

A Synthetic Investigation of Listening Skill and Learning Styles Status in Light of Exercise-based vs. Task-based Interventions

Gholam-Reza Abbasian^{1*}, & Mohsen Alikhani²

* Correspondence:

gabbasian@gmail.com

¹. Imam Ali University, Iran

². University of Tehran, Iran

Received: 8 February 2024

Revision: 27 March 2024

Accepted: 2 April 2024

Published online: 30 June 2024

Abstract

Language learning platforms or channels have always been a challenge and source of inspiration for the respective SLA researchers. The two widely used channels are learning exercises and tasks, which have received much research but which is more effective in developing language skills (listening here), is still controversial. Additionally, learners' features, including their learning styles, might be either an effective or an affected factor in applying either channel. To shed light on both problems, this experimental research employing 55 conveniently sampled Iranian intermediate EFL learners categorized into experimental and control groups was conducted. The experimental groups exposed to both pre-and post-tests received task- and exercise-based listening instructions separately for ten sessions. Their perceptual learning styles were also measured after the interventions. The respective parametric statistical analysis (i.e., independent-samples t-test) showed that both groups performed roughly equally in the post-test, and there was statistically no significant difference between intervention types. ANCOVA was run concerning each sub-style to address the status of the learning styles. Similarly, the relationship between listening ability and method type showed no statistically significant differences, regardless of whether the effectiveness of either treatment was natural. Both listening activities worked efficiently to enhance learners' listening comprehension abilities. Statistically speaking, the results confirmed the non-significantly differentiating effects of both independent variables on developing listening skills and modifying learning styles. The findings are more challenging rather than concluding, which, while bearing specific pedagogical insights, motivates further research.

Keywords: [task-based instruction](#), [exercise](#), [listening skill](#), [learning style](#)

1. Introduction

The evolution of language teaching methodologies has been driven by the ever-changing needs of people seeking to communicate across different nations and cultures. This pursuit has led to the development of various communicative-oriented teaching methods, including Task-Based Language Teaching (TBLT), which, as [Sanchez \(2004\)](#) suggests, is an efficient alternative for fostering fluent communication in response to contemporary social demands. [Nunan \(2005\)](#) views TBLT as a functional approach introducing fresh perspectives into language teaching methodology.

TBLT distinguishes itself from other methods by offering a range of tasks designed to facilitate learning processes through practice and application. While some educators emphasize using various exercises as supplementary tools in language teaching, it is crucial to differentiate between tasks in TBLT from specific mechanisms like exercises. According to [Ellis \(2003\)](#), the latter is defined as activities primarily focused on form, where language use concerns structural aspects. [Ellis \(2003\)](#) further clarifies that exercises deal with 'semantic meaning' – the meanings conveyed by specific forms regardless of context. Additionally, [Ellis \(2003\)](#) clearly distinguishes between exercises and tasks. Exercises are form-focused, concentrating on the structural aspects of language, whereas tasks are meaning-oriented, emphasizing the use of language in context. Another aspect of differentiation, according to [Ellis \(2003\)](#), lies in the role of the participants. Participants act as language learners in exercises, focusing on the language itself.

On the contrary, they act as language users in doing tasks and engaging in activities that mirror real-world scenarios. Such distinctions between tasks and exercises lead to a distinction in learning types in that exercises promote intentional learning, while tasks facilitate incidental learning. Moreover, the distinction between exercises and tasks underscores the diverse strategies employed in language education, each with its unique focus and learning outcomes. All such theoretical, methodological, and technical initiatives have been made to consider the nature of each skill and the learner's characteristics so that the process and product of learning language skills can be more effective and communicative. In line with this trend, the unique features of each skill are treated uniquely. For example, it is listening comprehension through which learners exhibit diverse behaviors, a phenomenon extensively explored in educational research to understand individual teaching differences ([Reid, 1987](#)).

Gender, age, social status, motivation, attitude, aptitude, culture, learning strategies, and learning styles contribute to these variations among learners. [Tabanlıoğlu \(2003\)](#) advocated for teachers to be aware of their student's preferred learning styles, as this awareness can enhance the organization and effectiveness of classroom activities and materials. This perspective on individual differences is supported by the work of [Ehrman, Leaver, and Oxford \(2003\)](#), [Reid \(1987\)](#), [Felder and Brent \(2005\)](#). [Felder and Brent \(2005\)](#) further expanded this list to include students' intellectual development levels and approaches to learning. [Tubic and Dordic \(2010\)](#) also highlighted the influence of learning styles on the learning process and information organization. [Grasha \(2002\)](#) defines learning styles as "personal dispositions that influence a student's ability to acquire information, to interact with peers and teachers, and to participate in learning experiences" (pp.126–127). These styles represent a combination of preferences and qualities as standard to all learners. While there has been considerable research on learning styles ([Gilbert & Swanier, 2008](#); [Riazi & Mansoorian, 2008](#); [Sain, 2007](#)), there remains a gap in understanding precisely how Iranian students' learning styles relate to their development of listening skills. Furthermore, it is recognized that individuals with different learning styles approach language tasks in varied ways.

In developing language skills, regardless of the skill type, language practice typically involves a range of exercises or tasks. Therefore, the mechanisms through which language input is presented and activated, particularly concerning perceptual learning styles, are critically important and warrant further investigation. Given these challenges, the current study aims to integrate learning mechanisms (i.e., tasks vs. exercises), learning styles, and skill acquisition (e.g., listening skills). This study explores whether a relationship exists between specific learning styles (visual, auditory, tactile, and kinesthetic) and students' achievements in listening comprehension skills, particularly concerning different listening tasks and exercises. To do so, the following questions are posed:

1. Is exercise-based listening instruction more effective than task-based instruction in developing Iranian EFL learners' listening ability?
2. Does instruction type (i.e., exercise-based and task-based) significantly affect EFL learners' listening ability about their perceptual learning style type?

2. Review of the Literature

2.1 Learning Styles

Felder (1996) defined learning styles as the characteristic strengths and preferences that learners exhibit during the learning process. This concept acknowledges that students have diverse ways of absorbing information. For instance, some students are more inclined toward concrete facts, data, and algorithms, while others gravitate toward abstract theories and mathematical models. Additionally, learning preferences can be divided based on the type of information: Some learners process visual information like pictures, diagrams, and schematics more effectively, whereas others benefit more from verbal forms, including written and spoken explanations. Furthermore, while some students thrive in active group learning environments, others prefer solitary study.

