional ways in which the teacher was the dominant authority in the class. In fact, rather than promoting interactive, student-to-student discourses, teachers often use a traditional approach known as the Initiate-Respond-Evaluate (IRE) model (Gonzalez, 2008; Moss & Brookhart, 2009). In IRE interactions, the class talk is dominated by the teacher determining the subject of discussion, leading the conversation, asking questions, and providing evaluative feedback on student responses. In this traditional structure of classroom discourse, teachers routinely implement a rapid firing of questions one right after another, while students do not have enough time for responses or conversation (Moss & Brookhart, 2009).

An innovative method that provides a novel way of teaching in order to promote speaking and consequently communication and WTC among students is Cooperative Learning (CL) (Gomleksiz, 2007). In CL, teachers try to create an environment for learners in which they are encouraged to work together as a team and it is claimed that CL can be used as an effective approach to encourage students to work together as one team and start interaction. Based on Hirst and Slavik (2005), students participate actively while sharing their different points of view on a certain topic when cooperative learning approach is applied in the classroom. They emphasized that cooperative classrooms symbolize a shift from traditional lecture-based classrooms to more brain-friendly environments that benefit all learners. Besides, Kagan (2010) described cooperative learning as a teaching arrangement that refers to small, heterogeneous groups of students working together in order to achieve a common goal. Students work together to learn and they are responsible for their teammates’ learning as well as their own. Johnson D., Johnson R., & Holubec E. (2008) called group work as cooperative learning, and defined it as the instructional use of small groups to encourage students working together to take advantage of their own and each other’s learning. It is exemplified by positive interdependence, where students perceive that better performance by individuals produces better performance by the whole group. One of the most prominent strategies in CL is Kagan’s

Cooperative Structures. They can be used to organize interactions between students who are participating in cooperative working teams. Dr. Spencer Kagan developed the concept of structures; and his popular cooperative learning and multiple intelligence structures like Number Heads Together and Timed Pair Share are used in classrooms worldwide (Kagan, 2008). In the structural approach, the focus is on creating, analyzing, and systematically applying the structures and also content-free ways of organizing social interaction in the classroom.

Therefore, the main purpose of this study was to indicate the importance of Kagan's cooperative group-work structures, teachers' role as a facilitator of learning process, and students' role in using correct and suitable cooperative learning structures in the learning achievement specifically learners' willingness to communicate in second language. Moreover, since cooperative learning is a student-centered method, teachers should make an effort to consider themselves as a counselor to their students than an authoritative teacher in order to communicate and interact with their students and increase their willingness to communicate skill.

Review of Literature

Willingness to communicate

Communication is considered to be one of the most pivotal goals in learning a second or foreign language, and being able to use this SL/FL orally or in a written form indicates successful language acquisition. Nowadays, the importance of cultivating and promoting communicative competence in the learning process has been rightly emphasized in modern language teaching approaches (Canale & Swain, 1980). With the emergence of communicative language teaching (CLT), authenticity, real-world simulation and meaningful tasks were the main characteristics of classroom conversation (Brown, 2001). Therefore, students need to learn how to effectively interact with teachers and other peers. Doing this may require motivation and willingness to initiate a dialogue. It is argued by some researchers that the main purpose of language instruction should be the creation of willingness to communicate (WTC) in the language learning process. Willingness to communicate is considered to be a potentially underlying principle for effective interaction and language production. Based on MacIntyre et al. (1998), the main purpose for teaching an L2 should be cultivating WTC in learners and language learning process so that learners, who are eager and willing to seek out opportunities to communicate, are produced.

The concept of WTC in the first language communication was first promoted by McCroskey and Richmond in 1990. According to them, WTC should be treated as a "trait" because it is the intention of an individual for initiating and being involved in communication in different situations (McCroskey & Richmond, 1990). Their work was in relation to communication in the first language (L1), and as an expansion of earlier work by Burgoon's (1976) on unwillingness to communicate. WTC in L1 can be defined as a stable predisposition toward interacting with others when they are free to choose to do so (McCroskey, J. C., Bayer, J. M., & Richmond, V. P, 1985). According to McCroskey and Richmond (1990), WTC in L1 is a personality-based, trait-like predisposition which can be undeviating across different situations. In other words, despite the fact that situational variables can have an effect on learners' WTC, individuals might represent regular WTC tendencies across different situations. In a study done on Japanese language students, McCroskey et al. (1985) concluded that learners' communication apprehension can be boosted in both L1 and L2 when their native language communication and L2 motivation are combined. Later in 1998, MacIntyre et al. (1998) promoted a more comprehensive model called WTC in SLA research in which social-

