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Effect of Flipped Instruction on Developing Iranian EFL Learners' Listening Macro-skills: Attitude in Focus

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Abstract

This study examined the effects of flipped instruction on the listening macro-skills of Iranian female EFL learners. Furthermore, the study investigated the perceptions of Iranian intermediate EFL students concerning flipped instruction in relation to the enhancement of listening comprehension. To achieve this objective, 137 Iranian EFL learners completed the Oxford Quick Placement Test (OQPT), from which 80 participants were selected as intermediates for the study. These participants were divided into two groups, a control group and an experimental group, each comprising an equal number of individuals. Subsequently, a listening pretest was administered to both groups. The experimental group underwent treatments utilizing flipped instruction. Three days before each actual class session, the materials were delivered to this group through the WhatsApp messaging service. In contrast, the control group received traditional instruction within a face-to-face framework. Following the intervention, both groups participated in a listening post-test to assess the intervention's impact on their listening abilities. Moreover, the experimental group completed an attitude questionnaire to gauge their feelings about the flipped instruction. The findings obtained indicated a significant difference between the listening post-test scores of the experimental group and those of the control group. The post-test findings revealed that the experimental group significantly outperformed the control group. Moreover, the findings of the one-sample t-test indicated that Iranian EFL learners had notably positive perceptions regarding the use of flipped instruction in the teaching and learning of listening skills.

Keywords: Conventional learning; Flipped learning; Listening macro-skill

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1. Introduction

As we are in modern society, one can experience continually developing technology as well as incorporating new technical achievements in our daily life. We use computers and technology in order to perform our daily tasks in a more efficient manner. Everything in our life holds an influence coming from technology, specifically our educational framework. Education, as well as learning modalities, were influenced by technology. Moreover, it even changed classical classroom settings. It is considered a tool for improving both learning as well as educating procedures (Papadakis et al., 2020). One technology-based teaching method that has gained considerable popularity among educators over the past few decades is known as flipped instruction (Moranski & Kim, 2016). This pedagogical strategy, referred to as "flipped instruction," entails a reversal of the conventional order of classwork and homework (Merrill, 2015, p. 16). According to Merrill (2015), instruction delivery predominantly occurs outside the classroom, most commonly through videos

sourced from Internet resources. The flipped classroom (FC) represents a student-centered educational model that, as articulated by AlJaser (2018), “aims to replace the traditional lecture with interactive, cooperative tasks using the internet and computer technology to send a video lecture that students can watch at home and then discuss in pairs” (p. 69). It is imperative to explore the impact of flipped classrooms on the language acquisition process. By presenting online educational materials prior to class and encouraging students to engage in interactive group learning or complex problem-solving activities with teacher support in the classroom, the FC fundamentally transforms the conventional educational paradigm.

Bergmann and Sams (2012) note video as their key component for their minimum flipped classroom model. Nonetheless, there was a diverse set of digital media employed by students in their self-directed learning activity, such as online materials and simulations, games, reading assignments, and collaboration tools such as blogs, forums, and debates.

Application of flipped learning can be an effective technique in cultivating English as a Foreign Language (EFL) learners' listening comprehension skills. Listening comprehension was identified by Vandergrift (1999) as a complex interactive process in which listeners listened attentively to a series of elements such as sounds, intonation, linguistic units, and social settings. Likewise, Holden (2004) held that listening comprehension is a taxing activity necessitating immense cognitive effort for the purpose of obtaining knowledge.

Moreover, it was held amongst both scholars that listeners were obliged to receptively access information prior to verbalizing what is acquired. Listening comprehension contains two major units, which are micro-skills and macro-skills. Brown (2004) lists a total of 17 micro and macro skills that are relevant in executing listening comprehension.

These specific macro-skills refer only to those skills that are linked with the level of organization, which is the discourse level, while those skills that are within the sentence level are still regarded as micro-skills. These listening comprehension macro-skill abilities include:

Determining communicative functions of utterances in line with situations, participants, as well as intentions.

Make inferences about situations, participants, and goals using real-world knowledge.

From the events and ideas described, one is expected to predict outcomes, infer links and connections between events, deduce causes and effects, and detect relationships such as the main idea, supporting new ideas, new information, given information, generalizations, and exemplifications.

Distinguish between literal and implied meanings.