The term 'learning styles' was first used in group dynamics by Thelen (1954), as cited in Ehrman et al. (2003). These styles are categorized in various taxonomies, often called type theories, which classify people into distinct groups. The roots of these theories can be traced back to the work of psychiatrist and psychoanalyst Jung (1964), who developed the Myers-Briggs Type Indicator test, a tool widely used for occupational decision-making (Pashler et al., 2008). Listeners' preferred learning channel affects how efficiently they can extract information from auditory signals. Teachers must be mindful of their presentation methods and how they deliver material, ensuring it aligns with the learners' potential listening abilities. Learning styles are crucial in how listeners process and retain auditory information.

Research in this field has been extensive. Riazi and Mansoorian (2008) investigated EFL students' learning styles in Iran using Reid's Perceptual Learning Style Questionnaire. They found that auditory, visual, tactile, and kinesthetic learning styles were predominant among Iranian learners, with individual and group learning styles being less preferred. Gilbert and Swanier (2008) explored why some students learn specific topics more quickly than others. They discovered that learning styles can vary from lesson to lesson, necessitating flexible teaching methods that adapt to learners' evolving needs and the requirements of the course. Sain (2007) aimed to diversify traditional English classes, which often cater mainly to visual and oral learners, by incorporating kinesthetic-oriented activities. The results indicated several benefits: enhanced social interaction, reduced stress and boredom, and more active learning experiences that facilitated quicker and easier understanding of the material.

Awad and Naqeeb (2011) examined the relationship between students' perceptual learning styles and factors like academic level, gender, and English proficiency. Their study, involving many male and female participants, revealed a predominant preference for auditory learning styles, with variations in learning styles observed across different academic levels. Hsu (2007) investigated the relationship between the learning styles of Taiwanese elementary students and their English academic achievements. Using a modified version of Reid's learning style questionnaire, the study found that group learning was preferred. While visual, tactile, and group learning styles were positively correlated with language learning, their relationship with English academic achievements was relatively weak.

Craciun and Isvoran (2009) outlined several classifications of learning styles: 1) Dunn and Dunn's environmental preferences: This model identifies three primary perceptual learning styles: visual, verbal (auditory), and kinesthetic or tactile. Visual learners favor graphical information, auditory learners excel with verbal instructions, and kinesthetic or tactile learners learn best through physical interaction. 2) VARK learning styles by Neil Fleming include four primary learning styles: Visual/auditory, read/write, kinesthetic/tactile, and a multimodal style that combines these elements. Read/write learners, for example, prefer textual information like manuals and textbooks. 3) Honey and Mumford's learning modes divide learners into four types: activists, reflectors, theorists, and pragmatists. 4) Gregory's mind style categorizes people along two continuums: abstract-concrete and sequential-random. 5) Reid (1995) proposed three significant categories of learning styles: sensory or perceptual, cognitive, and affective. Sensory or perceptual styles are concerned with how learners use their senses in the learning environment. Cognitive styles are linked to personality traits and influence how individuals think, learn, and solve problems. Affective styles relate to emotions, values, and feelings, encompassing motivation and engagement. Oxford (2003) further elaborated on learning styles in language learning, focusing on sensory preferences, personality types, desired degree of generality, and biological differences. Research by Mauney and Walker (2007) indicates that learning styles significantly influence language learning, including specific skills like listening. These styles affect how students perform in listening activities, underscoring the importance of understanding and catering to these diverse learning preferences in educational settings.

These studies highlight the diverse range of abilities and preferences influencing listening comprehension in language learning. Understanding these differences is crucial for educators to tailor their teaching methods effectively, ensuring they meet the varied needs of their students. Pursuing the objectives of the current study, tasks, and exercises regarding listening skills should be addressed, too. Listening tasks in language learning encompass a range of abilities, each contributing to how effectively one can perceive, interpret, and understand auditory information.

2.2 Listening Skill Instruction

Chastain (1988) presents listening as an active process crucial for effective communication. This process demands that listeners utilize their language skills and integrate their background knowledge of the world. Such integration is vital for reconstructing the speaker's intended meaning. With this, there is a chance of communication breakdown. Chastain (1988) further delineates listening into four sequential elements: discrimination, perception of the message, retention, and comprehension. In the initial stages – discrimination, perception, and retention – listeners are engaged in processing the language but do not yet ascribe meaning to what they hear. In the comprehension stage, listeners actively attempt to reconstruct the intended meaning. This distinction is crucial: the ability to discriminate or perceive language elements does not automatically equate to comprehension. While the first three elements focus on the linguistic aspects of language, comprehension is concerned with understanding the meaning.

Expanding on the concept of listening in language education, Morley (1991) identifies three distinct approaches to listening instruction:

Listening to Repeat: This approach involves listening to spoken language and then repeating it. It focuses on the accuracy of reproduction, emphasizing the mechanical aspect of listening. Listening to Repeat is rooted in the Audio-linguistic and situational language teaching methods. It involves the listener hearing a model – a sentence, phrase, or word – and then being asked to repeat it. The focus here is not on understanding the content but on imitating or memorizing what is heard. This method emphasizes the mechanical aspect of language acquisition, where the listener's ability to replicate the sounds and rhythms of the language is prioritized over comprehension.

Listening to Understand: This method shifts the focus to grasping the content of what is being heard. It requires a deeper engagement with the spoken language, moving beyond mere repetition to interpretation and understanding. Listening as the primary focus in the 'Comprehension Approach' to Second/Foreign Language Learning: In this perspective, listening is central to language acquisition. It emphasizes the importance of understanding and interpreting language as it is naturally spoken, aiming to develop learners' abilities to comprehend spoken language in real-life situations. Each perspective outlined by Morley (1991) highlights a different facet of listening, from the essential skill of echoing spoken words to the more complex task of understanding and interpreting language. These approaches underscore the multifaceted nature of listening in the context of language learning and communication. Listening to Understand, which, according to Morley (1991), aims to develop listening as a skill in its own right. The primary goal is to enable listeners to quickly and accurately comprehend spoken language, fostering confidence and efficiency in various contexts and settings.

This approach can be further divided into two models:

A) **The Question-Oriented Response Model:** In this model, students listen to spoken language and then respond to a series of factual comprehension questions (Morley, 1991). These questions might take various forms, such as true/false, multiple-choice, fill-in-the-blank, or short answer. While this method tests understanding, it often needs to pay more attention to the functional aspect of language. The focus is more on testing than teaching, emphasizing memorization and guessing rather than meaningful comprehension. This approach can sometimes be unengaging and demotivating for students, as it needs more authentic communicative contexts.

