# **Investigating Listening Comprehension through Flipped Classroom Approach: Does Authenticity Matter?**

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#### Abstract

This study examined the impact of flipped teaching on the improvement of listening performance. The main objective of this paper is to gauge if there are any statistically significant differences in the listening achievement of participants who learn via flipped approach and those who learn 'conventionally'. 119 advanced English language learners were assigned to three groups: one Authentic Audio Material Group (AAMG); one Pedagogical Audio Material Group (PAMG); and one Control Group (CG). As for the authentic materials, audio resources from some websites were the focus of listening exercises. The pedagogical audio materials were taken from 'Real Lives, Real Listening' book series (the Advanced Level). The treatment included predesigned educational materials and differentiated tasks that were used with two experimental groups while the other group studied the teaching materials in a similarly learner-centered class. After the treatment, there was a posttest and with a 6-month time interval, a delayed posttest was held. The results of data analysis revealed that flipped approach to teaching listening proved highly effective for the experimental groups in the short and long-term. In fact, the results indicated that this improvement in the listening is directly attributable to the flipped approach. In addition, authentic audio materials proved to be more contributing in comparison with the audio materials designed for pedagogical purposes. This unprecedented paper reminds the importance of not lagging behind thriving technology and underlines the need for influential teaching and technology integration. As a result, its thought-provoking implications can help the stakeholders and educational officials.

**Keywords:** authenticity, blended learning, computer-assisted language learning, constructivism, flipped classroom approach, listening comprehension

## Introduction

There has been a continuous shift in how learning is achieved in a classroom. Nevertheless, with the advent of technology and recent educational techniques, more and more applied linguists are choosing the blended approach to attain and develop students' learning experience (Bonk & Graham, 2006; Friesen, 2012). Flipped instruction is a kind of blended learning model where the responsibility of learning and mastering content is placed on learners. The term flipped classroom instruction is not new to higher education pedagogy; however, adopting this practice is new in many language classes and universities of Iran. Flipped classroom inverts Bloom's revised taxonomy (Anderson & Krathwohl, 2001) where students perform the lower levels of cognitive work (remembering and understanding) outside the class, and focus on the higher level of cognitive work (application, analysis, evaluating, and creating) in class.

Studies conducted by Lage, Platt, and Treglia (2000) showed the merits of learning technologies, particularly of the learning technologies via the inverted classroom, also known as the flipped instruction. Although using flipped approach is not recent; there has been more prevalent use of this approach possibly because of an increase in accessibility to technology both at school and at home. To the best of the authors' knowledge, although flipped instruction keeps its promise as a new model that greatly facilitates teaching and learning, more careful scrutiny of English teaching in Iran, the site of this study, shows that teacher-centered and unidirectional instruction is particularly common.

In addition, recently listening comprehension exercises are making their way into the classrooms and most instructors consider listening as a crucial skill (Soodmand Afshar & Hamzavi, 2014). However, sufficient attention has not been given to listening skill, and learners do not appear to be properly trained by the up-to-date, technological, and learner-centered instructional approaches, such as flipped classroom instruction in an Iranian context. Few studies about flipped classroom instruction have been conducted in Iran, and its efficacy has not been thoroughly investigated. Besides, as Mareschal (2007) stated listening classes are "a conventional listening comprehension lesson that simply add yet another text to the learners' experience; it does little or nothing to improve the effectiveness of their listening, or to address their shortcomings as listeners" (p. 35).

Another point which is regarded in this paper is the issue of comprehending authentic materials. The point that is particularly problematic for language students is that they are unable to understand the constant flow of information (Chastain, 1998). This lack of understanding confuses English language learners (Vandergrift, 2003). It is worth mentioning that considering a number of studies about the listening comprehension in an Iranian context (e.g., Shirani Bidabadi & Yamat, 2011; Shirani Bidabadi & Yamat, 2012a; Shirani Bidabadi & Yamat, 2012b; Shirani Bidabadi & Yamat, 2013; Soodmand Afshar & Hamzavi, 2014; Zanjani & Izadpanah, 2016), the studies which explore the effect of flipped classroom instruction on authentic and pedagogical listening materials seem to be rare. Moreover, not many studies have paid attention to the EFL learners' needs to be provided with the educational instruction to enhance their listening in the long-term. Therefore, longitudinal studies are also needed. All in all, the aim of this study is to investigate the short and long-term effects of flipped teaching on the listening proficiency of Iranian EFL learners. The

results of our paper also determine whether or not this alternative pedagogy of incorporating technology and active learning strategies are useful for the Iranian EFL learners. The role of authentic and pedagogical listening materials is also investigated in this study. Given the mentioned problem, an investigation of the current approaches to teaching listening comprehension and the flipped classroom instruction along with various types of materials is required. This paper attempted to examine the following hypotheses:

- 1. H<sub>1</sub>: Flipped classroom approach does not have any statistically significant short-term effects on the listening achievement of Iranian advanced EFL learners.
- 2. H<sub>2</sub>: Flipped classroom approach does not have any statistically significant long-term effects on the listening achievement of Iranian advanced EFL learners.
- 3. H<sub>3</sub>: Flipped classroom approach does not have any statistically significant effects on the listening comprehension of Iranian advanced EFL learners with regard to the authentic and pedagogical listening materials.
- 4. H<sub>4</sub>: There is no statistically significant difference between the listening comprehension achievement of Iranian advanced EFL learners who attain the flipped classroom instruction and that of learners who attain in-class instruction.

#### Literature Review

# Flipped Learning

Sams and Bergmann (2013) stated that flipped teaching is not about how to utilize videos in a teacher's lessons, but how to make use of the class time and increase the class time a teacher has with his or her students. By changing direct instruction to teacher-created videos that will be viewed by the students at home, interaction amongst students and teachers can be carried out in the classroom. The flipped instruction improves face-to-face time with students because the lower level taxonomies of Bloom are shifted to the videos. By doing so, it allows students to spend more time on the upper levels of Bloom's taxonomy with tasks requiring students to apply, analyze, evaluate, and create (Sams & Bergmann, 2013).