Read facial, kinetic, and bodily movement and other nonverbal signals in order to interpret meanings.

Develop and use a set of listening strategies such as keyword detection, guessing at word meanings based on contextual information, asking for help, and signaling for comprehension or lack thereof. As for the significance of the dependent and independent variables in this study, we made an effort to explore the influence which adopting flipped learning would exert on enhancing Iranian EFL learners' listening macro-skills including "recognizing the communicative functions of utterances" (RCF), "inferring situations" (I), and "guessing the meaning of words from context" (G).

2. Literature Review

As stated by Lage et al. (2000), a "flipped instruction" is a pedagogical design whereby those activities that once happened in the classroom are now taking place outside it, while those that happened outside are now taking place in it. One distinctive feature of this flipped classroom model (FC) is delivering class content outside class hours in the form of video clips, according to Correa (2015) and Yang, Shao, Liu, & Liu (2017). Flipped classrooms allow for flexibility for students so they can watch the videos at their own leisure.

Moreover, students can access the lecture materials repeatedly—the second time, the third time, or any further number of times—before attending class. That in its own right allows instructors more class hours for those tasks which promote active learning, such as group problem-solving activity, group discussion, and student presentations, according to Lee & Lai (2017).

By taking up inverted learning strategies, for instance, flipped classroom (FC) learning, issues such as absenteeism due to medical reasons, inattentiveness during periods when lessons are conducted, and insufficiently equipped venues in standard classrooms for listening to audio recordings are eliminated (Bergman & Sams, 2012).

Due to a fast pace in lesson flow in standard classes, in addition to an overabundance of content requirements per semester, teachers are able to compensate by opting to produce different forms of content delivery, including pre-recording instructive videos in advance and disseminating them to learners before face-to-face meetings are organized for purposes of discussion, elaboration, and resolving problems.

The flipped classroom (FC) is characterized by several issues and drawbacks despite its own set of advantages. One key drawback is in relation to problems with technology. As per Nielsen (2011), it is impossible for a student to learn if there is no access to a smartphone, laptop, tablet, or desktop. Flipped learning is contingent upon access to a single such device for it to run efficiently.

Moreover, access to a stable internet is a requirement for participation; according to Johnson (2013), individuals residing in an area where connectivity is not effective are unable to join online learning. Another concern for FC is that of instructor issues.

As per Johnson (2013), teachers in flipped learning are also supposed to possess some level of computer literacy to plan and execute effectively. Consequently, teachers as well as learners are sure to experience problems based on a lack of computer literacy.

A number of empirical studies were conducted to investigate the effectiveness of flipped instruction on language learning. Campillo-Ferrer and Miralles-

Martinez (2021) examined the effects of flipped classrooms on students' perceptions of their learning and motivation during the COVID-19 pandemic, revealing that the participants demonstrated improved performance in their post-test, with a majority expressing favorable opinions regarding the flipped classroom approach.

Utilizing a quasi-experimental design, Khanahmadi and Nasiri (2022) found that flipped instruction significantly improved the learning performance of English as a Foreign Language (EFL) students. Additional research indicated that flipped classroom instruction positively influenced language proficiency, autonomy, and anxiety among EFL learners as well as their levels of engagement and motivation.

Yoon and Kim (2020) carried out a study in order to determine if flipped learning results in better learning outcomes when compared with conventional or blended learning approaches in English-speaking proficiency. There were 70 first-year learners at a Korean university involved in a research study as a sample population, divided into three groups: conventional, blended learning, and flipped learning.

A rubric based on the IELTS speaking test marking criteria was used in administering and marking pre-and post-tests. Post-test scores for fluency, coherence, and lexical resources were found to show statistical improvement in all three groups when compared with their pre-test findings. However, it is notable that only the two experimental groups had substantial developments in grammatical range use, accuracy use, and pronunciation use.

Sudarmaji et al. (2021) further explored how the flipped classroom (FC) model would affect speakers' speaking proficiency. Findings in their experiment revealed how the fully online FC not only sustained speakers' interest in the English materials but also enhanced their speaking proficiency significantly.

Statistical analysis of quantitative data revealed that flipped learning (FC) was an effective medium for developing writing subskills in EFL learners. Another group of researchers was interested in exploring the possible effect of flipped learning on reading comprehension skills in EFL learners.