B) **The Task-Oriented Response Model:** This model involves listeners performing or completing a task individually or in small groups based on their understanding of the spoken text. The task requires the application of language knowledge to achieve a communicative outcome. Evaluation in this model is based on completing the intended task. This approach is more interactive and engaging, using language in practical, real-world scenarios.

Both approaches to listening – “Listening to Repeat” and “Listening to Understand” – play unique roles in language education. While the former focuses on accurate language reproduction, the latter emphasizes comprehension and the practical application of language skills. These methods cater to different aspects of language learning, highlighting the multifaceted nature of acquiring listening skills.

2.3 Exercises and Teaching Language

Ellis (2003) defines an exercise as an activity with a form-focused purpose, engaging learners in tasks with communicative objectives. Such exercises require participants to act primarily as language learners. Understanding the distinction between exercises and tasks is crucial, especially in this study, which investigates the effects of exercise and task-based instruction on listening comprehension ability. Hill and Tomlinson (2003, p. 3650) provide a list of listening exercises commonly found in traditional listening course books. These exercises are designed to help learners extract factual information from spoken texts and include:

1. Listening for Specific Information: Identifying particular details within the oral text.
2. Pronunciation Practice: Aiming to improve the learners' pronunciation skills.
3. Answering Questions on the Cassette: Responding to questions based on the audio material.
4. Listen and Check: Requiring learners to verify or correct information after listening.
5. Completing Cloze Tests: Filling in missing words or phrases in a text based on what is heard.
6. Read the Text and Listen to It: Enhancing comprehension by reading along with the audio.

Wu, Witten, Edwards, Nichols, and Aquino (2006) further categorize exercise activities into six major types, each focusing on different aspects of language learning:

1. Multiple Choice: Choosing the correct answer from given options.
2. Matching involves finding matching items, such as synonyms or antonyms. It can take various forms, including matching pictures to words, texts to pronunciations, words to definitions, or words to each other.
3. Permutation: Asking learners to arrange items (words, letters, and events) in order.
4. Fill in the blank: This requires learners to find the correct and appropriate answer for a missing part of the text.
5. Spelling: Focused on constructing words correctly, this exercise is beneficial for vocabulary learning.
6. Category: This involves grouping items (e.g., words) based on their type or category.

With their distinct focuses and methodologies, these exercises play a vital role in developing various aspects of language proficiency, particularly in enhancing listening comprehension skills. By engaging learners in a range of activities, these exercises aim to reinforce language learning in a structured and targeted manner.

2.4 TBLT and Learning Language

Maley (2003) explained that TBLT was first applied in Prabhu's procedural syllabus in 1987. This approach's basis is tasks such as problem-solving, information finding, and opinion gap without attention to the order of language items. By using this kind of task in teaching, Prabhu believed that a learner's conscious attention is mainly centered on solving problems or completing tasks while his unconscious mind is acquiring language competence.

2.5 Some Dominant Characteristics of TBLT

Nunan (2005, p. 1) outlines the key characteristics of Task-Based Language Teaching (TBLT), a method that has gained significant attention in language education.

1. Learner-Centric: It prioritizes the needs of the learner.
2. Incorporates Authentic Texts: Authentic materials are used to enhance the learning experience.

Balances Focus on Language and Learning Process:

3. It provides opportunities for learners to concentrate on both language structure and the learning process.

Connects Classroom Learning to Real-World Use:

4. It bridges the gap between language learning in the classroom and its application in real-life contexts.

Values Learners' Experiences:

5. Learners are encouraged to bring their own experiences into the learning environment.

Emphasizes Interaction in the Target Language:

6. Interaction is seen as key to encouraging communication.

Centers on Experiential Learning:

7. Active engagement in language processing is essential.

Several studies have explored the effectiveness of TBLT in various contexts. Dickinson (2010) investigated TBLT in Japan, comparing it with the PPP (Present-Practice-Product) approach. Found that TBLT provides rich input for learners, especially in contexts lacking authentic language exposure. McDonough and Chalkitmongkol (2007) examined TBLT in Thailand, noting its alignment with learners' communication needs. Initially, students were resistant, but they gradually adapted and appreciated the method for promoting independent learning. Khomeijani Farahani and Khagani Nejad (2009) indicated that task-based practices in speaking significantly improved negotiation skills in learners at intermediate and advanced levels compared to traditional methods.

Ruso (2007) explored TBLT's influence on EFL learners, finding positive student perceptions due to its learner-centered approach and opportunities for self-expression. Murad (2009) investigated TBLT's impact on Palestinian learners' speaking proficiency and attitudes, noting significant improvements in both areas. Hayati and Jalilifar (2010) studied TBLT's effect on reading comprehension among MBA students, finding that those in the TBLT group outperformed the control group in the final exam. Humaney and Arias (2009) focused on the impact of teacher-led and task-based oral interaction activities in a Colombian public school, observing differences in how interactions were initiated and sustained in each method. Fuente (2006) compared traditional and task-based vocabulary lessons, discovering that task-based instruction, mainly focusing on form, was more effective for vocabulary acquisition. These studies highlight TBLT's effectiveness in enhancing language proficiency across various skills and contexts. The method's adaptability to learners' needs, its emphasis on real-world application, and its focus on experiential learning make it a powerful approach in language education.

Adams and Newton (2009) conducted a comprehensive review of research on implementing Task-Based Language Teaching (TBLT) in various Asian contexts, including Malaysia, China, Japan, and South Korea. Their findings indicate that adopting TBLT in these countries encounters several challenges. These challenges stem from factors such as large class sizes, resistance from teachers to adopt new teaching methods, the influence of high-stakes national examinations that focus on rote learning, students' preference for traditional methods prioritizing accuracy over fluency, and their reluctance to engage in English speaking activities in the classroom. Ellis (2003) further adds a cultural dimension to this discussion by stating that "task-based teaching is an Anglo-American creation" (p. 331) and may conflict with other cultural contexts (p. 332). This suggests that the effectiveness of TBLT might be influenced by cultural factors, necessitating adaptations to fit different educational and cultural settings.