# **Authentic Listening Materials**

Based on flipped instruction in teaching listening, the role of authentic listening materials is investigated in this research. Using authentic materials has been a point of controversy amongst scholars in the field (Vanderplank, 2010). According to Richards (2006), the advantages of the incorporation of authentic materials are (a) providing exposure to real language which can help learners develop awareness about socio-cultural aspects of L2 and (b) providing cultural information about the target language. However, the critics of authentic materials reject their use

as they claim that these materials contain difficult and irrelevant language (Martinez 2002). The results of studies conducted are also inconsistent. Parker and Chaudron (1987) and Derwing (2006) favor the use of inauthentic materials, while Young (1999) and Berardo (2006) did not find a big improvement by using such materials.

#### Flipped Learning in Second Language (L2) Contexts

Flipped classrooms or flipped learning refers to instructional techniques whereby students learn course content via various technology-based materials (e.g., video recordings, narrated presentations, podcasts, and course notes) before attending the class, instead of being practiced within the class. In conventional classrooms, almost everything is received from teachers, educational materials, and homework inside the classroom. Through the flipped approach, students can increase their knowledge at home via, for instance, going through educational materials and instructional files prepared and delivered by the instructor and follow practice in the class. (Bergmann & Sams 2012; Berrett 2012; Moravec, Williams, Aguilar-Roca, O'Dowd (2010). In other words, Flipped classrooms reverse the traditional learning process where learning is restricted to school principles during school time with instructors being the main resource for knowledge (LaFee, 2013). Flipping as Strayer (2012) stated "moves the lectures outside the classrooms and uses learning activities to move practice with concepts inside the classroom" (Strayer, 2012, p. 171). Although flipped learning is commonly associated with online videos, Bergmann and Sams (2012) emphasize that it is much more than videos/screencasts.

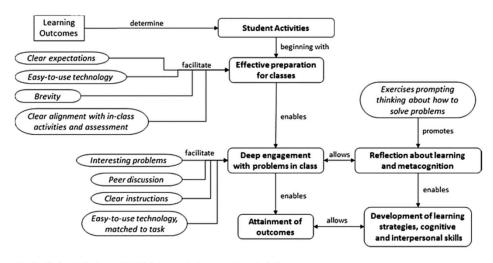
McLaughlin, White, Khanova, and Yuriev (2016) enumerate three main parts of the flipped approach as pre-class learning (e.g., video recordings, vodcasts, interactive online modules), inclass learning (e.g., group tasks, individual feedback, scaffolding, etc), and assessment (various approaches like embedded self-assessments, audio response systems, wikis, discussion forums, essays, and projects). It is apparent that considerable time, careful planning, and preparatory work are needed to design, develop, and deliver course content, yielding in substantial workload for teachers.

Mehring (2016) upholds the potential contribution of flipped instruction in English as a foreign language (EFL) classrooms, generating a communication-promoting and student-centered learning environment, and suggests the use of various tools for flipped EFL classrooms. Flipped instruction develops opportunities for peer-assisted learning, collaborative learning, active learning, and inclass discussions with students who are more active, constructing their own knowledge and gaining responsibility for their learning (Arnold-Garza, 2014; Butt, 2014; Hawks, 2014; Talbert, 2012). Flipped approach has the potential to: (1) provide a more dynamic and flexible environment through which teachers can aid students as they implement concepts; (2) help students learn on the basis of their processability capacity; (3) provide the opportunity for students to use the materials and concepts in a wide array of contexts, which can contribute to the development of

communicative competence; (4) assist teachers with freeing up class time to be spent on active learning; and (5) develop student involvement in the learning materials and activities (Bergmann & Sams, 2012; Berrett, 2012; Moravec, Williams, Aguilar-Roca, & O'Dowd, 2010).

On the basis of the concept map of flipped classroom (McLaughlin, White, Khanova, & Yuriev, 2016), flipped learning consists of four pivotal elements. The first element is defining clear objectives for the course and ensuring that all activities and tasks are compatible with the defined objectives. The second element is effective preparation of the learners for the class. This is usually obtained by catering materials and concepts to students and allowing them to work on the materials and concepts intra-individually or inter-individually. A number of technological advancements can also be employed to facilitate this phase. By presenting materials to students during the pre-class phase of flipped learning, the starting point in a flipped learning class will be the output. This procedure is supported by the tenets behind Wen's (2008) Out-put driven/Input-enabled model and the underpinnings of active learning. In her model, Wen (2008) questions the teaching order used in conventional classes, where the starting point of the class is input (e.g. lectures, presentations). She argues for output as being the starting point in the teaching process; this, according to the advocates of active learning (e.g., Bonnell & Eison, 1991; Hung, 2015; Meyers & Jones, 1993), can lead to the activation of higher-order mental capacities such as critical thinking, problem-solving, and decision-making and students' engagement during the learning process. Additionally, it can help students mix what they already know with what they are supposed to learn and do (Figure 1).

The third element of flipped learning is engaging students with the concepts and materials already presented to them during the pre-class phase thoroughly and solving their problems during the inclass phase. This can be achieved via multiple activities such as class and peer discussions and through what Wette (2015) defines as instruction scaffolding, whereby peer feedback (either the teacher or learner or both) in a collaborative manner is provided. The use of these activities (e.g. collaborative and scaffolding learning activities) is supported by Vygotsky's zone of proximal development (ZPD) theory (Wette, 2015). This theory suggests that there is a gap between what language learners can learn alone and what they can learn with the help of the teacher or a partner who is more proficient, and collaborative and scaffolding learning activities can help learners achieve beyond what they can do individually. The last element of a flipped classroom is students' attainment of the defined objectives. If the above steps are designed, developed, and implemented meticulously, students can achieve the expected outcomes.



Student behavior is shown in bold; instructor behavior is shown in italics.

Figure 1. Concept map of flipped learning (McLaughlin et al. 2016, p. 25)

Thus, based on the factors considered for flipped learning, it can be discussed that flipped learning has a composite nature and many compounding variables such as the type of the materials and the nature of the learning tasks and activities used during the pre- and in-class phases of flipped learning interact with each other to guide its implementation and determine its success. The following part offers implications and findings from a number of research studies carried out on the flipped classroom approach within the second language (L2) contexts.

In spite of a number of studies on flipped teaching in other majors, there is only a small number of research studies on the influence of flipped instruction in the arena of second language learning and teaching. For instance, some research has concentrated on the influence of the flipped approach on foreign language learners' academic performance in an English course at a Taiwanese university by using WebQuests as the online learning platform (Hung, 2015), learning loads of English idioms by using the LINE smart phone application as the online learning platform (Chen Hsieh, Wu, & Marek, 2017), the academic performance of intermediate-level English students without any online platforms (Hung, 2017), and ELT learners' academic performance in a curriculum development course without any online platforms (Adnan, 2017). The implications of this research seem to demonstrate that flipped instruction may help English students become highly motivated, involved, and active and achieve better learning outcomes.

