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Research Article

Explaining listening comprehension among Turkish EFL learners: The contribution of general language proficiency, vocabulary knowledge and metacognitive awareness

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Abstract

The present study investigates the impact of individual differences in language knowledge, namely general L2 proficiency and L2 vocabulary knowledge, and metacognitive awareness of strategies used in the listening process on L2 listening comprehension. It seeks an answer to what proportion of the variance in listening comprehension is explained by general L2 proficiency, L2 vocabulary knowledge and metacognition among intermediate-level adult Turkish EFL learners. A total of 99 intermediate-level adult Turkish EFL learners, studying at Anadolu University School of Foreign Languages (AUSFL) participated in the present study. Data were gathered using Oxford Quick Placement test (OQPT), the New Vocabulary Levels Test (NVLT) (McLean & Kramer, 2015), a researcher designed Listening Comprehension Test (LCT) and Metacognitive Awareness Listening Questionnaire (MALQ) (Vandergrift et al., 2006). Results reveal that vocabulary knowledge and some sub-components of the MALQ (Person Knowledge, Problem Solving and Directed Attention) play a significant role in L2 listening comprehension. The results are interpreted and discussed within the light of the previous research, and a number of pedagogical implications are suggested accordingly.

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Note(s)
[1]This study was presented at ACLL (Asian Conference on Language Learning) in Japan in 2018.
[2]This paper is part of a PhD study so it is ensured that it meets the principles of research ethics.

Author(s)' statements on ethics and conflict of interest
Ethics statement: I hereby declare that research/publication ethics and citing principles have been considered in all the stages of the study. I take full responsibility for the content of the paper in case of dispute.
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Introduction

Listening is a fundamental skill for both first (L1) and second/foreign language (L2) learners (Becker, 2016; Buck, 2001; Field, 2008; Rost, 2011). Its main purpose is to be able to comprehend the intended message of the speaker (Rost, 2011). Proficient listening comprehension enables learners to understand the spoken discourse of the target language, which in turn aids the development of other language skills (Dunkel, 1991; Rost, 2002). Along with reading, listening plays a vital role in foreign language learning. In other words, the more learners read and listen, the more they are exposed to language, which is what leads to language acquisition (Krashen, 1985; Peterson, 2001). Listening is even of stronger significance to language development than reading because it is the most frequently used language skill (Ferris, 1998; Morley, 1999; Vogely, 1998). Wolvin and Coakley (1988) showed that listening consumes more of daily communication time than other forms of verbal communication, both in and out of the classroom. Vandergrift (1999) also showed that in daily life, people spend 40-50% of their communication on listening. Through listening, language learners internalize linguistic information which they use to produce language (Brown, 2001). Similarly, Rost (2002) maintains that listening is considered one of "the primary means of L2 acquisition for most people" (p. 103). It is regarded as a key communication skill within and outside of school (Behrens & Eriksson, 2009; as cited in Wolfgramm et al., 2016). Tresch (2009) notes that classroom observations reveal that pupils spend a large part of class time listening (as cited in Wolfgramm et al., 2016). It is therefore not surprising that the skill of listening is likely to be a prerequisite for successful learning and knowledge acquisition (Hagen & Huber, 2010; as cited in Wolfgramm et al., 2016). In addition, the skill of listening enables engagement with a wide range of online spoken target language samples such as those from video sharing websites and digital audio/video on demand systems (Robin, 2007). Therefore, the importance of listening ability is increasing in the world, and technological advances in global communication have made listening by non-natives even more vital (Mendelsohn, 1998). Apart from being a fundamental skill, listening comprehension is a complicated process because it is based on both linguistic knowledge, such as vocabulary or grammar, and non-linguistic information, such as knowledge of the world (Buck, 2001; Vandergrift & Baker, 2015). At the same time, listening has been qualified as a highly complex skill because of its real-time (Buck, 2001) and implicit nature (Hulstijn, 2007).

However, despite the fundamental role of listening comprehension in L2 learning and abundance of listening materials available, it remains to be the least well understood and researched language skill compared to the other language skills, namely reading, writing and speaking (Field, 2008; Macaro et al., 2007; Vandergrift, 2006; Vandergrift & Goh, 2012). Regarding this, Nunan (1999) states that "listening is a Cinderella skill in second language learning" (p.199). He also notes that it is believed that knowing a language means speaking and writing in that language. Chastain (1988) attributes this belief to the fact that students and teachers do not recognize listening as a prerequisite to a developed speaking ability. Therefore, listening research is necessary for the development of a more complete understanding of learners' oral communicative abilities in a foreign language (Becker & Sturm, 2017). Largely lacking are empirical studies analyzing the predictors of listening comprehension. (Wolfgramm et al., 2016). Despite the abundance of literature on listening comprehension among non-native