psychological linguistic, educational and communicative dimensions of language are amalgamated in order to find a way to explain the learners' WTC in L2. MacIntyre et al. (1998) defined WTC as the chances of learners' engagement in interaction with others when they are free to do so. In fact, they considered WTC as a state of eagerness to start speaking with others in L2 at a specific time and situation. On that account, the concept of willingness to communicate in the second language is considered as a *situational factor* in MacIntyre's WTC model and it includes both "enduring" and "temporary" effects.

Based on Azmandand Zamanian (2014), the pedagogical environment in an L2 setting is much more different and complex than in an L1 because there is a strong modifying variable called the learner's communication skill and ability. Therefore, they claimed that considering WTC in an SL context as a manifestation of WTC in the L1 might be quite doubtful. However, MacIntyre et al. (1998) defined L2 WTC as being ready to get into a conversation with a specific person at a particular time, using the second language. This definition suggests that although the chance to communicate will likely present itself, it is not necessary in order to possess the WTC. For instance, if an instructor frames a question in the class, several students may know the answer and therefore they might raise their hands to show their desire to answer the question. Even if only one student among many has the opportunity to answer the question in L2, all of the students raising their hands can be considered as expressing WTC in L2. (MacIntyre et al., 1998).

Recently, willingness to communicate in second language is defined as a function of situational contextual factors including the subject, the conversation partner, the size of the group in which the conversation occurs, and the learners' cultural background (Kang, 2005). Kang (2005) claims that individual psychological conditions and situational variables have an effect on L2 WTC. She argues that the previous definitions of L2 WTC cannot serve as a theoretical foundation for investigating WTC in dynamic situations, where it can be changed from time to time. Therefore, she proposes a new definition of WTC which is an individual's "volitional inclination" toward participating in communication in a specific situation which is changeable according to the subject, interlocutor or partner, and conversational context, among other potential situational variables" (Kang, 2005, p.291). With all the definitions of WTC proposed by different researchers above, it can be suggested that WTC can be regarded as both situational and trait-like characteristics.

Factors underlying EFL learners' WTC

There have been numerous studies associated with the elements underlying EFL learners' WTC. Matsuoka (2006) examined how learners' different variables have an impact on Japanese university students' WTC in English as well as their English proficiency. It was proved that communication apprehension, introversion, perceived competence, and motivational intensity are all critical predictors of L2 WTC and additionally, perceived competence and WTC are both significant predictors of L2 Proficiency. In another study done in China, Yu (2009) investigated English learners' WTC and found out that all communication variables such as WTC, communication apprehension, and self-perceived communication competence were significantly correlated with each other in both Chinese and English communication settings.

Furthermore, other studies suggest that linguistic, communicative, and social psychological variables may be influential in learners' WTC. For example, Cetinkaya (2005) argues that learners' WTC has a straightforward relation with their mindset toward the international community and their perceived linguistic self-confidence. Consequently, she suggests that learners' motivation to communicate in a language and whether they have an introverted or

extroverted personality are both indirectly related to their WTC through linguistic self-confidence.

In recent studies, teachers have been identified as a crucial element in making learning and communication effective. Teachers can create an environment in which students can feel more open and comfortable to speak out and share their ideas and consequently students' willingness can be affected when they are in a cozy environment. Among the many effects teachers can have on students' educational lives, some researchers have referred to the role of teachers in EFL learners' WTC. (Cetinkaya, 2005; Hsu, 2005; Myers & Bryant, 2002; Yu, 2009). It's suggested by Habash (2010) that for improving the quality of teaching in the class, teachers need to improve strategies for helping learners to become more eager and enthusiastic about communicating in the class. According to Riasati (2012), learners' WTC is influenced by a number of factors such as task type, topic of discussion, interlocutor, teacher, class atmosphere, personality, and self-perceived speaking ability. In another study conducted in the Iranian setting, Alemi, Tajeddin, and Mesbah (2013) concluded that Iranian EFL learners' WTC is somehow affected by their individual differences. A brief review of the literature available reveals that in spite of having several studies dedicated to factors affecting Iranian EFL learners' WTC, there is not, however, any emphasis on cooperative learning and Kagan's structures as a significant construct contributing to learners' WTC.