2.6 Task-based Approach to Teaching Listening Skills

To this end, two approaches are dominant: Bottom-Up Approach: As described by Vandergrift and Goh (2009) and Morley (1991), this approach starts with the perception of sounds and words and culminates in speech comprehension. It involves a gradual process where listeners decode sounds into words, understand grammatical relationships and lexical meanings, and finally construct the overall meaning. Richards (2006) notes a slow progression in bottom-up processing from language to meaning. Top-Down Approach: This approach, highlighted by Vandergrift and Goh (2009), focuses on meta-cognitive awareness. It encourages learners to actively control their comprehension process and engage deeply with the nature of listening. The goal is to enhance meta-cognitive knowledge about listening, encompassing personal, task, and strategy knowledge. In top-down processing, comprehension is driven by internal sources such as prior knowledge and global expectations. This includes using prior information to predict text content, understanding the situation and topic, and setting expectations about language and the world. Richards (2006) observes that the movement is from meaning to language in top-down processing.

Both approaches offer distinct yet complementary strategies for teaching listening skills. The bottom-up approach emphasizes language's linguistic and structural aspects, while the top-down approach leverages the listener's existing knowledge and expectations. Effective listening instruction often involves a blend of both methods, catering to students' diverse needs and learning styles. Ellis (2003) defines tasks in language learning as activities that can engage

learners in both productive and receptive skills, encompassing oral and written modalities. Listening tasks, in particular, hold significant value for researchers and teachers for several reasons:

1. **Assessment of Linguistic Knowledge Processing:** Listening tasks serve as a tool to measure learners' ability to process linguistic knowledge. Success in these tasks indicates learners' engagement and achievement in the language learning process.
2. **Promotion of Targeted Feature Acquisition:** These tasks can enrich learners' input, aiding in acquiring specific language features.

[Kuo \(2010\)](#) investigated the effect of partial dictation in an English-teaching radio program on Taiwanese intermediate-level English learners' listening comprehension. The study focused on addressing word recognition and segmentation issues in connected speech. The experimental group, which filled out texts with deleted words, showed significant improvement in word recognition compared to the control group. [Ghorbani \(2011\)](#) examined the impact of phonetic instruction on Iranian students' listening abilities. The experimental group received additional training in phonetic symbols, phonemic transcription, and standard listening activities. Results indicated that this group outperformed the control group, which did not receive phonetic instruction.

[Gallego, Palacio, and Tasama \(2009\)](#) conducted a study on the effect of TBLT on the listening comprehension of university students in Colombia. The treatment included the use of images alongside tasks to enhance comprehension. Findings showed improved listening comprehension and a positive attitude towards using images in tasks. The study also noted increased learner involvement and frequent cognitive and memory strategies use. [Luchini and Arguello \(2009\)](#) investigated the barriers to listening comprehension through student questionnaires. They identified a need for more skills in contextual prediction and understanding oral discourse as critical challenges. The treatment focused on these barriers, using various tasks to improve listening skills. Post-treatment questionnaires revealed enhanced students' listening skills and a positive response to task-based activities in listening classes.

These studies collectively highlight the effectiveness of different listening tasks in enhancing comprehension skills. They demonstrate how targeted activities can significantly improve learners' listening abilities, whether focusing on linguistic features, phonetic training, or supplementary materials like images. Additionally, addressing specific barriers to comprehension through tailored tasks can lead to marked improvements in students' listening proficiency. While the literature review has shed light on various research findings related to task and exercise-based teaching, there still needs to be a more significant gap in understanding the specific impact of Task-Based Language Teaching (TBLT) on developing listening comprehension skills. More research is needed to explore the relationship between perceptual learning styles and enhancing listening skills through different exercises and tasks. To address this gap, the current study has been conceptualized and rationalized. Its primary aim is to explore the effects of exercise-based and task-based listening instruction. Furthermore, it seeks to examine how different learning style types may influence the development of listening skills. By focusing on these areas, this study intends to contribute valuable insights to the existing body of knowledge and provide a clearer understanding of how different instructional approaches and learning styles can effectively foster listening comprehension in language learners.

3. Methodology

The purpose of this study was twofold: to explore the influence of task-based and exercise-based instructions on the listening comprehension ability of Iranian EFL learners and to investigate the relationship between perceptual learning styles and listening comprehension ability. To do so, different steps were taken.

3.1 Participants

The participants of this study were 55 conveniently selected Iranian female intermediate EFL learners studying English in a private language institute in the form of two Experimental groups (EG1) for task-based instruction and an Experimental group (EG2) for exercise-based instruction. Both groups were exposed to a ten-session treatment plus two more sessions, one at the beginning of instruction to administer the KET in order to make sure of the homogenous nature of the participants and to diagnose their listening ability before the treatment and another at the end of instruction to administer an achievement post-test to assess the effect of the instruction.

3.2 Instrumentation

In order to do this study, the following instruments were used:

1. The Key English Test (KET) for homogeneity purposes (pre-test): The reliability of KET's listening part was estimated to be 0.93 using the KR-21 method, 2. Listening part of the KET for diagnostic and achievement purposes (i.e., pre-test and post-test). In order to measure the learners' listening comprehension ability after the treatment, another version of KET (only the listening comprehension section) was administered at the end of the treatment. The reliability of the test was found to be 0.95 using the KR-21 method, 3. Reid's Perceptual Learning Style Questionnaire (PLSQ). In order to answer question number 2, Reid's Perceptual Learning Styles Questionnaire was used. This questionnaire is composed of 30 items. These items are designed to discover learners' most preferred perceptual learning styles. This is a Likert-Scale questionnaire in which each item is rated on a five-point scale from strongly agree to disagree strongly, and 4. Materials: The book *Tactics for Listening (Expanding): Intermediate Level* (Richards, 2004) was used for both groups (EG1 and EG2). Ten units of this book were selected for treatment, and the researcher taught both groups according to the syllabus prepared beforehand.

3.3 Procedure

Having randomly selected two experimental groups, the researchers administered a version of the KET before the treatment. The exam lasted for 1 hour. After homogenizing the data, five persons from the task group and six from the exam group were excluded. After this stage, two different kinds of activities were applied to teach listening to learners. One class received instruction in an exercise-based form, and another received instruction in a task-based form. Before the treatment, the researcher explained the procedure for each group separately, gave a syllabus that clarified and demonstrated what would happen during the treatment period, and pointed to different kinds of activities designed for learners for each session separately. The number of units was the same for the two groups. The experimentation lasted for ten sessions.