Hashemifardnia et al. (2018) explored flipped classrooms' impacts on Iranian EFL learners' reading comprehension and found that an experimental group receiving flipped instructional lessons excelled over a control group receiving a conventional reading comprehension lesson in a post-test. Flipped learning is an appropriate response to listening problems faced by learners.

Many researchers dedicated their works to the variety of problems and issues that are faced by language learners when trying to understand oral communication (Goh, 2000). Underwood (1989) listed some hindrances:

(1) Listeners are not in control of the pace of spoken information;
(2) Listeners are not always free to ask for repetitions while performing listening exercises;
(3) Listeners are not always in a position to acquire enough knowledge in vocabulary;
(4) Listeners are not able to recognize when the speaker is changing topics; and
(5) Listeners are not endowed with enough background information.

Researcher Qiu and Luo (2022) paid attention to the potential effectiveness of flipped classroom (FC) instruction on English as a Foreign Language (EFL) majors' listening proficiency.

Qiu and Luo (2022) verified that flipped listening training significantly promoted Chinese EFL majors' listening proficiency while reducing their listening anxiety at the same time.

To concisely delineate key points, flipped learning was used in order to improve all speaking skills in addition to basic skills in a foreign language, including vocabulary and grammar.

However, in order to determine if a more efficient use of such a method of instruction is possible, this study was conducted in order to explore whether flipped classes are able to help in developing learners' listening comprehension macro-skills.

Based on this, the following research questions were proposed:

RQ1. *Is there a significant difference between flipped and conventional instructions regarding their effects on the macro-skills of listening comprehension of Iranian intermediate EFL learners?*

RQ2. *Which listening macro-skills:*
(a) recognizing the communicative functions of utterances,
(b) inferring situations, and
(c) guessing the meaning of words from context) of Iranian intermediate EFL learners is more influenced by flipped instruction?

RQ3. *How do Iranian intermediate EFL learners perceive flipped instruction in relation to the development of the macro-skills of listening comprehension?*

3. Method

3.1. Participants

The participants of the study were 80 EFL learners who were selected from 137 students through a non-random convenience sampling method. The participants were selected from two English language institutes in Kermanshah, Iran, by administering the Oxford Quick Placement Test (OQPT).

Based on the OQPT findings, 80 intermediate participants were selected and classified into four classes; two of them were assigned to the experimental group (EG), and the other two groups formed the control group (CG). Each class consisted of 20 learners.

The learners were as homogeneous as possible in terms of a variety of factors, including age (17 to 26), native language (Persian), gender (both males and females) and the length of exposure to English as a second language (5 years).

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3.2. Instruments

OQPT was employed in this research in order to equate participants. It is a worldwide-accepted and standardized English placement test consisting of 60 multiple-choice vocabularies, grammar, and reading comprehension items. According to the scoring criteria of the OQPT, L2 learners with a score ranging between 30 and 47 out of 60 were regarded as "intermediate."

3.3. Data Collection Procedure

At the commencement of the study, a pre-test assessing listening comprehension was conducted to ensure that the participants in both the experimental group (EG) and control group (CG) exhibited similar levels of listening comprehension ability prior to the initiation of the intervention.

This assessment was designed as a multiple-choice test, derived from the textbooks utilized by the learners in the language institution, specifically the *Top-Notch* series.

The test consisted of 30 items addressing the macro-skills related to listening comprehension that were the focus of this research. The researcher evaluated the test's reliability employing the KR-21 formula, which yielded a coefficient of r = 0.81, and consulted with three experts in English Language

Teaching (ELT) and testing to verify its validity. These reviewers held doctoral degrees and were affiliated with English Departments at two universities located in Kermanshah Province. The listening comprehension posttest was equivalent in content, number of items, duration, and scoring criteria to the pretest. Posttest reliability (r= 0.83) and validity were also assessed by administering it in a similar way as the pretest.

A 20-statement questionnaire was prepared by the researcher to determine participants' attitudes towards implementing flipped classrooms. This questionnaire measures language learners' attitudes with a 5-point Likert scale ranging in use from 1 (strongly disagree) through 5 (strongly agree). Reliability for the questionnaire was measured by Cronbach's alpha, which returned a coefficient of 0.84.