Al-Harbi and Alshumaimeri (2016) also explored the effect of flipped teaching in teaching grammar on students' performance about learning English. To this end, some educational videos were prepared and made by the researcher before each lesson to provide learning interactions. Forty-three participants were subcategorized into experimental and control groups. The experimental group participants were required to watch the videos by themselves to learn before the class. Moreover, they practiced what they had learned under the instructor's supervision by

accomplishing their tasks in pairs or groups. However, the control group was provided with inclass conventional teaching. A posttest analyses revealed that flipped teaching performed a leading role in enhancing English learners' grammar, yet the difference was not significant.

In another study, Ahmed (2016) explored the influence of flipped teaching on English writing. The findings of the research indicated that the experimental group was more successful than the control group in the posttest of EFL writing. The findings of his paper also showed that not only did flipped instruction develop students' writing skill but also it improved their perceptions about this skill. Furthermore, flipped teaching increased students' motivation and class engagement.

Similarly, Boyraz and Ocak (2017) came to the conclusion that flipped instruction had the possibility to achieve considerable learning improvements more than conventional approaches. Most of the participants of that study believed flipped instruction helped them learn better (73.77% vs. 17.39%). They mentioned flipped instruction does not require more out of classroom time than conventional approaches do. In fact, flipped teaching increases students' motivation to be ready for the lesson and makes their learning happen positively. Moreover, students found flipped teaching highly motivating and highly beneficial to be able to rewind educational videos when they did not understand. They also believed that completing exercises with teacher help was easier. Participants also expressed that the selection of videos is crucial and they may have problems if videos are not carefully chosen. Students in that research mentioned that flipped instruction enables them to be independent learners and it is more suitable for their personal characters.

In another study, Wu, Hsieh, and Yang (2017) conducted a research in which they made an online learning community in a flipped classroom to increase EFL students' oral proficiency. To do so, a mixed-method design was used to analyze the data, including pre- and post-tests on oral reading and comprehension questions, a "Community of Inquiry" (CoI) questionnaire, and semi-structured interviews. The findings demonstrated that the online learning community not only facilitated useful and meaningful collaboration but also enhanced the learners' oral proficiency, thus resulting in more active involvement in interactive learning tasks, such as storytelling, dialogue collaboration, and class discussion.

Lee and Wallace (2018) also investigated the impacts of flipped teaching on South Korean college students' achievements, attitude of the flipped instruction, and involvement in the learning process over the course of one semester. The findings showed that the flipped group received higher grades in their three final tasks (i.e., exams, writing assignments, and presentations) than the non-flipped group. Nevertheless, only the mean score of the final exam was significant. As most participants in this research mentioned, by previewing course materials at their own pace as many times as they wanted and by completing the worksheets before class, they had been ready for the lessons. Owing to self-learning of the content and their own preparation, they could participate actively in class and receive more feedback from the teacher than their classmates. The researchers in that study

came to the conclusion that a number of factors, such as securing enough time, accessibility and quality of the online tutorials, are vital for executing the flipped instruction effectively.

Additionally, there are some studies concentrating on students' perceptions towards flipped teaching. Mehring's (2015) exploration with Japanese university students studying in an EFL flipped classroom revealed improved active learning, cooperation, and involvement among students. Other research in the language context was conducted with 48 students by Hsieh, Wu, and Marek (2017) concluded that because of increased motivation along with enhanced knowledge on topics, flipped teaching was an appropriate instructional approach for English teaching.

Recent interest in the implementation of flipped teaching has resulted in an increasing number of studies in various fields of studies, but there are still few researches on the application of this model for language learning and teaching (Mehring, 2016). Thus, it can be claimed that flipped approach may be appropriately used to enhance L2 skills such as listening. Nevertheless, it is an understudied area in L2 research.

# Methodology

# **Participants**

The participants in the present study were 119 Iranian advanced EFL learners (out of a population of 269) majoring in English translation, literature, and English teaching at two branches of Islamic Azad University (Central Tehran Branch and South Tehran Branch). They were 36 males and 83 females aged from 19 to 37. The participants were selected by means of a listening section of a real IELTS test and were assigned to three groups. Participants' selection criteria were as follows: The mean score of the test was calculated and those who obtained a score above one standard deviation were given the label "advanced". Three groups were then formed: One Authentic Audio Material Group (AAMG); one Pedagogical Audio Material Group (PAMG); and one Control Group (CG). The AAMG and PAMG groups each had 40 participants while the Control Group had 39 students.

#### Instrumentation

In order to achieve the objectives of this study, a pretest, a posttest, and a delayed posttest were used. Authentic, pedagogical, and learning materials were also developed.

#### **Authentic Materials**

For the original audio materials used in the study, the researchers utilized video and audio resources from many websites such as TED (www.ted.com), YouTube, and National Public Radio

(www.npr.org). The criteria for selecting these audio materials were threefold: First, these audio materials were internationally well-known and designed to target young people. Second, the language used in the dialogues was almost close to standard English and few idioms were used so that it could make it suitable for this study's target learners. Finally, they feature a lot of motivating listening materials based on reports, interviews, stories, formal discussions and much more. These parts were worked on every session taking almost 45 minutes of the class time.

## **Pedagogical Materials**

For the pedagogical audio materials, "Real Lives, Real Listening" book series (the Advanced Level) by Sheila Thorn published by Collins in 2013, which was developed for advanced ESL/EFL learners was chosen. This book teaches students the necessary skills they need to listen more effectively to English exposing students to the grammatical structures and words which are usually used in spoken English around the world. The time and amount of working on pedagogical audio materials in the class were exactly the same as the authentic audio materials.

# **Learning Materials**

Due to the fact that there are few reliable and valid IELTS listening comprehension screencasts, videos, and PowerPoint presentations, the researcher produced and designed videos, screencasts, and PowerPoint presentations to target EFL learners' problematic areas. The predesigned teaching materials were developed for the flipped listening comprehension class.