In the exercise-based class, learners were asked to perform the following activities:

1. Listening to text and then transcribing what they heard before;
2. Completing a cloze passage prepared by the researcher beforehand; the learners listened to an oral text and then completed the missing parts based on what they remembered from the text;
3. Giving a summary of the text;
4. Answering some factual questions about the text; and
5. Recall the times of events or recall some new words.

However, the task-based class was conducted differently. Willis and Willis (2007) listed various task types such as information gap activities, opinion gap activities, reasoning gap activities or problem-solving, comparing and contrasting, and matching tasks. In each session, the researcher selected one or two of these tasks based on the contents of each unit and practiced by the students in class. For example, in session 3, the students listened to unit 12, entitled Cities Improvement. Then, the learners discussed the problems of people living in big cities and the merits of living in big cities based on what they comprehended from the oral text. At the final stage, the learners were asked to talk about the solutions suggested by people in the oral text to improve the quality of living in big cities. In this kind of instruction, there was little attention to words or structures of text except in situations where students expressed some difficulties in understanding the text because, based on Nunan (2004), TBLT is meaning-focused and inserts authentic context in language classes to practice language similar to a real-life situation.

After a ten-session treatment, all the learners took part in the final achievement test. For this purpose, the listening section of another version of KET was administered. Like the previous pre-test listening test, 25 items were included, which assessed learners' listening comprehension ability after the treatment. Their scores were calculated out of 25. The design of this study resembles a one-group pretest-posttest version of pre-experimental design since the participants, regardless of being two groups instead of one group, received pretest, treatment, and posttest, which is schematically represented as: Pre-test → Treatment → Post-test: **T1** **X** **T2**

At first, the data collected from the pre-test (KET) was analyzed to ensure the participants' homogeneity regarding their English proficiency level and to determine their listening comprehension ability prior to treatment. Since the data was not checked regarding normality characteristics, parametric and non-parametric statistics were calculated whenever required to take the safe side. Independent samples t-test was used to compare EG post-test scores with TG's. The Independent-samples t-test aimed to determine whether there was any significant difference in the effect of

task-based and exercise-based instruction on participants’ listening comprehension ability in achievement post-test. To analyze the participants’ answers to the Perceptual Learning Styles Questionnaire, descriptive statistics and ANCOVA were run to determine the effect of treatment on participants’ perceptual learning styles.

4. Results and Discussion

4.1 Investigation of the First Research Question

In order to compare EG and TG scores in the post-test in line with the purpose of the first research question, an Independent- samples t-test was run. As displayed in Table 1, since $p > 0.05$, the data fails to reject the null hypothesis. Both groups performed roughly equal in the post-test, and there was statistically no significant difference between the groups.

Table 1. Independent- samples t-test of post-test scores (TG & EG groups)

	Levene’s Test for Equality of Variances		t-test for Equality of Means						
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
Equal variances assumed	15.8	.758	1.7	53	.093	1.526	.891	-.3	3.3
Equal variances not assumed			1.8	46.4	.078	1.526	.848	-.2	3.2

4.2 Investigation of the Second Research Question

To answer the second research question, “Does instruction type (i.e., exercise-based and task-based) have any significant effect on EFL learners’ listening ability about their perceptual learning style type?” ANCOVA was run. Table 2 illustrates TG styles in the pre-test and post-test. As shown, the most significant amount of mean is related to tactile style in the pre-test and tactile and individual styles in the post-test, and the least amount of mean is related to auditory and kinesthetic styles in the pre-test and kinesthetic style in the post-test.

Table 2. Descriptive statistics of TG group’s responses to the perceptual learning styles questionnaire

Style	Pre / Post	Mean	Std. Deviation	95% Confidence Interval of Mean	
				Lower	Upper
Visual	Pre	1.90	.607	1.67	2.13
	Post	2.00	.695	1.74	2.26
Tactile	Pre	2.37	.718	2.10	2.63
	Post	2.43	1.040	2.04	2.82
Auditory	Pre	1.87	.571	1.65	2.08
	Post	2.10	.803	1.80	2.40
Kinesthetic	Pre	1.87	.681	1.61	2.12
	Post	1.97	.615	1.74	2.20
Group	Pre	2.13	.937	1.78	2.48
	Post	2.40	.932	2.05	2.75
Individual	Pre	2.27	.868	1.94	2.59
	Post	2.43	.679	2.18	2.69

Table 3 illustrates EG styles in the pre-test and post-test. As shown, the most significant mean is related to individual style in the pre-test and post-test questionnaire, and the least amount of mean is related to auditory in the pre-test and auditory and group styles in the post-test questionnaire.

Table 3. Descriptive statistics of EG group's responses to the perceptual learning styles questionnaire

Style	Pre / Post	Mean	Std. Deviation	95% Confidence Interval of Mean	
				Lower	Upper
Visual	Pre	2.12	.666	1.85	2.39
	Post	2.00	.707	1.71	2.29
Tactile	Pre	2.20	.957	1.80	2.60
	Post	2.32	.945	1.93	2.71
Auditory	Pre	1.76	.663	1.49	2.03
	Post	1.80	.577	1.56	2.04
Kinesthetic	Pre	1.80	.577	1.56	2.04
	Post	1.92	.997	1.51	2.33
Group	Pre	1.92	.702	1.63	2.21
	Post	1.84	.898	1.47	2.21
Individual	Pre	3.04	.978	2.64	3.44
	Post	2.88	.971	2.48	3.28

4.3 Analysis of Covariance (ANCOVA)

Inferentially, the effects of the instruction methods (i.e., Task-based and Exercise-based) on the dependent variable (i.e., listening ability) were investigated about the learning style types separately. To do so, ANCOVA was run concerning each set of measures. Table 4 shows the relationship between an independent and dependent variable concerning visual style. The relationship between listening ability and method type is not statistically significant since in all sources, except for the respective instruction effect measured through pretest and posttest (F value=17.33), the corresponding critical values are smaller than respective critical values at the .05 probability level. Then, no statistically meaningful variance is revealed, regardless of the effectiveness of either treatment being a natural phenomenon.

Table 4. Listening and visual style

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	177.971 ^a	4	44.493	5.370	.001
Intercept	1712.070	1	1712.070	206.622	.000
Visual	1.498	1	1.498	.181	.672
Method	29.507	1	29.507	3.561	.062
PrePost	143.624	1	143.624	17.333	.000
Method * PrePost	5.334	1	5.334	.644	.424
Error	870.029	105	8.286		
Total	19638.000	110			
Corrected Total	1048.000	109			

a. R Squared = .170 (Adjusted R Squared = .138)

Table 5 shows the relationship between an independent and dependent variable concerning tactile style. The relationship between listening ability and method type is not statistically significant since in all sources, except for the respective instruction effect measured through pretest and posttest (F value=17.25), the corresponding critical values are smaller than respective critical values at the .05 probability level. Then, no statistically meaningful variance is revealed, regardless of the effectiveness of either treatment being a natural phenomenon.