speakers, explaining individual differences in listener characteristics has received less attention by comparison with studies which investigate individual differences in reading comprehension (Andringa et al., 2012). It is crucially important to gain better insights into the listener characteristics which determine L2 learners' success in understanding speech because "listening is a source of frustration to learners and an area in which it seems difficult to make progress" (Graham, 2011, p. 113). Comprehending spoken English is challenging for foreign language learners because their first language dominates most of their communication, they try to learn how to listen largely through formal instruction in the classroom, and are not exposed to English outside the context of formal study (Chang, 2007). Even when taking a classroom English listening text, learners are confronted with a wide range of difficulties such as limited vocabulary and syntactic knowledge, lack of background knowledge, fast speech rates, unfamiliar accents, unawareness of listening strategies, to name but a few (Chang, 2007). It is also worth noting that listening research has depended to a great extent on findings borrowed from reading research, probably because of the complexity in testing the aural modality (Bonk, 2001). Both reading and listening require receptive language processing, namely decoding and interpretation; employ linguistic knowledge, such as vocabulary and syntax, and world knowledge, including topic, text structure, schema and culture; entail top-down and bottom-up processing; necessitate cognitive processing that is flexible and adaptable to task demands, and are influenced by additional factors, such as metacognition and motivation (Vandergrift, 2006). However, there are a number of characteristics of listening that differentiate it from reading. For example, "listening takes place in real time and is ephemeral" (Vandergrift, 2006, p. 9). In addition, listeners must apply phonological knowledge to the comprehension process to segment the sound stream into meaningful units and process them quickly, which underscores the significance of working memory. Moreover, "listening is more context sensitive", which necessitates attention to prosodic features such as stress and intonation (Vandergrift, 2006, p. 9).

In sum, listening comprehension is an integral part of foreign language learning and an important foundation for success in other language skills, specifically the skill of speaking; however, little is known about specific variables that make significant contributions to the L2 listening. Given this clear gap in knowledge, the primary objective of the present study is to obtain empirical evidence for some of the listener characteristics that might contribute to listening and the extent to which these variables explain the variation in L2 listening comprehension. A more precise understanding of the learner characteristics involved in L2 listening comprehension is likely to help to explain some of the difficulties faced by L2 learners and, thereby, to inform listening instruction and potential remediation (Vandergrift & Baker, 2015). Additionally, identifying specific variables that make significant contributions to L2 listening can help teachers of English as a Foreign language (EFL) learners design and practice evidence-based curricula, and as a result, EFL learners can develop L2 listening skills more effectively (Oh & Lee, 2014). Therefore, the present study addresses the following research question:

> What proportion of the variance in listening comprehension is explained by general L2 proficiency, L2 vocabulary knowledge and metacognition among intermediate-level Turkish EFL learners?

Literature Review

Rubin (1994) lists the factors that contribute to L2 listening comprehension as text characteristics, interlocutor characteristics, task characteristics, listener characteristics and process characteristics although there are other categorizations by other scholars (e.g. Vandergrift & Baker, 2015). The focus of the present study is on individual differences in listener characteristics, which refer to general language proficiency, vocabulary knowledge, listening strategy use, metacognitive awareness, working memory and processing speed (Wang & Treffers-Daller, 2017). Of these individual differences in listener characteristics, the present study is specifically concerned with general language proficiency, vocabulary knowledge and metacognitive awareness. The rationale for this lies in the Model of Communicative Language Ability by Bachman and Palmer (1996). According to the Model of Communicative Language Ability, language ability refers to "the capacity that enables language users to create and interpret discourse" (p. 33). In other words, language ability is a combination of language knowledge, which refers to vocabulary, syntax and phonology, and strategic competence, which refers to higher-order metacognitive strategies. Prior to delving into the factors contributing to L2 listening comprehension, which are of primary significance for the present study, it is necessary to review the others.

With regard to the text characteristics, three temporal variables, namely speech rate, pause phenomena and hesitation, affect L2 listening comprehension in terms of acoustics (Griffiths, 1992). In addition to these temporal variables, level of perception, sandhi ("the phonological modification of grammatical forms which have been juxtaposed" (Henrichsen, 1984, p. 311) and L1/L2 differences also affect L2 listening comprehension as part of the acoustics of the text characteristics. Besides, morphological and syntactic modifications including restatements do influence text characteristics and thus L2 listening comprehension. Text type has also been noted as a factor affecting listening comprehension. Furthermore, studies have suggested that whether the text has visual support has to do with L2 listening comprehension as well. For example, Aldera (2015) investigated the efficacy of using visual multimedia technique in multimedia language settings to aid L2 listening comprehension among Arab learners of English, and found that the participants who had been given exercises via multimedia task scored significantly higher in the listening comprehension test than those who were asked to listen to the task aurally only. Similarly, Becker and Sturm (2017) found that integrating online audio-visual materials into the listening instruction of L2 French learners had a measurable impact on their listening comprehension development. In an eye-tracking study, Suvorov (2015) found that ESL learners considered content videos (videos with visual aids) more important and informative than context videos (videos with no visual aids). Regarding the interlocutor characteristics, sex bias and perceived speaker expertness have been reported to affect L2 learners' listening recall (Markham, 1988).