Participants undertaking the intervention were asked to go through the videos, screencasts, and PowerPoint presentations carefully before the class using all the presentations and explanations that the prepared materials offered. The flipped classroom instruction included ten listening videos, screencasts, or PowerPoint presentations. Materials were also complemented with supplementary practices. The listening materials entailed more practice time in class, and the class activities offered more strategies for independent learning and apprenticeship for the participants in both experimental groups.

## The Pretest, Posttest, and Delayed Posttest

Three distinct IELTS listening tests were selected to be given to the students at three different points. One was given to the target population prior to the flipped classroom instruction as a pretest. The second was implemented immediately after the intervention as a posttest, and eventually, with a 6-month-time interval, another listening section of IELTS were used as a delayed posttest to realize if the participants still enjoy the benefits of flipped teaching and extend what they have learnt to a different context.

All three listening sections of the IELTS tests were taken from official IELTS books, IELTS Cambridge series published by Cambridge University Press in 2018. Each book consists of 4 actual IELTS tests evaluating all four skills (listening, speaking, reading, and writing). There is an answer key provided for each book which was used to check the number of correct answers for each participant. The IELTS tests were used in this study as they are known worldwide to be a standard test of foreign language learners' proficiency level in all four skills separately. The IELTS listening test includes forty questions. There are four sections with ten questions each and the test-takers are supposed to answer a variety of question types such as multiple choice, matching, labelling, completion, and short response questions (Appendix A).

The participants undertook the pretest, posttest, and the delayed posttest under timed conditions and had to complete the whole listening test within the allocated time. The pretest measured the participants' listening comprehension abilities before applying the flipped instruction. The immediate posttest and the delayed one were planned upon the completion of flipped instruction. The participants of this research were given the pretest, the immediate posttest and the delayed one in identical testing conditions.

## **Data Collection Procedure**

From the outset of the study, the pretest which was the listening section of a real IELTS test was given to the participants in the three groups prior to the application of any kind of treatment to evaluate the students' performance on this area of language for all three groups. Then, the researchers consulted with other qualified English instructors and university professors to develop the flipped instruction class. The materials for the flipped class were provided by the researchers in the form of screencasts, videos, or PowerPoints lectures.

Participants of this research received initial class instructions, explanations, and demonstrations, about the assumed learning approach. The researchers clarified how the treatment will proceed and explained to the language learners the reasons for pursuing this innovative model of teaching, pointing out that it is crucially important that participants see the given videos, PPTs, and other instructional materials as their assignments to come to class prepared with the relevant information to have more practice class time. Expectations from the participants were explained thoroughly, yet it seemed that proper class implementation required some time.

Throughout this study, the control group was provided with conventional instruction in class in a teacher-centered learning atmosphere with the same time and activities for scaffolding tasks for learners apart from the answers to the listening comprehension tasks which were completed at home. However, the experimental groups learned differently by doing as the content of their lessons were given to them in advance to offer opportunities for learners to learn at their own pace.

On a weekly basis, one lesson was allocated to listening class practice. Before the lesson, the created screencasts, PowerPoint files, and audio materials were either emailed to the participants or given to them in person. Participants were required to go through these instructional materials carefully, which served to prepare the participants in the experimental groups for the purpose of the class, free class time for practice instead of theoretical explanations of how to satisfy the requirements of the IELTS listening comprehension and to encourage more independent learning. Lesson exercises and class activities were also designed to assess the participants' learning. Class activities were scaffolded and task-based based on participants' abilities. Next, the participants were informed that the immediate posttest would be administered after the flipped instruction. Moreover, a 6-month time interval delayed posttest was also administered to realize the possible long-term influences of flipped classroom instruction on the language learners' listening achievement. Participants were also asked not to do any other activities like self-study to improve their listening skill over these six months. The data collection procedure started in October 2017 and ended in April 2018.

# **Design of the Study**

The method of instruction was the key independent variable of this research. It can be categorized into: (1) the conventional teaching method and (2) the flipped classroom instruction. The term conventional used in the present paper refers to a student-centered and teacher-driven class with all theoretical explanations taking place inside the class, while the practical tasks and assignments were assigned for the language learners to complete at home without the researcher's observation. The participants' listening comprehension achievement was the dependent variable. This study includes a pre, posttest, and delayed posttest quasi-experimental design.

# **Data Analyses and Results**

To put the first hypothesis of this study to empirical test, a mixed factorial (or repeated measures) ANOVA was employed. This procedure is so-called because it combines a within-subjects variable with several levels (in the case of the present study three different times at testing) with a between-subjects independent variable which can also have multiple levels (in the case of the current study two different treatment groups as well as a control group).

To find out any short-term effects for the treatment conditions, only the pretest and the immediate posttest data were used for this analysis. Descriptive statistics belonging to these variables are depicted in Table 1.

Table 1
Descriptive Data Relating to Experimental/Control Groups at Pretest and Posttest

		Mean	Std. Deviation	Skewness	Kurtosis
	Authentic	7.2000	.69614	.18	96
Pretest	Pedagogical	6.7750	.69752	11	64
	Control	6.6282	.64602	.02	46
	Authentic	7.8750	.79864	63	.57
Posttest	Pedagogical	7.5625	.98181	32	69
	Control	6.1282	.99814	77	.37

The data for these two variables were normally distributed and did not demonstrate any violations of the homogeneity of variances assumption as revealed through the results of the Levene's test, showing a non-significant F for each within-subjects factor. On the other hand, checking for the assumption of sphericity does not apply to this particular analysis as the within-subjects variable only has two levels (Larson-Hall, 2010). As such, the results of the analysis show that there is a statistically significant main effect for time at testing, F(1, 116) = 13.18, p < .01, partial  $\eta^2 = .10$ , which is not very large according to Cohen's (1988) effect size criteria (i.e., r = .1 to .3 is a small effect, r = .3 to .5 is a medium effect, and r = .5 to 1.0 is a large effect). Nonetheless, the results also revealed a stronger significant interaction effect between time at testing and participants' groupings, F(2, 116) = 21.53, p < .01, partial  $\eta^2 = .27$ . Also, the between-subjects analyses demonstrated a significant difference between the various treatment conditions, F(2, 116) = 32.64, p < .01, partial  $\eta^2 = .36$  (see Tables 2 and 3).