Table 5. Listening and tactile style

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	176.516 ^a	4	44.129	5.317	.001
Intercept	2464.007	1	2464.007	296.874	.000
Tactile	.043	1	.043	.005	.943
Method	30.478	1	30.478	3.672	.058
PrePost	143.220	1	143.220	17.256	.000
Method * PrePost	5.839	1	5.839	.703	.404
Error	871.484	105	8.300		
Total	19638.000	110			
Corrected Total	1048.000	109			

a. R Squared = .168 (Adjusted R Squared = .137)

Table 6 shows the relationship between an independent and dependent variable concerning auditory style. The relationship between listening ability and method type is not statistically significant since in all sources, except for the respective instruction effect measured through pretest and posttest (F value=17.61), the corresponding critical values are smaller than respective critical values at the .05 probability level. Then, no statistically meaningful variance is revealed, regardless of the effectiveness of either treatment being a natural phenomenon.

Table 6. Listening and auditory style

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	178.484 ^a	4	44.621	5.388	.001
Intercept	1886.311	1	1886.311	227.785	.000
Auditory	2.011	1	2.011	.243	.623
Method	32.546	1	32.546	3.930	.050
PrePost	145.839	1	145.839	17.611	.000
Method * PrePost	5.330	1	5.330	.644	.424
Error	869.516	105	8.281		
Total	19638.000	110			
Corrected Total	1048.000	109			

a. R Squared = .170 (Adjusted R Squared = .139)

Table 7 shows the relationship between an independent and dependent variable concerning group style. The relationship between listening ability and method type is not statistically significant since in all sources, except for the respective instruction effect measured through pretest and posttest (F value=19.61), the corresponding critical values are smaller than respective critical values at the .05 probability level. Then, no statistically meaningful variance is revealed, regardless of the effectiveness of either treatment being a natural phenomenon.

Table 7. Listening and group style

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	229.338 ^a	4	57.335	7.354	.000
Intercept	2100.601	1	2100.601	269.419	.000
Group	52.865	1	52.865	6.780	.011
Method	49.048	1	49.048	6.291	.014
PrePost	152.960	1	152.960	19.618	.000
Method * PrePost	2.835	1	2.835	.364	.548
Error	818.662	105	7.797		
Total	19638.000	110			
Corrected Total	1048.000	109			

a. R Squared = .219 (Adjusted R Squared = .1)89

Table 8 shows the relationship between an independent and dependent variable concerning kinesthetic style. The relationship between listening ability and method type is not statistically significant since in all sources, except for the respective instruction effect measured through pretest and posttest (F value=18.03), the corresponding critical values are smaller than respective critical values at the .05 probability level. Then, no statistically meaningful variance is revealed, regardless of the effectiveness of either treatment being a natural phenomenon.

Table 8. Listening and kinesthetic style

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	184.713 ^a	4	46.178	5.617	.000
Intercept	2094.568	1	2094.568	254.759	.000
Kinesthetic	8.240	1	8.240	1.002	.319
Method	32.057	1	32.057	3.899	.051
PrePost	148.306	1	148.306	18.038	.000
Method * PrePost	5.952	1	5.952	.724	.397
Error	863.287	105	8.222		
Total	19638.000	110			
Corrected Total	1048.000	109			

a. R Squared = .176 (Adjusted R Squared = .145)

Table 9 shows the relationship between independent and dependent variables about the individual. The relationship between listening ability and method type is not statistically significant since in all sources, except for the respective instruction effect measured through pretest and posttest (F value=18.00), the corresponding critical values are smaller than respective critical values at the .05 probability level. Then, no statistically meaningful variance is revealed, regardless of the effectiveness of either treatment being a natural phenomenon.

Table 9. Listening and individual style

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	210.736 ^a	4	52.684	6.607	.000
Intercept	2265.783	1	2265.783	284.148	.000
Individual	34.263	1	34.263	4.297	.041
Method	51.684	1	51.684	6.482	.012
PrePost	143.583	1	143.583	18.006	.000
Method * PrePost	8.772	1	8.772	1.100	.297
Error	837.264	105	7.974		
Total	19638.000	110			
Corrected Total	1048.000	109			

a. R Squared = .201 (Adjusted R Squared = .171)

Therefore, contrary to the effectiveness of each treatment measured based on respective tests in developing the participants' listening ability, the data failed to reject the second null hypothesis since in all measures, $p > .05$. This indicates that the participants' listening ability did not significantly improve in light of the instruction type and various subcategories of the perceptual learning styles.

5. Discussion

As the data analyses showed, types of listening activities positively influenced EFL learners' listening comprehension abilities. These findings align with Gallego, Palacio, and Tasama's (2009) study that found task-based instruction effective in the listening comprehension performance of seven university-level students in Colombia. The present study's findings also agree with Kuo's (2010) study, which revealed that partial dictation of an English teaching radio program enhanced learners' listening comprehension ability. Nevertheless, the findings of this research study contrast with Ellis's (2003) and Careless's (2007) opinions about TBLT in a foreign language context. They believed that task-based instruction is difficult to execute by non-native speaking teachers because of the teacher's insufficient second language proficiency and cultural constraints. Adams and Newton's (2009) findings reveal that using TBLT in an Asian context faces challenges and problems because of teachers' and students' willingness toward the traditional approach.

In order to find which type of instruction (exercise or task-based) was more effective in developing learners' listening ability, an Independent-samples t-test was run to compare EG and TG scores in the post-test. As displayed in Table 4.1, $P = .093 > .05$, since P.value was more than 0.05, it was concluded that both groups performed equally well in the post-test, and there was statistically no significant difference between the two groups. Both listening activities worked efficiently to enhance learners' listening comprehension abilities. So, the results confirmed the first hypothesis that there is no difference between the effect of exercise-based instruction and task-based instruction. These findings align with Moumene's (2010) findings, as he used grammar tasks that integrated form-focused and task-based instruction for teaching grammar. His study revealed that grammar tasks caused significant differences in learners' grammatical

knowledge compared to traditional grammar teaching. Furthermore, the findings support Fuente's (2006) findings about the positive effect of task-based instruction with an explicit focus on forms on vocabulary learning development instead of task-based teaching without a focus on forms. The result also confirmed Carless's suggestion about an alternative approach, which he called the "situated task-based approach" in the Asian context. This approach mixed TBLT principles with PPP approach principles. He believed that form-focused and meaning-focused activities should be inserted into the classroom syllabus to satisfy learners' linguistic and communicative needs.