Validity was verified in the ratings of three subject matter experts. These judges were the same reviewers who had been brought on previously to validate pre- and posttests for listening comprehension. The educational materials used in this research were taken from commercially available educational materials specifically created for developing listening proficiency in L2 learners.

Parts of such materials were modified based on Richard's (2006) Tactics for Listening series. These materials were prepared in such a manner that all three macro-skills of (a) determining communicative function for utterances, (b) inferring situational settings,

(c) making contextual inferences for word meanings are included.

These units included a vast pool of topics such as salutations, weekend habits, features of fruitful business approaches, types of residences, and so forth. These audio recordings were approximately 6 to 7 minutes in length each and were administered in a flipped classroom as well as a typical instructional class.

In the initial phase, the 80 participants chosen for this study were allocated into four equal groups. Two of these groups were designated as the Experimental Group (EG), while the remaining two constituted the Control Group (CG).

Subsequently, both groups undertook a pre-test assessing their listening comprehension skills. Following this, the learners in both groups adhered to identical routines throughout the 12-session intervention within their language learning classes, with the exception that those in the EG engaged in flipped learning specifically for the listening components of the lessons.

More specifically, to foster an enthusiasm for listening acquisition, the researchers developed interactive audio files that were subsequently provided to the EG participants. Appropriate audio resources were tailored to correspond with the listening materials that the learners were required to study.

Both the instructor and the learners were obliged to download the WhatsApp application onto their smartphones. The audio files were transmitted to the EG via the WhatsApp application, and they were expected to listen to the files at home or any location and at any time of their choosing.

After listening to the recordings and practicing them independently, they engaged in discussions regarding these materials during their actual class sessions.

In fact, the EG had the opportunity to listen to the recordings prior to attending class, which allowed them to participate actively in classroom activities. The activities were categorized into two types: pre-class activities and in-class activities, both designed to enhance the students' listening speed and comprehension skills.

The content of the pre-class recordings was open for discussion between teachers and learners during class time. This pedagogical inversion in teaching listening facilitated the instructor's use of class time for complete discussions and for the introduction or review of listening skills and strategies.

On the contrary, the CG learners went through the classical pattern of a listening lesson in their everyday classrooms, which normally starts with some pre-listening tasks (i.e., visual materials, questions, conversations, and prediction).

Then comes while-listening tasks in which general as well as specific queries are raised, and it is concluded with a post-listening activity which might involve personalized activity, focus on language use, functional focus, summary, as well as a discussion.

After instructing the audio recordings to both groups, a listening comprehension post-test was given to enable the researchers to determine if the two groups changed in a different manner in terms of listening comprehension. To obtain a proper response for the third research question, at the conclusion of the experiment, a questionnaire on attitudinal survey was administered to the experimental group to investigate their views on flipped instruction.

Data collection activity for the study took more than 6 weeks between June and July 2022. Both groups' study participants were in English classes twice a week.

3.4. Data Analysis Procedure

To begin with, normality in the distribution was tested using the Kolmogorov-Smirnov test. Then, a one-way MANCOVA was used to test the findings acquired during the administration of both pre-test and post-test in response to meeting the first and second research questions.

Finally, a one-sample t-test was employed in testing the findings acquired in response to answering the third research question.

4. Results

4.1. Effect of Flipped Instruction

First, the normality of the distributions of macro skills in pre- and posttests was checked via running the Kolmogorov-Smirnov Test.

Table 1. One-Sample Kolmogorov–Smirnov Test (Pre- and Post-tests of Macro-skills)

Variable	N	Mean	Std. Deviation	Absolute	Positive	Negative	Kolmogorov–Smirnov Z	Asymp. Sig. (2-tailed)
conRCFpre	40	9.12	2.34	0.22	0.22	-0.18	1.39	0.09
conIpre	40	9.42	2.63	0.20	0.15	-0.20	1.26	0.08
conGpre	40	10.40	9.18	0.32	0.32	-0.27	2.04	0.06
conRCFpost	40	10.52	2.40	0.18	0.18	-0.14	1.17	0.12
conIpost	40	11.30	2.02	0.26	0.14	-0.26	1.68	0.07
conGpost	40	10.37	9.11	0.35	0.35	-0.22	2.25	0.11
exRCFpre	40	7.27	2.75	0.30	0.30	-0.12	1.91	0.17
exIpre	40	6.80	1.81	0.24	0.24	-0.15	1.55	0.16
exGpre	40	7.05	2.96	0.28	0.28	-0.11	1.82	0.13
exRCFpost	40	13.52	1.15	0.22	0.22	-0.17	1.42	0.13
exIpost	40	12.75	2.00	0.15	0.13	-0.15	0.99	0.27
exGpost	40	12.97	1.79	0.18	0.12	-0.18	1.14	0.14