Cooperative learning

Recently in the field of education, there have been many innovative methods proposed by different scholars for the purpose of enhancing students' eagerness to communicate and based on Gomleksiz (2007), cooperative learning (CL) can be one of these novel methods that focuses on learners' communication and WTC. According to Johnson & Johnson (1998) and Kessler (1992), CL is becoming more and more popular in school, college, and university settings all around the world and it is claimed to be immensely influential in foreign/second language education by scholars (Johnson & Johnson, 1998; Kagan, 1990; Slavin, 1995). The main responsibility of teachers in CL is to create an environment in which students try to achieve their goals while interacting with other students and trying to reach a final result which is usually content specific. Therefore, in CL, learners are situated in different groups designed by teachers and they are encouraged to work together as a team. In each Kagan group, there are three to five students who try to work together, share their opinions, study, and negotiate meaning to promote a shared piece of knowledge and accomplish a certain purpose or seek a solution for a specific learning problem instead of working individually and competing with other students. In other words, cooperative learning can be defined as a system of concrete teaching and learning techniques, rather than an approach, in which learners play the role of an active agent in the process of learning and they strive to learn through communicating and interacting with other students in the group and as a result, not only do they improve themselves, but they also boost their pairs' learning too.

Kagan's cooperative learning structures

One of the most prominent strategies in CL is Kagan's Cooperative Structures. These structures are used in order to create interaction opportunities between students who are participating in cooperative working teams. The concept of these cooperative structures was promoted by Dr. Spencer Kagan and there are more than 150 different kinds of them such as multiple intelligence structures like Number Heads Together and Timed Pair Share which are used in classrooms worldwide (Kagan, 2008). In the structural approach, teachers try to create, analyse, and apply the structures systematically in the process of teaching so that they are able to organize social interaction between students in the class. Students, on the other hand, are

encouraged to work together to learn and they are responsible for their teammates' learning as well as their own. The Kagan model of cooperative learning, which is based on the concept and use of "structures", is an innovative approach to classroom instructions. There are a lot of different structures and they can be used for any lessons to teach any skills or sub-skills. As it was mentioned above, there are over 150 Kagan structures which have different functions. Some of them are designed to produce master of high consensus content, others to produce thinking skills and yet others to foster communication skills.

Kagan's cooperative structures are used so as to organize interaction between individuals in an educational environment. There are simple and step-by-step procedures which are applied to present, practice, and review material. Some of the structures are suitable for promoting interaction between pairs, while some others are best for teamwork or even the whole class (Kagan, 2008). Cooperative learning structures are content-free strategies for learners to be engaged and involved in the classroom talk. There are a lot of different structures and they can be used for any lessons to teach any skills or sub-skills. Instructors can provoke learners' motivation, boost their achievement, and manage an effective classroom while using Kagan's cooperative structures such as "numbered heads together", "Quiz-Quiz trade" and "rally coach". Kagan's structures are simple, step-by-step instructional strategies and most of them are designed to increase student engagement and cooperation. For example, a famous and at the same time easy Kagan Structure is Rally Robin. Instead of calling on one student each time to answer a question, the teacher has all learners interacting at once by saying, "Turn to your group-friends and do a Rally Robin." While students are doing a Rally Robin, they take turns repeatedly, share their one answer each turn, listen to the other students' answers, and they create an oral list. Each student in the class gives several answers. For longer responses, the teacher might use a different structure, such as Timed Pair Share. In a Timed Pair Share structure, each student in turn shares for a predetermined time, perhaps only a minute each. There is a list of some of Kagan's cooperative structures in table 1.