Table 2
Test of Within-subjects Effects

Sour	rce	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
		Squares	ui	Bquare		Dig.	Bquarea
Time	Sphericity	6.124	1	6.124	13 189	.000	.102
Time	Assumed	0.121		0.121	13.10)	.000	.102
TT: 44 C	Sphericity	20.000	•	40.000	21 525	.000	.271
Time * Group	Assumed	20.000	2	10.000	21.537		
	Sphericity						
Error (Time)	-	53.859	116	.464			
21101 (111114)	Assumed						

Table 3
Tests of Between-subjects Effects

Course	Type III Sum					Partial Eta
Source	of Squares	df	Mean Square	F	Sig.	Squared
Intercept	11754.316	1	11754.316	13884.607	.000	.992
Group	55.279	2	27.639	32.649	.000	.360
Error	98.202	116	.847			

In order to interpret the observed interaction effect, a parallel coordinate plot (see Figure 1) was obtained. As can be seen in the plot, although the mean scores for both of the experimental conditions have risen from the time of the pretest to the posttest, the control group mean has declined. Moreover, the authentic group has a larger mean compared to that of the pedagogical group at the time of the posttest. Both of these patterns account for interaction effect between listening performance and time at testing. On the other hand, the Tukey post hoc test revealed statistically significant differences not only between the experimental conditions and the control group, but also between the authentic and pedagogical groups (see Table 4). Taken together, this means that while the experimental group students have benefited from the treatments (with the authentic condition being significantly more beneficial than the pedagogical one), the control group students' performance has declined. Overall, it can be concluded that there exists in the data a significant short-term boost in Iranian L2 learners' listening comprehension scores and; therefore, the hypothesis was rejected.

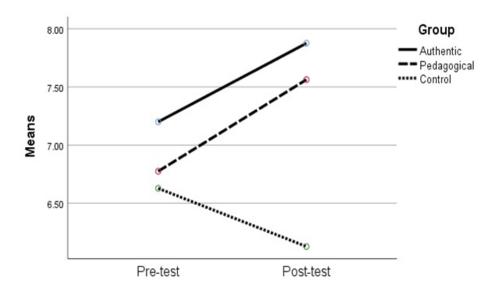


Figure 2. Performance on the IELTS Listening Test over Time

Table 4
Multiple Comparisons between Groups at Pre- and posttest

	Mean				95% Confid	lence Interval
		Difference	Std.		Lower	Upper
Group I	Group J	(I-J)	Error	Sig.	Bound	Bound
Authentic	Pedagogical	.3687*	.14548	.033	.0234	.7141
Aumentic	Control	1.1593*	.14641	.000	.8117	1.5069
Pedagogical	Authentic	3687*	.14548	.033	7141	0234
redagogicai	Control	.7905*	.14641	.000	.4429	1.1381
Control	Authentic	-1.1593*	.14641	.000	-1.5069	8117
Colluloi	Pedagogical	7905*	.14641	.000	-1.1381	4429

To determine whether there is a significant long-term effect for the differing treatment conditions, all the data points on the within-subjects variable, that is the pretest, posttest, and delayed posttest, were used for this analysis (see Table 5 for descriptive statistics).

Table 5
Descriptive Data Relating to Experimental/Control Groups at Different Testing Times

		Mean	Std. Deviation	Skewness	Kurtosis
	Authentic	7.2000	.69614	.18	96
Pretest	Pedagogical	6.7750	.69752	11	64
	Control	6.6282	.64602	.02	46
	Authentic	7.8750	.79864	63	.57
Posttest	Pedagogical	7.5625	.98181	32	69
	Control	6.1282	.99814	77	.37
	Authentic	7.8500	.82586	99	.69
Delayed posttest	Pedagogical	7.4875	.95062	65	.45
	Control	5.8974	1.23640	67	.73

By looking at Table 5, it can be inferred that despite the decrease of the mean score on the delayed posttest, there was still an improvement compared to the pretest results. In fact, although we can see that the treatment's effect was slightly reduced on the delayed posttest, the mean score differences with the pretest were still significant.

Once again inspection of the assumptions of normality and homogeneity of variances showed no violations. However, since this time the within-subjects variable has three levels, an additional test of sphericity was conducted. The Mauchly's statistic, which is consulted to check for this assumption, was significant (p< .1) which means that sphericity does not hold for this data set. As Howell (2002) maintains when the assumption of sphericity is violated, the "Greenhouse-Geisser" or "Huynh-Feldt" correction should be used instead of the conventional sphericity assumed F value.

According to Larson-Hall (2010), the Greenhouse-Geisser is a more conservative measure which means that it is more powerful and, therefore, it was chosen over the other correction statistic. The within-subjects results once again revealed a statistical, though very small, main effect for time at testing, F (2, 206) = 7.83, p< .01, partial  $\eta$ 2 = .06, but a much stronger interaction effect between time at testing and the different conditions the participants were assigned to, F (4, 206) = 19.25, p< .01, partial  $\eta$ 2 = .24. Furthermore, the difference between the treatment groups (i.e., the between-subjects variable) was also statistically significant, F (2, 116) = 41.97, p< .01, partial  $\eta$ 2 = .42 (see Tables 6 and 7).

Table 6
Test of Within-subjects Effects

		Type III Sum		Mean			Partial Eta
Sou	irce	of Squares	df	Square	F	Sig.	Squared
Time	Greenhouse- Geisser	6.323	1.778	3.556	7.835	.001	.063
Time * Group	Greenhouse- Geisser	31.086	3.556	8.741	19.259	.000	.249
Error (Time)	Greenhouse- Geisser	93.620	206.276	.454			

Table 7
Tests of Between-subjects Effects

	Type III Sum					Partial Eta
Source	of Squares	df	Mean Square	F	Sig.	Squared
Intercept	17715.464	1	17715.464	11520.597	.000	.990
Group	129.082	2	64.541	41.972	.000	.420
Error	178.376	116	1.538			

Here too a plot was obtained (see Figure 2) which shows that when compared to the control group, whose decline in scores has continued well into this six-month interval, the authentic and pedagogical groups have continued to benefit from the flipped instruction. However, when authentic and pedagogical groups are compared across time (i.e., a within-subjects comparison) rather than across groups, the results are somewhat less compelling. This is because both of these conditions enjoyed an upward trend from the pretest to the posttest. But, during the six-month hiatus the effect for authentic group has levelled off and the influence of the pedagogical treatment on student performance has a slight downward trend. The post Tukey hoc test revealed a significant difference between authentic and pedagogical groups though (see Table 8). These results point to several facts. Firstly, as opposed to the control group, the authentic and pedagogical conditions have had some sustainable effects. Secondly, while this effect is to some extent substantial, it is not uniform between the authentic and pedagogical conditions, with the former having a clear

advantage over the latter. In conclusion, it can be argued that the flipped teaching has indeed had a statistically significant long-term between-groups effect on the listening achievement of Iranian advanced EFL learners. In fact, the results attest to the positive effects of the flipped approach on the posttest and delayed posttest. It should be mentioned that the performance of the participants on the delayed posttest declined; however, there was still a meaningful difference in the comparison of data on the pretest in favor of the delayed posttest, but across time the authentic group has experienced a more sustained effect on their performance than the pedagogical group. Put together, these reasons resulted in the rejection of the second hypothesis.