The findings, as shown in Table 1, indicate that the distribution of the data was normal in the pre- and posttests of macro-skills.
Based on this Table, all *Sig.* values are greater than 0.05. Hence, the parametric statistics were used to provide an answer for the first research question. In Table 2 below, the mean scores of both experimental and control groups are shown on the post-tests of Recognizing Communicative Functions (RCF), Inferring (I), and Guessing (G).

Table 2. Descriptive Statistics of Both Groups on the Listening Macro-skills Posttests

	Groups	Mean	Std. Deviation	N
Recognizing Communicative Function Posttests	Control	10.52	2.40	40
	Experimental	13.52	1.15	40
	Total	12.02	2.40	80
Inferring Posttests	Control	11.30	2.02	40
	Experimental	12.75	2.00	40
	Total	12.02	2.13	80
Guessing Posttests	Control	10.37	3.03	40
	Experimental	12.97	1.79	40
	Total	11.67	2.80	80

Based on the Table, the control group's mean scores on the post-tests of RCF, I, and G are 10.52, 11.30, and 10.37, respectively. In addition, the experimental group's mean scores on the post-tests of RCF, I, and G are 13.52, 12.75, and 12.97, respectively. To figure out if the differences between the posttests of the macro-skills of both groups were significant or not, a one-way MANCOVA test was used.
Table 3 illustrates the findings. According to the findings, the differences between the three listening macro-skills (Recognizing Communicative Functions, Inferring, and Guessing) in posttests of both groups were significant, as the *Sig* values are less than 0.05. In fact, the experimental group outperformed the control group in the mentioned listening macro-skills in the posttest. In addition, the findings indicate that the treatment had the most effect on "recognizing the communicative functions of utterances" since the Partial Eta Squared is 0.57.
According to Cohen (1988), the findings of eta square are interpreted as follows: 0.01 = small effect, 0.06 = moderate effect, and 0.14 = large effect.

4.2. Participants' Attitudes towards Flipped Instruction

This section analyzes the data pertaining to Iranian EFL students' attitudes toward adopting flipped instruction.

Table 3. Inferential Statistics of Control and Experimental Groups on the Listening Macro-skills of Posttests

Effect	Test	Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Intercept	Pillai's Trace	0.90	235.28[b]	3.00	73.00	0.00	0.90
	Wilks' Lambda	0.09	235.28[b]	3.00	73.00	0.00	0.90
	Hotelling's Trace	9.66	235.28[b]	3.00	73.00	0.00	0.90
	Roy's Largest Root	9.66	235.28[b]	3.00	73.00	0.00	0.90
Recognizing Communicative Functions (Posttests)	Pillai's Trace	0.57	32.97[b]	3.00	73.00	0.00	0.57
Inferring (Posttests)	Wilks' Lambda	0.42	32.97[b]	3.00	73.00	0.00	0.57
	Hotelling's Trace	1.35	32.97[b]	3.00	73.00	0.00	0.57
	Roy's Largest Root	1.35	32.97[b]	3.00	73.00	0.00	0.57
Guessing (Posttests)	Pillai's Trace	0.39	15.86[b]	3.00	73.00	0.00	0.39
	Wilks' Lambda	0.60	15.86[b]	3.00	73.00	0.00	0.39
	Hotelling's Trace	0.65	15.86[b]	3.00	73.00	0.00	0.39
	Roy's Largest Root	0.65	15.86[b]	3.00	73.00	0.00	0.39
Groups	Pillai's Trace	0.00	0.17[b]	3.00	73.00	0.00	0.02
	Wilks' Lambda	0.99	0.17[b]	3.00	73.00	0.00	0.02
	Hotelling's Trace	0.00	0.17[b]	3.00	73.00	0.00	0.02
	Roy's Largest Root	0.00	0.17[b]	3.00	73.00	0.00	0.02
	Pillai's Trace	0.31	11.35[b]	3.00	73.00	0.00	0.31
	Wilks' Lambda	0.68	11.35[b]	3.00	73.00	0.00	0.31
	Hotelling's Trace	0.46	11.35[b]	3.00	73.00	0.00	0.31
	Roy's Largest Root						