Table 1
Some of Kagan's Cooperative Structures

Summarizing	Idea Spinner Paraphrase Passport	Spin-N-Think Three Step Interview	Telephone
Analyzing	Same Different Match Mine	Jigsaw Solving Spin-N-Think	Problem Sequencing
Inducing	Find My Rule	Think Pair Share/Square	
Deducing	Mix-Pair-Discuss Team Discussion with Roles	Numbered Together Inside-Outside Circle	Heads Stir the Class
Problem Solving	Co-op Projects Round Robin	Jigsaw Solving	Problem One Stray
Brainstorming	Brainstorming Think Pad	4-S Brainstorming RoundTable	Round Robin Pairs Compare

Questioning	Spinners Team Interview	Three Step Interview Q-Matrix	Who Am I?
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Besides theoretical support, there needs to be an empirical background to support the practicality of the study. Therefore, the researcher has referred to the following related studies in order to establish a practical basis for the variables under consideration. In one study, Soleimani and Khosravi (2018) applied Kagan cooperative structures in order to find their effect on willingness to communicate. In their study, 24 female adult learners participated. The results of their study revealed the fact that they excelled the control group in oral communication and they were more eager and willing to communicate and share their ideas. In another study, Cao and Philp (2006), for example, investigated the relationship between interactional context and willingness to communicate. The results of the study showed that self-confidence, familiarity with the interlocutor, and the interlocutor's participation had an influence on learners' WTC. As well, in another study, Cameron (2013) studied the factors affecting willingness to communicate in a Spanish university context, and concluded that self-perceived communicative competence, personality, stress-free mood, motivation, and the learning context were the effective factors in students' WTC.

As this brief literature review shows, there is no or low empirical evidence regarding the effectiveness of group-work techniques based on Kagan's cooperative learning methods on EFL learners' willingness to communicate. To this end, efforts should be made to research the effect of cooperative learning methods and purposefully group-work techniques based on Kagan's cooperative structures on Iranian upper-intermediate EFL learners' willingness to communicate. Having these purposes in mind, the researcher proposed to answer the following research question: Do group-work techniques based on Kagan's Cooperative Structures have any significant effect on Iranian Upper-Intermediate EFL Learners' Willingness to Communicate?

To answer the above-mentioned research question, the following null hypothesis was proposed along this line:

Ho: Group-work techniques based on Kagan's Cooperative Structures have no significant effect on Iranian Upper-Intermediate EFL Learners' Willingness to Communicate.

Method

Participants

Seventy-Five Iranian upper-intermediate EFL students from Goldis Language Institutes in Tabriz, Iran participated in the present study. Out of 75 participants, 60 participants whose scores were within one standard deviation above or below the mean were selected based on their scores on the Nelson proficiency test. Then, these participants were randomly assigned into one control group and one experimental group. The number of participants in each of the control and experimental groups was 30. Moreover, all the participants were from the same cultural background and they shared the same L1. What's more, the participants' age group ranged from 18 to 30 and there were both male and female learners in the treatment course; therefore, age and gender were not the variables to be considered in the study.

Principled reflections were approved in the completion of the research. Participants were acquainted with the aims of the present study, and they were assured that the results would be kept private. Furthermore, to guard their anonymity, research conventions were given to each participant to signify their individuality, and no personal information was available (e.g., using numbers and codes instead of names to refer to participants, not revealing identifying information, discussing the location of records and who will have access to them). The participants should be voluntarily free to be included in the research study without any pressure or coercion and they can withdraw from the study at any point during data collection. Also, permissions were obtained to assign the participants in the treatment or the same as experimental group and control group in the pretest and post-test as well as to administer the tests and questionnaires required as the basis of the quantitative research questions.

Instruments

A WTC in English inside the classroom questionnaire was adapted from MacIntyre, Baker, Clément, and Conrod (2001) which assesses the frequency of times that learners would prefer to communicate in L2 in an educational setting. The questionnaire, which was used as a pretest and post-test, consists of 27 items on a 5-point Likert scale ranging from 1 “strongly disagree” to 5 “strongly agree” which are designed to measure participants’ feelings towards communication in four language skills, gauging students’ willingness to read, write, comprehend, and finally speak in the class. In order to check the reliability of the questionnaire, it was subject to a pilot study the results of which showed an acceptable level of reliability which is .819. To ensure the content validity of the test a professor, whom I was honored to be supervised by, studied the questionnaire and approved its face and content validity.