Some other studies comparing the effects of task-based and traditional form-focused instructions on language skill development produced contrasting results. Task-based instruction caused significant improvement in language skills in comparison to traditional approaches. Hayati and Jalilifar's (2010) findings revealed that TBLT improved students' micro-reading skills, such as skimming, scanning, and guessing, compared to student's performance in a reading class conducted just by translating activities. Murad's (2009) finding gave dominant importance to TBLT over traditional methods to help learners improve their speaking skills. Dickinson's (2010) research result also confirmed the advantages of TBLT on PPP approach in Japan.

Concerning the second research question, the findings are in direct contrast to Gilbert and Swanier's findings (2008) that learners' learning styles fluctuated from one lesson to another because learners' styles did not change due to the effect of treatment. These results confirmed Mehrpour's (n.d.) findings, revealing no significant differences between students with different major learning styles and their listening comprehension scores. The present study's findings also agree with Hsu's (2007) study, which revealed that students' learning styles had a low relationship with school English achievements.

Conclusion

This research study examined task-based and exercise-based instructions for their effects on Iranian EFL learners' listening comprehension abilities. The general finding of this study indicates that both types of instruction positively affected learners' listening skill improvements, and both worked efficiently and well in enhancing listening comprehension abilities. These findings revealed no significant difference between the effects of task-based and exercise-based instructions on learners' listening comprehension abilities. TBLT is a new method to practice listening comprehension in an Iranian context. Most Iranian learners are used to primarily form-focused instruction in formal language learning contexts, more extended instruction periods, a significant number of participants, and various TB listening materials and activities are required to be applied to investigate if TBLT can cause different results compared to exercise-based instruction.

On the other hand, it can be claimed that TBLT is not problematic in contrast to Adams and Newton's (2009) findings. However, since it brings about no significant difference over exercise-based instruction, it can be concluded that based on Carless's (2007) suggestion, an alternative task-based approach, which he called the "situated task-based approach" can be applied to merge teaching formal aspects of language with teaching meaningful, communicative aspects of language. Moreover, this study investigated the EFL learners' listening ability in light of various instruction procedures and the possible role perceptual learning styles can play. The data revealed statistically non-significant differences, meaning neither of the instructions is superior to the other.

Although both instructions provided efficient and essential activities in practicing listening in the EFL context, the findings of a single study like this cannot be easily generalized. Based on the findings of this study, listening activities characterized by various tasks and exercises can give EFL learners a lot of enthusiasm and motivation. On the other hand, most language teachers are used to teaching based on form-focused methods. For them, it is necessary to develop training programs to make them experienced enough in teaching based on new methods such as TBLT and using multiple exercises to develop their students' language proficiency.

In developing textbooks, the neglected role of perceptual learning styles in language learning should be considered, including activities requiring implementing different learning styles. This can have twofold advantages: it can satisfy all learners' desires, personal factors, and strategies and influence how they tackle the learning process. As a research direction, it is still determined if the practiced interventions could entail similar results regarding the three other intact skills. The effect of task or exercise difficulty on EFL learners' listening comprehension abilities is also intact and worthy of attention. Moreover, exploring the EFL learners' strategy use while doing listening tasks and exercises is worthwhile. Last but not least, replication of this study in a slightly more extended period with larger samples is deemed necessary.

References

- Adams, R., & Newton, J. (2009). TBLT in Asia: Constraints and opportunities. *Asian Journal of English Language Teaching*, 19, 1–17. <file:///C:/Users/SMA/Downloads/Adams%20and%20Newton%202009.pdf>
- Awad, A., & Naqeeb, H. (2011). *Learning styles as perceived by learners of English as a Foreign language (ELC. No.2)*. Arab American University Jenin- Palestine, the English Language Center.
- Carless, D. (2007). The suitability of task-based approach for secondary schools: Perspectives from Hong Kong. *System*, 35(4), 595–608. <https://doi.org/10.1016/j.system.2007.09.003>
- Chastain, K. (1988). *Developing second language skills: Theory and practice* (pp. 190–213). Florida: Harcourt Brace Jovanovich Publishers.
- Cracium, D., & Isvoran, D. (2009). Teaching molecular biology using computational tools and taking into account the learning styles of students. *Romanian Biotechnological Letters*, 14(40), 4567–4574. https://www.researchgate.net/publication/229004234_Teaching_Molecular_Biology_using_computational_tools_and_tacking_into_account_the_learning_styles_of_students
- Dickinson, P. (2010). *Implementing task-based language teaching in a Japanese EFL context*. Unpublished MA dissertation, University of Birmingham.
- Ehrman, M. E., Leaver, B. L., & Oxford, R. L. (2003). A brief overview of individual differences in second language learning. *System*, 31(3), 313–330. [https://doi.org/10.1016/S0346-251X\(03\)00045-9](https://doi.org/10.1016/S0346-251X(03)00045-9)
- Ellis, R. (2003). *Task-based language learning and teaching*. Oxford: Oxford University Press.
- Felder, R., & Brent, R. (2005). Understanding student differences. *Journal of Engineering Education*, 94(1), 57–72. [doi:10.1002/j.2168-9830.2005.tb00829.x](https://doi.org/10.1002/j.2168-9830.2005.tb00829.x)
- Felder, R. M. (1996). Matters of style. *ASEE Prism*, 6(4), 18–23. https://www.researchgate.net/publication/228843235_Matters_of_Style
- Fuente, M. J., de la. (2006). Classroom L2 vocabulary acquisition: Investigating the role of pedagogical tasks and form-focused instruction. *Language Teaching Research*, 10(3), 163–295. [doi:10.1191/1362168806lr196oa](https://doi.org/10.1191/1362168806lr196oa)
- Gallego, A., Palacio, S., & Tasama, H. (2009). *The impact of the incorporation of images on the design and implementation of listening comprehension tasks among EFL learners in a Colombian higher language education institute*. <https://hdl.handle.net/11059/1527>
- Ghorbani, M. R. (2011). The impact of phonetic instruction on Iranian students' listening ability enhancement. *Asian EFL Journal*, 52. <http://www.asian-efl-journal.com/PTA/May-2011-Ghorbani.pdf>
- Gilbert, J., & Swanier, C. H. (2008). Learning styles: How do they fluctuate? *Institute for Learning Styles Journal*, 1, 29–40. <https://www.auburn.edu/academic/cla/ilrj/Journal%20Volumes/Fall%202008%20Volume%201%20PDFs/Learning%20Styles%20How%20do%20They%20Fluctuate.pdf>
- Grasha, A. (2002). *Teaching with styles: A practical guide to enhancing learning by understanding teaching and learning styles*. United States of America: Alliance Publishers.
- Hayati, M., & Jalilifar, A. (2010). Task-based teaching of micro-skills in an EAP situation. *Taiwan International ESP Journal*, 2(2), 44–66. https://www.researchgate.net/publication/228841938_Task-based_Teaching_of_micro-skills_in_an_EAP_Situation
- Hill, D., & Tomlinson, B. (2003). In B. Tomlinson (Ed.), *Introduction: Are materials developing?* Britain: Cromwell Press.
- Hsu, Y. (2007). *Elementary school EFL students' learning style preferences and strategy use and their relationship with the students' English learning achievement*. Unpublished MA thesis, Providence University.