Table 4. Participants' Attitudes toward Using Flipped Instruction

No.	Statement	Mean	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	Flipped instruction develops my listening comprehension.	3.85	13	17	5	2	3
2	Flipped instruction develops macro-skills (recognizing communicative functions, inferring situations, and guessing meanings from context) of listening comprehension.	3.87	9	21	7	2	1
3	This instruction contributes to self-study.	4.67	28	11	1	0	0
4	This instruction is more student-centered.	4.55	23	12	3	2	0
5	This method is effective for introverted students.	3.92	14	16	5	3	2
6	I think this method is suitable for teaching other skills and sub-skills.	3.52	10	15	6	4	5
7	This method is more useful than conventional methods.	4.10	21	8	6	4	1
8	This method can improve our communication and interaction with teachers.	3.87	15	13	7	2	3
9	Learning by this method eliminates time and place limitations.	4.05	25	7	3	0	0
10	Flipped instruction makes us responsible for our own learning.	4.05	19	12	3	4	2
11	Students feel less stress in flipped-based classes.	3.57	14	9	7	6	4
12	Flipped classes increase our learning motivation.	3.97	17	14	3	3	3
13	Flipped-based instruction develops our reading and listening comprehension.	3.40	13	9	5	7	6
14	This instruction helps us learn English more successfully.	3.97	11	22	4	1	2
15	I am pleased by using this method in learning English.	4.05	16	16	4	2	2
16	I am more relaxed in flipped classes.	4.62	27	11	2	0	0
17	Flipped classes provide more learning opportunities.	3.85	13	17	4	3	3
18	Students experience more enjoyment and fun in flipped classes.	4.62	27	11	2	0	0
19	I suggest teachers use flipped-based instruction for teaching English.	4.07	19	11	4	5	1
20	I think flipped-based instruction is useful for teaching other subjects (math, science, history, geography, etc.).	4.15	15	18	0	6	1

To do this, a one-sample t-test was employed to examine the information obtained by distributing the flipped questionnaire. All of the mean scores for the survey items in Table 4 are higher than 3.00, as can be seen by glancing at them. This suggests that the participants' attitude toward employing flipped instruction was favorable. The participants agreed with every statement in the questionnaire based on the fact that all items had mean scores over 3.00. The participants tended to agree with the majority of the questionnaire items generally, as was mentioned above. As shown in the following tables, a one-sample t-test was used to determine if the degree to which the participants had favorable opinions regarding flipped instruction was statistically significant or not.

Table 5. Descriptive Statistics of One-Sample Test (Attitude Questionnaire)

	N	Mean	Std. Deviation	Std. Error Mean
Items	20	4.03	0.35	0.07

Table 6. Inferential Statistics of One-Sample Test (Attitude Questionnaire)

	Test Value = 0					
					95% Confidence Interval of the Difference	
	t	Df	Sig. (2-tailed)	Mean Difference	Lower	Upper
Items	50.77	19	0.00	4.03	3.86	4.20

The descriptive statistics for 20 items are shown in Table 5. According to this survey, the mean value is 4.03 and the standard deviation is 35.00 The following Table examines the inferential statistics to determine whether the Sig value is less than or greater than 0.05.

The statistical T-value is 50.77 (t=50.77), the *df* is 19, and the significance level is 0.00 (sig=0.00), which is less than 0.05, as given in Table 6. This suggests that EFL students in Iran had favorable sentiments toward the flipped classroom.

5. Discussion

Based on the findings of the current study, the experimental group surpassed the control group in the post-test assessment of listening macro-skills. Furthermore, the findings revealed that "recognizing communicative functions of utterances" as a listening macro-skill was affected by the treatment to a significantly greater extent than other macro-skills.