The material used in this study included the course book American English File 4, which was taught in three institutions. In addition, Nelson proficiency test was used in order to homogenize the participants based on their proficiency level. It consists of 50 multiple-choice items including reading, vocabulary, grammar, and pronunciation. The validity and reliability of the test have been already approved by plenty of researchers for several times and it is considered as a highly valid and reliable test of English proficiency (Fowler & Coe 1976).

Procedure

To carry out the study, the researcher complied with the research within the two-month period with the classes that took place twice a week and the sessions that lasted for ninety minutes. The procedure of the study was carried out in four phases and to collect the data, the subsequent measures were taken in order to achieve the purpose of the study.

Firstly, the Nelson proficiency test was administered to 75 Upper-Intermediate students whose scores fell within the range of one standard deviation above and below the mean and among them, 60 students based on the results of Nelson proficiency test were chosen to carry out the next phase of the study. Next, the participants were randomly assigned into one control group and one experimental group, each of both groups consisting of 30 participants. The second stage focused on the completion and collection of the WTC inside the classroom developed by MacIntyre et al. (2001) as a pretest with the interval of one session subsequent to the Nelson proficiency test. All 60 participants were informed that their participation was voluntarily and that their participation in this study would not affect their achievement as regards to their grades. They were also informed that the collected data would be anonymous and confidential. The questionnaires took about fifteen minutes of class time to complete. The results represented that the participants were also homogeneous in terms of WTC at the beginning of the study.

The third phase began by treatment which was based on Kagan's cooperative group-work techniques. The treatment took 15 sessions and, in each session, there was one skill and one sub-skill to be taught according to the curriculum and lesson plan of the book. In an experimental group, the focus of the teacher was on applying group-work techniques based on Kagan's structures. The teacher applied one new Kagan structure every session, which guided students to do different styles of group-work in order to achieve a task. It is worth mentioning that all the rules of the Kagan's structure were explained in detail to the participants at the beginning of each session. Some of the structures used in the course were Team-pair-solo, Numbered Heads Together, 4S brainstorming, Agree Disagree Lines-ups, etc.

The sessions commenced with a fifteen-minute part for greeting and reviewing the previous session's subject. Then it was time for presenting a new lesson. After the teaching step, the class was followed by thirty minutes of exercises done by the learners in their groups. All the students were divided into specific groups and they were asked to work with their group mates in order to achieve the task. This was the phase in which Kagan's structures were applied. To do so, the teacher had to explain the steps of Kagan's structure quite simply and also provide the students with the steps written on the piece of paper and then ask them to do the exercise based on the steps required. The treatment took 15 sessions twice a week for the experimental group. Each session lasted for 90 minutes, from which 20 minutes were devoted to the treatment. The teacher /researcher raised the awareness of the participants about Kagan's cooperative learning techniques and explained the cooperative learning techniques, which is explained in detail below. The only difference between the two experimental and control groups was in the treatment which was only provided to the participants in the experimental group. The traditional instruction was conducted in the control group.

An example of how the students in the experimental groups and also the teacher applied these structures is given below in steps.

Team Pairs Solo:

1. After explaining the steps and providing students with a piece of paper on which the steps are written, the teacher places the students in groups of four or five.
2. Then the teacher poses a question such as "Write an Introduction paragraph for the topic below" and asks students to come up with as many ideas as they can in their groups.
3. Students sit around with their teammates and jot down all the ideas related to the topic.
4. Teacher interrupts the brainstorming process after a while and divides the groups into pairs so that teams are transformed into pairs.
5. Now students keep on thinking about their ideas in pairs and narrowing them down and also having some thoughts about the grammar and structures they have to apply.
6. The teacher interrupts the process again and asks the students to perform the rest of the activity individually.
7. Students start writing and answering the questions individually.
8. All students have open-class feedback.

The last part of the lesson was dedicated to a follow-up activity or a freer practice task in which the participants had to do a speaking-related or a writing-related activity in groups and then their answers and results were checked by all the students and the teacher. This was the most significant part because it could be observed easily that how eager and willing the students are in order to communicate with others.

After the treatment period, the study began its last phase in which the students took the same WTC questionnaire once more after the treatment to both control and experimental groups to determine whether students' willingness to communicate has increased or not. The researcher intended to analyze the difference between pre-questionnaire and post-questionnaire of WTC to reach the research question.