- Humanez, L., & Arias, N. (2009). Enhancing oral interaction in English as a foreign language through task-based learning activities. *Latin American Journal of Content & Language Integrated Learning*, 2(1), 1–9. doi:10.5294/lacil.2009.2.2.10
- Khomeijani Farahani, A. K., & Khaghani Nejad, M. S. (2009). The study of task-based approach: The effect of task-based techniques, gender, and different level of language proficiency on speaking development. *Pazhuhesh-e Zabanhaye Khareji*, 49, 23–41. https://jor.ut.ac.ir/article_27672_6892f9c6f8197a5a6a320785a68c5d04.pdf
- Kuo, Y. (2010). Using partial dictation of an English teaching radio program to enhance EFL learners' listening comprehension. *Asian EFL Journal*, 47, 1–26. <http://asian-efl-journal.com/PTA/October-2010-Kuo.pdf>
- Luchini, P., & Arguello, M. (2009). Listening skill teaching: Second pedagogical considerations. *Iranian Journal of Language Studies (IJLS)*, 3, 317–344.
- Maley, A. (2003). Creative approach to writing materials. In B. Tomlinson (Ed.), *Introduction: Are materials developing?* Britain: Cromwell Press.
- Mauney, L. M., & Walker, B. N. (2007). Individual differences and the field of auditory display: Past research, a present study, and an agenda for the future proceeding. *The International Conference on Auditory Display*, Montreal, Canada.
- McDonough, K., & Chaikitmongkol, W. (2007). Teachers' and learners' reactions to a task-based EFL course in Thailand. *TESOL Quarterly*, 41(1), 107–132. <https://doi.org/10.1002/j.1545-7249.2007.tb00042.x>
- Morley, J. (1991). Listening comprehension in second/foreign language instruction. In M. Celce-Murcia (Ed.), *Teaching English as a second or foreign language*. Boston: Heinle & Heinle Publishers.
- Moumen, A. (2010). Grammar tasks and the learning of English as a foreign language. *EL-Tawassol*, 16(1), 73–102. <https://www.asjp.cerist.dz/en/article/48883>
- Murad, T. (2009). *The effect of task-based language teaching on developing speaking skills among the Palestinian secondary EFL students and their attitudes toward English*. Unpublished MA dissertation, Yarmouk University.
- Nunan, D. (2004). *Task-based language teaching*. Cambridge: Cambridge University Press.
- Nunan, D. (2005). *The evolution of technology and the value of online English language learning*. Global English Corporation.
- Oxford, R. L. (2003). Language learning styles and strategies: Concepts and relationships. *IRAL*, 41(4), 271–278. doi:10.1515/iral.2003.012
- Pashler, H., McDaniel, M., Rohrer, D., & Bjork, R. (2008). Learning styles: Concepts and evidence. *Psychological Science in the Public Interest*, 9(3). <https://doi.org/10.1111/j.1539-6053.2009.01038.x>
- Reid, J. M. (1987). The learning style preferences of ESL students. *TESOL Quarterly*, 21(1). 87–111. <https://doi.org/10.2307/3586356>
- Reid, J. M. (1995). *Learning styles in the ESL/EFL classroom*. New York: Heinle & Heinle Publishers.
- Riazi, A., & Mansoorian, M. A. (2008). Learning style preferences among Iranian male and female EFL students. *Iranian EFL Journal*, 2, 88–100.
- Richards, J. C. (2004). *Tactics for listening (Expanding): Intermediate level*. Oxford: Oxford University Press.
- Richards, J. C. (2006). *Communicative language teaching today*. Cambridge: Cambridge University Press.
- Rusa, N. (2007). The influence of task-based learning on EFL classrooms. *Asian EFL Journal*, 18, 1–23.
- Sain, N. B. (2007). *Upper secondary students' perception towards kinesthetic learning activities conducted in an English classroom: An insight*. Unpublished thesis for M.A. degree, University of Malaysia.

- Sanchez, A. (2004). The task-based approach in language teaching. *International Journal of English Studies*, 4(1), 39-71. doi:10.6018/ijes.4.1.48051
- Tabanlıoğlu, S. (2003). *The relationship between learning styles and language learning strategies of pre-intermediate EAP students*. Unpublished submitted thesis for M.A. degree, Middle East Technical University.
- Tubic, T., & Dordic, V. (2010). Improving motor learning with learning styles. *TEME*, 34(4), 1231-1245. https://www.researchgate.net/publication/321109988_IMPROVING_MOTOR_LEARNING_WITH_LEARNING_STYLES
- Vandergrift, L., & Goh, H. (2009). In M. Long & C. Doughty (Eds.), *Handbook of language teaching*. United Kingdom: Wiley-Blackwell Publication.
- Willis, D., & Willis, J. (2007). Task-based language learning. In R. Carter & D. Nunan (Eds.), *Teaching English to speakers of other languages* (pp. 173-179). Cambridge: Cambridge University Press.
- Wu, S. H., Witten, I., Edwards, A., Nichols, D., & Aquino, R. (2006). A digital library of language learning exercises. *IJET*, 2(1). https://www.researchgate.net/publication/33051510_A_digital_library_of_language_learning_exercises