The findings are in full support of those reported by Abaeian and Samadi (2016) and Bataineh and Issam Al-Sakal (2021) when studying flipped instruction effects on reading comprehension amongst EFL learners, which showed that experimental participants were significantly better in comparison with a control group on a post-test. Moreover, Hashemifardnia et al. (2018) monitored flipped classroom effects on Iranian EFL learners' reading comprehension; their findings are in full support for those in this study. According to their research findings, an experimental group showed superior performance in a post-test in comparison with a control group. The findings of this study are consistent with those reported by Sudarmaji et al. (2021), whose research observed the influence of flipped-based training on speaking proficiency in learners. Their research revealed FC format in an online modality significantly enhanced speaking proficiency in learners significantly.

With respect to the participants' positive attitudes towards adopting flipped instruction, it was found in this study that participants had favorable attitudes towards adopting flipped instruction during their English language learning. Such an ability for learners to collaborate, participate, and function independently as a result of implementing flipped instruction can allow participants to hold such positive attitudes towards its adoption. AlJaser (2018) believes that adopting flipped instruction gives learners more chances for participation and taking charge of their educational experience. Learners are found by Sirakaya and Ozdemir (2018) to hold a positive attitude towards the flipped classroom design since it improves their motivation, performance, and cooperation. The result of our study is consistent with those reported by Karimi (2017), which indicated his research participants had a positive attitude towards using flipped instruction. Also consistent with our study is Basa (2015), whose study surveyed English language teachers at a Turkish State University's attitude towards applying flipped education in their lectures. His research findings indicated pre-service English teachers had positive views about flipped instruction's applicability. The finding that flipped learning enhances collaboration amongst learners as opposed to instigating competition may answer what was observed. Such a learning model values group learning at its core, thus helping learners improve their capacity for higher-order thinking. Moreover, its integration enables freeing up instructional time as well as collaborative learning situations, which enhance communicative competence for learners. It is possible to state that such a learner-centered as well as collaborative model of flipped learning might instill a learning environment for better English acquisition amongst learners. The findings of this study can be justified by the consideration that flipped learning enables learners to study for their profession alongside studying for their academics. Flipped learning offers learners a chance for full occupation while studying. Besides this, learners can benefit from studying at their own pace and obtain free access to the course content at their own residences by adopting flipped learning. Besides this, some learners may feel hesitant in a face-to-face setting while learning a second language because they are accustomed to avoiding direct communication with the educator.

According to the personality spectrum, there are some individuals who are naturally introverted, thus facing a lack of motivation for social interaction. Flipped learning might, in effect, make individuals less anxious

about learning as well as social interaction. Most participants enjoy and make use of this cutting-edge teaching methodology. Findings of this study are further supported by the fact that flipped learning can generate worthwhile cost savings in terms of time, finance, as well as effort. The spirit of flipped learning, which is its collaborative nature and allowance for discourse and productive comment, is effective in fostering effective English language learning and might further our research. One key benefit of flipped learning is its ability for learners to easily explain their own thoughts, their colleagues', as well as their teachers', insights.

Such characteristics might make learning English as a Foreign Language (EFL) easier. Especially keeping in mind such benefits for the flipped classroom, it would also be worthwhile to note that desocialization is a possible disadvantage or a drawback for the flipped classroom, since in-class interaction with both peers as well as the instructor is minimized.

6. Conclusion

The current research attempted to investigate how flipped learning would affect Iranian intermediate learners' listening macro-skills. The findings revealed a significant effect for flipped learning on Iranian EFL learners' listening macro-skills. Moreover, it was found that Iranian EFL learners were positive about introducing flipped learning in EFL courses, specifically in listening comprehension exercises. Based on the findings of this particular study, in combination with the literature reviewed in this paper, it is safe to conclude that implementing flipped learning in EFL settings might make the learning process for EFL learners shorter. Based on this result, it is thus proposed that English instructors incorporate such a learning strategy in their courses. Another finding of this research is that Iranian EFL learners found the flipped instruction appealing and useful since there were favorable feelings towards it. Moreover, another deduction that is obtainable in our study is that blending conventional instruction with flipped instruction would be effective for language acquisition. There are a variety of techniques and approaches in the field of language learning that can enormously improve learners' proficiency in a second or foreign language. What has been proven is that tools based on technology enormously affect the means with which language learners engage, come up with concepts, and organize their communications. Using flipped instruction in combination with online tools like digital dictionaries, chats, and email media, games, presentation software, and multimedia can improve learning findings and is very essential in developing less tense, more productive learning environments in which learners can concentrate on fresh content and its use. While flipped learning and online learning have been proven in several studies in terms of their effectiveness, their roles in real-classroom settings are not at all negligible. These are teachers who can give insightful feedback and share rich materials for their learners and guide them on how to duly pick credible and accurate sources of information out of the Internet, besides inculcating creativity (Agarwal & Kaushik, 2020). Thus, it can definitely be held that teachers and edtech tools are complementary factors in their own right, and their co-existence is a necessary factor in English classes. Research findings may come in handy for teachers, students, and content providers when thinking about the advantages of flipped learning. Consequently, and for educational performance improvement reasons, research may encourage English teachers to implement technology-mediated approaches towards learning in their learning environments.