Design

The design of this study was quasi-experimental, including experimental and control groups with pretest and posttest. The participants were randomly assigned to one experimental and one control group. Group-work techniques based on Kagan's cooperative learning were considered as the independent variable and WTC was considered as the dependent variable of the study.

Results and Discussion

Results of normality distribution of willingness to communicate scores

Having collected the data, the researcher analyzed those using SPSS. To ensure the normality of the distribution of the participants' WTC scores in the control and experimental groups, One-sample Kolmogorov Smirnov test was used. The results of this test are shown in Table 2.

As Table 4.1 shows, the p-values for the participants' pre-test and post-test WTC scores between the control and experimental groups were higher than 0.05. Thus, it was demonstrated that the participants' pretest and post-test WTC scores had a normal distribution. Therefore, the normality assumption was met.

Table 2

One-Sample Kolmogorov Smirnov Test for the Participants' WTC Scores in Control and Experimental Groups

		Pre-test WTC Scores	Post-test WTC Scores	
Control Group	N	30	30	
	Normal Parameters ^{a,b}	Mean	80.67	90.80
		Std. Deviation	10.47	13.30
	Most Extreme Differences	Absolute	.133	.123
		Positive	.133	.091
		Negative	-.098	-.123
	Test Statistic	.333	.423	
	Asymp. Sig. (2-tailed)	.200 ^{c,d}	.200 ^{c,d}	
Experimental Group	N	30	30	
	Normal Parameters ^{a,b}	Mean	82.45	102.53
		Std. Deviation	9.57	7.35
	Most Extreme Differences	Absolute	.140	.179
		Positive	.140	.179
		Negative	-.085	-.097
	Test Statistic	.240	.279	
	Asymp. Sig. (2-tailed)	.200 ^{c,d}	.089 ^c	

Results of the independent samples T-test between the experimental and control groups

The null hypothesis formulated in the present study stated that group-work techniques based on Kagan's cooperative Structures has no significant effect on Iranian EFL learners' willingness to communicate.

In order to check the participants' WTC, the researcher used a pre-test WTC questionnaire to 60 participants of the study. Before embarking on the independent samples t-test, it was vital to consider the descriptive statistics of the participants' pre-test WTC scores. Table 3 demonstrates the results.

Table 3

Descriptive Statistics for the Participants' Pre-test Willingness to Communicate Scores

	Groups of Students	N	Mean	Std. Deviation
Students' Pre-test WTC Scores	Control Group	30	80.67	10.47
	Experimental Group	30	82.45	9.57

As it is illustrated in Table 4.2, the mean score and standard deviation of the participants' pre-test WTC scores in the control group were 80.67 and 10.47, whereas the mean score and standard deviation of the participants in the experimental group were 82.45 and 9.57. In other words, the participants in the experimental group outperformed the participants in the control group.

Independent samples t-test was applied to see whether there was a significant difference between the participants' pre-test WTC scores in the control and experimental groups or not. The results are demonstrated in Table 4.

Table 4

Independent Samples T-test for the Participants' Pre-test Willingness to communicate Scores between Control and Experimental Groups

		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
Students' Pre-test WTC Scores	Equal variances assumed	4.092	.151	-2.32	58	.190	-1.78	1.11
	Equal variances not assumed			-1.32	58	.190	-1.78	1.11

The results acquired from the first row of Table 4.3 revealed that in Levene's test, p-value of .151, higher than alpha level .05 and equal variances were assumed. Since $t(58) = -2.32$, $p = .190 > .05$, it was revealed that there was not a significant difference in the participants' pretest

WTC scores between the control and experimental groups. In other words, the participants had the same willingness to communicate before the treatment.

After the treatment instruction, the researcher distributed the WTC questionnaire among 60 participants as a post-test again to see whether there was a significant difference between the participants' post-test WTC scores between control and experimental groups or not. For this purpose, the researcher computed the descriptive statistics of the post-test scores. Table 5 displays the results of descriptive statistics for the post-test WTC scores.

Table 5

Descriptive Statistics for the Participants' Post-test Willingness to Communicate Scores between Control and Experimental Groups

	Groups	N	Mean	Std. Deviation
Students' Post-test WTC Scores	Control Group	30	90.80	13.30
	Experimental Group	30	102.53	7.35

As it is illustrated in Table 4.4, the mean score and standard deviation of the participants' post-test WTC scores in the control group were 90.80 and 13.30, whereas the mean score and standard deviation of the participants in the experimental group were 102.53 and 7.35. In other words, the participants in the experimental group outperformed the participants in the control group.