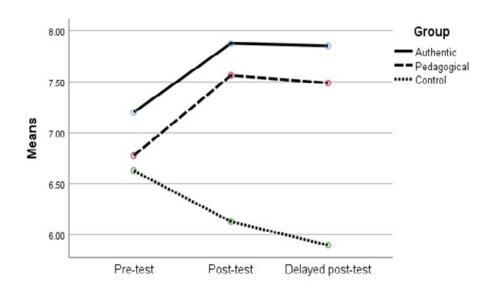


Figure 3. Performance on the IELTS Listening Test over Time (Longitudinal)

Table 8
Multiple Comparisons between Groups (Longitudinal)

		Mean			95% Confide	ence Interval
		Difference				
Group I	Group J	(I-J)	Std. Error	Sig.	Lower Bound	Upper Bound
A 41 4*	Pedagogical	.3667*	.16009	.042	0134	.7467
Authentic	Control	1.4237*	.16111	.000	1.0412	1.8062
Dadagagigal	Authentic	3667*	.16009	.042	7467	.0134
Pedagogical	Control	1.0571*	.16111	.000	.6745	1.4396
Control	Authentic	-1.4237*	.16111	.000	-1.8062	-1.0412
	Pedagogical	-1.0571*	.16111	.000	-1.4396	6745

To examine the third hypothesis, the two experimental groups were exposed to two distinct treatment conditions. One was comprised of flipped instruction using authentic listening materials while the other involved the same method of teaching but this time implementing pedagogical

listening materials. To realize if there is a statistically significant difference between these two treatments with regards to their effect on the L2 learners' listening performance, the scores on these two variables across the immediate and delayed posttests were compared. The obtained results from these tests are depicted in Table 9.

Table 9
Tests of Between-subjects Effects

	Type III Sum					Partial Eta
Source	of Squares	df	Mean Square	F	Sig.	Squared
Intercept	9471.006	1	9471.006	7392.005	.000	.990
Group	4.556	1	24.556	17.556	.001	.194
Error	99.937	116	1.281			

As can be observed in this table, both the authentic and pedagogical listening conditions are significantly different from each other, F(1, 116) = 17.55, p < .01, partial  $\eta 2 = .19$ , which illustrates the fact that in spite of their influence on improving the L2 learners' listening, their degree of effectiveness is different. This is because the authentic treatment has been more effective than the pedagogical one as revealed by the differences in their respective mean scores. Overall, it can be maintained that flipped instruction through authentic and pedagogical listening materials have had substantial but different effects on the listening of L2 English learners. Thus, the third hypothesis was rejected. In fact, using authentic audio materials proved to yield better results on the listening achievement of the learners compared with the pedagogical ones.

To investigate the last hypothesis, as previously mentioned, different groups of participants were recruited to help explore the research hypotheses of the present paper. More specifically, for the experimental part of this research, 119 L2 English learners were assigned to three groups and tested three times on the listening comprehension module of the IELTS test. Through preliminary analyses, mean scores were assigned to each group at each testing time. These averages were used to decide whether the treatment groups outperformed the control group and also to know whether there was a difference between the effectiveness of these two types of treatment. Another objective of the present research was to show any sustained effects for the treatments as well. Inspection of descriptive results in Table 5 allowed a provisional attempt to answer these questions which were later addressed more fully through inferential statistics.

As regards the former research question, it can be observed in the table that across all testing times both the authentic and pedagogical treatment groups' means are at least one point higher than that of the control group; a trend which becomes much more pronounced as we move toward the delayed posttest. This meant that both treatment conditions were effective. However, a comparison of the authentic and pedagogical group means themselves revealed that they are not equally effective in changing the EFL learners' listening performance but that the former condition is more

effective. Moreover, the differences in the mean scores indicated that while the control groups' listening performance had become worse from the time of the posttest, the performance of the treatment groups had levelled off, which points to a measure of continued effect. Nevertheless, here too the authentic group outperforms the pedagogical one.

In fact, the results on the posttest and delayed posttest demonstrated that the difference between the mean scores can be caused by the flipped classroom approach and this approach improved students' total listening scores. In other words, the analyses helped to reject the fourth hypothesis because a direct relationship was discovered between the flipped teaching and students' listening test scores.

#### **Discussion of the Results**

English students see input as part of their cognitive process, and when the way of exposure is changed and developed to satisfy their needs, language input becomes more conspicuous and perceptible for them. Therefore, the results of this study are in line with the assumptions of cognitive language learning and the key role of attention and noticing in learning the second language (Troike, 2012). The improvement of the participants' listening comprehension can be clarified by relating it to the key role of intentional attention to the language features required for their listening comprehension that took place via the flipped instruction. Furthermore, this intentional focus that is triggered via direct instruction is strongly related to the effect of the educational practices and the learning materials.

The results of this paper are also in agreement with the constructivist theories of learning. Participants in the experimental groups built their long-term learning by implementing inductive strategies to enhance their listening comprehension abilities in opposition with Chomsky's simplified concept of language learning as a subconscious process. Their learning took place as a consequence of analyzing crucial notions at their own pace in an individualized setting like their houses. In this way, they developed their listening comprehension ability by pursuing the taught strategies consciously. Moreover, the results of this paper support the influence of the method of teaching on learners' improvement in listening via the form-focused approach and input-based treatment (Ellis, 1997). Participants in the experimental groups put the emphasis on the inputbased teaching, which helped them to consider the language features purposely. In fact, "consciousness-raising activities can encourage students to take on the responsibility for planning." monitoring, and evaluating their own learning" (Vandergrift, 2003, p. 435). This can be accountable for the short-term improvement of the experimental groups. Besides, the short-term improvement of the participants can be related to the fact that affective factors were prominent in this study. During the intervention, attempts were made to decrease the experimental groups participants' stress which could help them complete a listening task successfully. The participants were trained not to give up on a listening task, and to try to understand as much as they could. They were told that listening is not an all or nothing skill and that they are able to understand the

gist of a listening text overall. At the end of the intervention, therefore, there was an increase in the participants' self-confidence, which in turn, led to a better short-term listening comprehension rate on the posttest.