Moreover, flipped learning may encourage instructors and lecturers to implement a multi-dimensional and appealing method for communicating learning content while allowing students to take charge of their learning processes. The study can guide Iranian English teachers in exploiting technology in class in their bid to improve students' learning accomplishments. From the study, further, such teachers can also gain inspiration in adopting freer and more creative means for conveying educational information in order to permit increased student responsibility in learning activities. Through flipped learning itself, teachers can more conveniently identify individuals requiring additional support based on their difficulty in handling course materials. From this study, teachers can also gain inspiration towards incorporating both flipped approaches and more conventional approaches in their teaching practice. These research findings can contribute positively to English learners in Iran; those unable to attend in person due to illness, lengthy travel distances, or other reasons might find it simpler and more expedient to catch up with their colleagues using flipped learning instead of conventional training. Flipped learning, unlike conventional learning, allows learners to take charge of their own learning experience. Students are given a chance to learn at their own pace thanks to the availability of online lectures. This research might specifically help those students who are timid or reserved and feel ashamed when undertaking face-to-face lessons. These research findings can allow cooperative learning for students; in fact, learners can share their thoughts and sources using the Internet. Moreover, by undertaking flipped and online learning, students are made actively involved and enjoy lessons incorporating pictures for increased appetite for learning. Cultivating internet media literacy in both instructors and students is needed for effective integration of online sources within language courses.

That would allow for an assumption that teachers should first gain experience with online learning tools themselves and dedicate some class time to training their students in such approaches. Based on specific lesson objectives, teachers can also support further adoption of more effective and efficient online tools while pushing aside those found inefficient or even counterproductive. Also, findings of this study show a need for those designing syllabi to pay greater attention to implementing online tools in learning English as a second or foreign language. Designers of syllabi should note the great importance of online tools for language learning. Moreover, those interested in further research

in the field in question can expand their views following a reading of this paper. Generally, findings of this research can open up for further study some new lines of investigation.

6.1. Limitations and Recommendations for Future Research

The findings of this study can deepen our knowledge about Iranian EFL learners' listening macro-skills improvement brought about by flipped learning; on the contrary, some restrictions need to come into consideration. It was a limitation of this study for it had a low number of participants based on the accessibility of students. Care should be taken in considering the representativeness of the individuals involved. It is, therefore, advisable for similar individuals to be studied in rural regions where there is lower access to contemporary comforts for students. Moreover, its restriction on participants in the age range 17-26 is yet another limitation. As a result, the findings are not transferable to individuals in different age groups. Because of a number of issues, it was not possible for qualitative information to support our findings; thus, only quantitative information was used for this study. To improve generalizability in futures research based on the above findings: It is first suggested that a larger number of participants should be selected. The second recommendation is shifting focus towards pre-intermediate, upper-intermediate, and advanced proficiency levels in languages. The third recommendation is towards taking into consideration gender, while it is suggested for the selection of male and female students in future research related to this topic area. The fourth recommendation is towards further research for determining if the treatment is equally successful in different populations as well as geographic locations. The fifth recommendation for futures research in this same area is using interviews and other tools for gathering more valid information. It is encouraged for other researchers to study the effect of flipped learning on other skills and sub-skills in the English language. It is further advised for futures researchers to increase the duration for which the treatment is administered so as to gather more robust information.

Authors Contributions

All the authors have participated sufficiently in the intellectual content, conception, and design of this work or the analysis and interpretation of the data (when applicable), as well as the writing of the manuscript.

Availability of data and materials

The data that support the findings of this study are available from the corresponding author, upon reasonable request.

Conflict of interest

The author states that there is no conflict of interest.

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