Once more, independent samples t-test was applied to see whether there was a significant difference between the participants' post-test WTC scores in the control and experimental groups or not. The results are demonstrated in Table 6.

Table 6

Independent Samples T-test for the Participants' Post-test Willingness to Communicate Scores between Control and Experimental Groups

		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
Students' Post-test WTC Scores	Equal variances assumed	4.363	.124	-9.155	58	.000	-11.73	3.38
	Equal variances not assumed			-9.155	58	.000	-11.73	3.38

As Table 6 demonstrates, the p-value in Levene's test for equality of variances yielded p-value of .124. It means that equal variances were assumed and the results of the first row should be read. Since $t(58) = -9.155$, $p = .000 < .05$, it was revealed that there was a significant difference

between the participants' post-test WTC scores in the control and experimental groups. Therefore, the null hypothesis was rejected. The answer to the research question was affirmative.

The purpose of the current research was to find out whether group-work techniques based on Kagan's cooperative structures have any significant effect on Iranian upper-intermediate EFL learners' willingness to communicate or not. The score rise in the willingness to communicate from the pre-test to the post-test indicated the positive effect of group-work techniques based on Kagan's cooperative structures on Iranian upper-intermediate EFL learners' willingness to communicate. The results proved that, there was a statistically significant difference between pretest results and post-test results. Therefore, it can be concluded that treatment in the experimental group was effective and implementing group-work techniques based on Kagan's cooperative structures significantly improved Iranian upper-intermediate EFL learners' willingness to communicate.

The results of the present research are also thoroughly supported by the findings of the study conducted by Soleimani and Khosravi (2018). They have found that Kagan's cooperative structures have a positive effect on the students' speaking skills and willingness to communicate. Soleimani and Khosravi (2018) applied Kagan cooperative structures in a class with 24 adult female students and revealed the fact that they excelled the control group in oral communication and they were more eager and willing to communicate and share their ideas. As well, based on Davoudi and Mahinpo (2012), Kagan cooperative learning structures enable students to work as teams, partners, and classmates. These structures empower learners to work together for learning a language. With the use of Kagan's cooperative learning structures, students are not only frustrated, but they are also supported by each other.

The results of this study are also compatible with the results of other researchers such as Cao and Philp (2006), and Cameron (2013). The results of the study done by Cao and Philp (2006) showed that self-confidence, familiarity with the interlocutor, and the interlocutor's participation had an influence on learners' WTC which is similar to the effect of Kagan's cooperative structures presented in the current study. Moreover, Cameron (2013) studied the factors affecting willingness to communicate in a Spanish university context, and concluded that self-perceived communicative competence, personality, stress-free mood, motivation, and the learning context were the effective factors in students' WTC which are in accordance with the results of this study.

Conclusion

The current study investigated the impact of group-work techniques based on Kagan's cooperative structures on Iranian upper-intermediate EFL learners' willingness to communicate. To carry out the study, the researcher complied with the research within the two-month period with the classes that took part twice a week and the sessions that lasted for ninety minutes. The procedure of the study was carried out in four phases. Firstly, the Nelson proficiency test was administered to 75 Upper-Intermediate level students, and 60 students were chosen to carry out the next phase of the study. The second stage focused on the completion and collection of the WTC inside the classroom developed by MacIntyre et al. (2001) on the first day of the study. The third phase began by dividing the 60 students into a control and Experimental group. In the treatment phase, which took two months, the aim of the researcher was to implant Kagan's cooperative structures in the experimental group. The treatment took 15 sessions and, in each session, there was one skill and one sub-skill to be taught according to the curriculum and lesson plan of the book. After the treatment period, the

study began its last phase in which the students took the same WTC inside the classroom questionnaire developed by MacIntyre (2001). The purpose was to determine whether students' willingness to communicate in different situations inside an English classroom has changed or not. The researcher intended to analyze the difference between pre-questionnaire and post-questionnaire of WTC to reach the research question.