The findings of the present paper revealed that Iranian advanced EFL learners show an improvement in their scores on the listening tests because of a specific teaching approach in SLA, and this achievement may be related to flipped approach. The instructional approach can be either a barrier or an opportunity for learning, and in the present study, it seems to have a contributing influence on students' listening comprehension. Perhaps in this research, linking flipped instruction to the theory of connectionism in SLA makes comparison to the strength of association that second language learners experience throughout the SLA (Troike, 2012). To be more specific, the prior class preparation and instructional materials offer opportunities for learners to assimilate the rules that govern their answers rather than just have an abstract understanding of a new rule.

The results could also be regarded as the advantages of mixing a different teaching approach, which is a kind of inverted learning and a set of class activities that are differentiated relying on learners' different and personal abilities. These activities demonstrated individualized in-class plans that involved learners in an inquiry that led them to achieve similar learning outcomes in a more personalized and differentiated manner. Generally, learners' performance indicated a great knowledge, a better understanding, and enhanced listening comprehension. Flipped classroom approach and the class tasks were specifically prepared to help students voice their opinions and organize them interestingly and correctly. As a result, the rich input via the instructional materials and the following classroom interactions and individualized activities developed practical skills and improved the listening comprehension. Students were given equal opportunities for the activities to analyze information and be involved in their learning process.

The outcomes of this paper also showed that using authentic listening materials can exert a contributing influence on listening proficiency of second language learners, provided that the tasks given to them is appropriate for their level of proficiency. The reasons behind the results can be elaborated by two elements. First, it can be the innate difference between the type of language which is used in pedagogical and real-life contexts (Crystal & Davy, 1975). In accordance with Widdowson (1983), the simplified audio materials are changed to fit the proficiency levels of the students and this causes the language rather artificial. On the contrary, authentic materials are suited to improve comprehension of everyday speech, since they indicate real-life listening, and permit more exposure to varieties of language (Vandergrift, 2007). Hence, in accordance with Blanco (2002) being in touch with the natural use of language and working on everyday conversation may validate better performance of the authentic group on both post and delayed tests. Second, as Field (1998) stated, decreasing the task demand instead of using simplified instructional materials can help the students to deal with the authentic instructional materials which are beyond their language competence. This may lead to a sense of self-achievement among the students which

in turn may result in a higher performance (Vandergrift, 2007). Hence, the results certify the earlier evidence that listening practice with authentic materials has advantages (Vandergrift, 2007). Also like Miller (2005) and Weyers (1999), the findings of this study advocated non-simplified audio materials and justified its exploitation as a part of second language classes. On the other hand, in contrast to Brown (1995) and Ridgway (2000) who favored pedagogical materials, the findings of this paper suggested that with similar training and exposure time, authentic materials can be highly contributing.

# **Conclusions and Implications**

Although the findings of this study can advance existing research, akin to any study, this paper suffered from some limitations. First, since the participants of the current study were EFL learners and practicing teachers only from Tehran province in Iran, the collected data may not be truly representative of the whole population of English teachers and learners in this country. Second, this study is limited to undergraduates. Studies on flipped instruction at the postgraduate level would be also useful, and may need varying design and implementation details. Third, as Hung (2017) mentioned, flipped instruction is made up of different parts, materials, and factors and it is hard to control the impacts of the confounding variables such as teachers' abilities, the nature of the tasks and materials, and classroom settings which can affect the final results. As a result, the positive results indicated in this paper may be, in one way or another, the result of the interaction among all these confounding variables rather than the mere effect of flipped approach. Fourth, because the classroom instructor was the researcher too, students may have wanted to satisfy their instructor by producing positive responses. Fifth, other factors besides the flipped classroom instruction may have influenced the participants' listening skill score in the longitudinal phase of the study. In fact, a lot of other things may have happened during these six months. For example, participants may do some other learning activities like self-study to improve their listening comprehension over these six months. As such, the findings of this paper ought to be considered as tentative and open to revision.

Altogether, the findings of the present paper demonstrated that flipped instruction enhanced students' attainment in listening. Participants in both experimental groups showed a notable listening achievement via this method, and realized that they were directly involved and accountable of their learning than the learners in the CG. It can be then concluded that flipped approach represented higher interest in the listening and better self-confidence. Moreover, not after a long time of resistance, they accepted this approach and replied well in terms of mastery over linguistic level compared to the participants in the CG. Learners who received the "conventional" class instruction in the learner-centered class showed less confidence about their listening abilities. Besides, when learners have instructional materials at home, they create the opportunity to review it as many times as required to figure out the concepts, so they can break the learning into chunks.

Many instructors use prearranged instructional materials to teach learners principal learning objectives. With the great dependence on technology in today's generation of learners, predesigned educational materials like videos, screencasts, and PowerPoint presentations are quite appealing in that they address various learning modes to permit self-paced learning. This saved more class time for the teacher's effective feedback, clarification of misunderstandings, and correction of mistakes. Consequently, learners invest a long time in class implementing what they had learnt through the predesigned educational materials under the close supervision of the teacher. In this way, students' responses were generated and considered in class after the target concepts were learnt at home in advance.

The role of learners in both experimental groups included highly active involvement in the learning than those in the CG who did not share the ownership over the teaching materials that the experimental groups enjoyed. Consequently, the students in both experimental groups were highly independent. Likewise, the instructor educated learners in the experimental groups without being concerned about the time. This made a more cooperative model, which both instructor and learners liked and boosted their own confidence about.

It was also concluded that flipped classroom approach exerted positive impacts on the short-term improvement of the listening comprehension of the experimental group students. Likewise, regarding the results, significant long-term improvements were recorded for the experimental groups. It was also concluded that the use of authentic audio materials, in comparison with the pedagogical ones can exert a positive impact in teaching listening comprehension.