The result indicates that using group-work techniques based on Kagan's cooperative learning structures had a significant effect on Iranian learners' willingness to communicate. Considering Kagan's cooperative structures can be a good substitution for traditional and conventional methods of teaching and presenting lessons in an L2 learning and teaching context. This research can be supportive in creating a new understanding of the role of cooperative learning structures especially Kagan's cooperative group-work structures in language learning and teaching process. Group-work techniques as one type of Kagan's cooperative learning structures can be an essential factor in language teaching and education; therefore, it needs to be incorporated in language classrooms. As it was also evident in the present study, Kagan's group-work techniques can encourage learners' willingness to communicate which in sequence can help L2 learning.

Consequently, the results of the present study concerning cooperative learning especially group-work techniques can have substantial prospective in promoting EFL learners' willingness to communicate. In the present study, the effect of group-work techniques based on Kagan's cooperative structure on Iranian learners' willingness to communicate was examined. It is worth noting that the results of this study might be helpful for teachers, syllabus designers, and teacher trainers to update their cooperative learning techniques especially Kagan's cooperative structures in teaching and learning process. It can also be of importance and support to material developers to create course books that integrate Kagan's cooperative learning techniques and group-work as an effective and new element in the teaching syllabus.

Therefore, to eradicate the limitations imposed upon the study such as the small sample size, convenience sampling method, time limitations, further research is required to replicate the findings of the present research, specifically the effect of group-work techniques based on Kagan's cooperative structures on EFL learners' language skills and sub-skills, learners' motivation, autonomy, creative thinking, and other factors in facilitating the way of learning a language.

Appendix

Questionnaire on WILLINGNESS TO COMMUNICATE INSIDE THE CLASSROOM (MacIntyre et al., 2001)

This questionnaire is composed of statements concerning your feelings about communication with other people, in English. Please indicate in the space provided the frequency of time you choose to speak in English in each classroom situation.

- 1 = Almost never willing
- 2 = Sometimes willing
- 3 = Willing half of the time
- 4 = Usually willing
- 5 = Almost always willing

Speaking in class, in English

1. Speaking in a group about your summer vacation.
2. Speaking to your teacher about your homework assignment.

3. A stranger enters the room you are in, how willing would you be to have a conversation if he talked to you first?
4. You are confused about a task you must complete, how willing are you to ask for instructions/clarification?
5. Talking to a friend while waiting in line.
6. How willing would you be to be an actor in a play?
7. Describe the rules of your favorite game.
8. Play a game in English.

Reading in class (to yourself, not out loud)

1. Read a novel.
2. Read an article in a paper.
3. Read letters from a pen pal written in native English.
4. Read personal letters or notes written to you in which the writer has deliberately used simple words and constructions.
5. Read an advertisement in the paper to find a good bicycle you can buy.
6. Read reviews for popular movies.

Writing in class, in English

1. Write an advertisement to sell an old bike.
2. Write down the instructions for your favorite hobby.
3. Write a report on your favorite animal and its habits.
4. Write a story.
5. Write a letter to a friend.
6. Write a newspaper article.
7. Write the answers to a “fun” quiz from a magazine.
8. Write down a list of things you must do tomorrow.

Comprehension in class

1. Listen to instructions and complete a task.
2. Bake a cake if instructions were not in Persian.
3. Fill out an application form.
4. Take directions from an English speaker.
5. Understand an English movie.

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Ali Bahojb Habibi studied English Language and Literature for his BA, and during this time, he developed a particular interest in language education, and teaching 21st century skills such as collaboration, critical thinking, etc. Having majored in TEFL, he is mainly passionate about teacher education, and teaching methodology. In his master's, he gained deeper knowledge of teaching theories, learners' psychology, and learners' language development. He has been a language instructor and teacher educator for more than 12 years in countries like Iran, Turkey, and Azerbaijan, and he has always tried to apply theoretical knowledge gained in various courses in real educational environment.

Shadi Mohammadali Zadeh Fard is a master's degree graduate in Translation Studies. Her thesis was a qualitative, comparative study focusing on the translation of a fictional character's Idiolect. She accomplished her bachelor's degree in English language and literature. Since she was a sophomore at university, she started teaching English language to learners from a wide range of ages and cultures. To gain a deeper understanding of the field, she participated in a TESOL master course. Her main research interests are in TEFL, TESOL, teacher education, young learners' education.