We are quite hopeful that the results of this study actively encourage ESL/EFL instructors to devote very considerable attention to listening comprehension. Regarding the advantageous effects of attracting students' attention to more listening practice, ESL/EFL teachers are supposed to spend more time in teaching listening. Such an approach can be obtained through the use of flipped instruction along with authentic audio materials. Although teaching listening seems to be difficult and is rather burdensome to any instructor, it is pleasant for teachers who favor a more cooperative method. Instructors are required to implement flipped instruction in teaching listening in accordance with students' level of language proficiency.

Additionally, the results of this paper indicated that making use of authentic materials for listening along with discussions may be advantageous to enhancing listening proficiency. As a result, syllabus designers are suggested to make use of authentic materials for listening activities. Incorporating authentic materials can especially compensate for students' lack of exposure to the real-life situation. Therefore, it can result in a particularly suitable condition for listening development.

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# **Appendix A: Sample IELTS Listening Test**

# Test 1

# LISTENING

# SECTION 1 Questions 1-10

Complete the table below.

Write ONE WORD AND/OR A NUMBER for each answer.

# **COOKERY CLASSES**

Cookery Class	Focus	Other Information
Example The Food Studio	how to 1and cook with seasonal products	small classes     also offers 2     classes     clients who return get     a 3 discount
Bond's Cookery School	food that is 4	includes recipes to strengthen your 5      they have a free 6 every Thursday
The <b>7</b>	mainly 8food	located near the 9      a special course in skills with a 10 is sometimes available

10

Listening

# SECTION 2 Questions 11-20

Questions 11-13

Choose the correct letter, A, B or C.

# **Traffic Changes in Granford**

- 11 Why are changes needed to traffic systems in Granford?
  - A The number of traffic accidents has risen.
  - B The amount of traffic on the roads has increased.
  - C The types of vehicles on the roads have changed.
- 12 In a survey, local residents particularly complained about
  - A dangerous driving by parents.
  - B pollution from trucks and lorries.
  - c inconvenience from parked cars.
- 13 According to the speaker, one problem with the new regulations will be
  - A raising money to pay for them.
  - B finding a way to make people follow them.
  - C getting the support of the police.

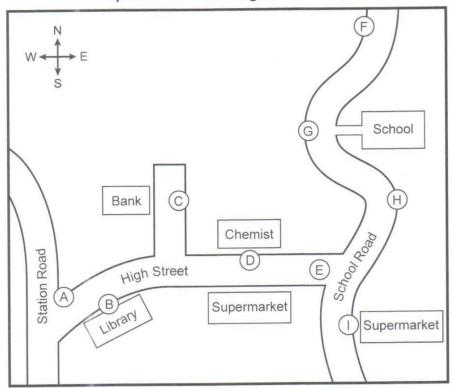
Test 1

# Questions 14-20

Label the map below.

Write the correct letter, A-I, next to Questions 14-20.

# Proposed traffic changes in Granford



14	New traffic lights	
15	Pedestrian crossing	
16	Parking allowed	
17	New 'No Parking' sign	
18	New disabled parking spaces	
19	Widened pavement	
20	Lorry loading/unloading restrictions	

12

Listening

#### SECTION 3 Questions 21–30

Questions 21-25

Choose the correct letter, A, B or C.

- 21 Why is Jack interested in investigating seed germination?
  - A He may do a module on a related topic later on.
  - B He wants to have a career in plant science.
  - C He is thinking of choosing this topic for his dissertation.
- 22 Jack and Emma agree the main advantage of their present experiment is that it can be
  - A described very easily.
  - B carried out inside the laboratory.
  - c completed in the time available.
- 23 What do they decide to check with their tutor?
  - A whether their aim is appropriate
  - B whether anyone else has chosen this topic
  - C whether the assignment contributes to their final grade
- 24 They agree that Graves' book on seed germination is disappointing because
  - A it fails to cover recent advances in seed science.
  - B the content is irrelevant for them.
  - C its focus is very theoretical.
- 25 What does Jack say about the article on seed germination by Lee Hall?
  - A The diagrams of plant development are useful.
  - B The analysis of seed germination statistics is thorough.
  - C The findings on seed germination after fires are surprising.

#### Test 1

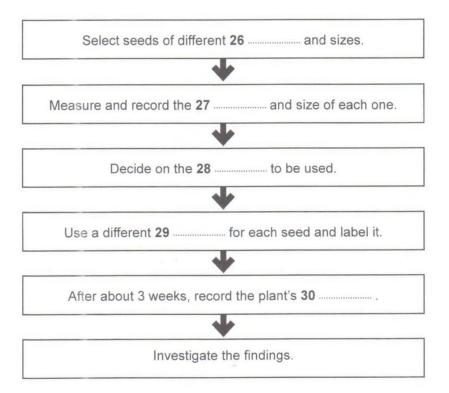
Questions 26-30

Complete the flow-chart below.

Choose **FIVE** answers from the box and write the correct letter, **A–H**, next to Questions 26–30.

Α	container	В	soil	С	weight	D	condition
Е	height	F	colour	G	types	Н	depths

# Stages in the experiment



14

Listening

# SECTION 4 Questions 31-40

Complete the notes below.

Write ONE WORD ONLY for each answer.

Effects of urban environments on animals
Introduction
Recent urban developments represent massive environmental changes. It was previously thought that only a few animals were suitable for city life, e.g.
the 31 – because of its general adaptability
the pigeon – because walls of city buildings are similar to 32
In fact, many urban animals are adapting with unusual 33
Recent research
<ul> <li>Emilie Snell-Rood studied small urbanised mammal specimens from museums in Minnesota.</li> </ul>
- She found the size of their 34 had increased.
<ul> <li>She suggests this may be due to the need to locate new sources of 35 and to deal with new dangers.</li> </ul>
<ul> <li>Catarina Miranda focused on the 36 of urban and rural blackbirds.</li> </ul>
<ul> <li>She found urban birds were often braver, but were afraid of situations that were 37</li></ul>
<ul> <li>Jonathan Atwell studies how animals respond to urban environments.</li> </ul>
He found that some animals respond to 38 by producing lower levels of hormones.
Sarah Partan's team found urban squirrels use their 39 to help them communicate.
Long-term possibilities
Species of animals may develop which are unique to cities. However, some changes may not be 40