As for the task characteristics, task type has been found to affect L2 listening comprehension. Research reveals that L2 learners may perceive some tasks as relatively more/less difficult than some others, or their recall may vary in accordance with the task type. To exemplify, Brunfaut and Revesz (2015) found that passages with a larger number of contractions and passages which contained more of the most common multiword expressions in written general discourse (e.g., as well as, deal with, over the years) posed significantly less

difficulty, while passages including a larger number of multiword expressions rare in written academic discourse (e.g., sort of, think about, go off) were significantly more demanding for ESL learners.

Concerning the individual differences in listener characteristics, listening strategy use, working memory and processing speed are also crucially significant for L2 listening comprehension. To begin with listening strategy use, Kassem (2015) explored listening strategy use among a group of Egyptian EFL college sophomores, identifying the strategies used more often by the participants and the relationship between listening strategy use and listening comprehension. Results revealed that cognitive strategies were used more often by participants, followed by metacognitive and socio-affective strategies, and listening strategies correlated significantly with listening comprehension. Kazemi and Kiamarsi (2017) determined the listening strategies used by intermediate and advanced EFL learners and investigated the relationship between learners' overall language proficiency and their choice of strategy. As a result, it was found that the total number of strategies used by advanced learners was higher than the total number of strategies used by intermediate learners, and advanced learners employed a wide variety of metacognitive strategies, while the most favored listening strategies for learners in the intermediate group were cognitive, and then socio-affective strategies. In Yeldam (2015) study, Taiwanese EFL learners who were taught bottom-up, top-down and metacognitive listening strategies made significant progress in listening comprehension. Second, for the working memory, Vandergrift and Baker (2015) maintained that more general skills like auditory discrimination and working memory play a significant role in the development of more specific language skills leading to L2 listening comprehension. Brunfaut and Revesz (2015) investigated the relationship between L2 listening and a range of task and listener characteristics, and found that working memory, assessed using forward and backward digit span tasks, indicated a significant, positive relationship to listening comprehension. However, Andringa et al., (2012), in their study explaining individual differences in both native and non-native listening comprehension, found that working memory did not explain unique variance in listening comprehension in either group. Similarly, Wolfgramm et al., (2016) examined the role of concentration, vocabulary and self-concept in listening and reading comprehension, and reported that working memory did not prove to have a significant effect on listening comprehension, nor on reading comprehension. As for processing speed, lastly, Andringa et al. (2012) found that processing speed contributed to listening comprehension substantially for the native speakers, whereas for the non-native speakers there was a significant contribution of IQ. Oh and Lee (2014) found that sentence processing speed along with grammar significantly predicted bottom-up and top-down listening comprehension.

Lastly, process characteristics refer to the characteristics of internal operations or behaviors, and how listeners interpret input in terms of what they know, or identify what they do not know (Rubin, 1994). The processes that are examined in L2 listening are top-down and bottom-up processing. Top-down processes refer to learners' using their knowledge of the world, situations and roles of human interaction to focus on meaning, whereas bottom-up processes refer to learners' using their knowledge of words, syntax and grammar to work on form. Studies investigating the role of bottom-up and top-down processing in L2 listening

comprehension vary in their findings, and reveal that listening processing is complex and difficult to measure mostly because the measures are indirect (Rubin, 1994).

Regarding the role of listener characteristics in L2 listening comprehension, two studies are worth mentioning in detail. First, Brunfaut and Revesz (2015) investigated to what extent linguistic complexity of the listening task input and response, and speed and explicitness of the input, were associated with task difficulty. The study also explored the relationship between L2 listening and listeners' working memory and listening anxiety. Results revealed a significant correlation between L2 listening task difficulty and indicators of phonological, discourse, and lexical complexity and with referential cohesion. In addition, a negative correlation was found between L2 listening and listeners' working memory and listening anxiety, indicating that the less anxious the listeners and the higher their working memory capacity, the more proficient they are in L2 listening. Second, Vandergrift and Baker (2015) conducted an exploratory path analysis on learner variables, namely L1 listening ability, L1 vocabulary knowledge, L2 vocabulary knowledge, auditory discrimination ability, metacognitive awareness of listening and working memory capacity, in L2 listening comprehension. A correlation analysis revealed significant correlations among the variables in the current study, and the strongest and most consistent correlation was found between L2 listening comprehension and L2 vocabulary. Additionally, as a result of a path analysis, it was found that L1 vocabulary and metacognition have an indirect positive influence on L2 listening comprehension through L2 vocabulary.

L2 listening comprehension and general language proficiency

In a study exploring the respective contributions of L1 listening comprehension ability and L2 proficiency to L2 listening comprehension ability, Vandergrift (2006) concludes that L2 proficiency plays a crucial role on L2 listening ability. Another piece of evidence comes from Wang and Treffers-Daller (2017), who explored the contribution of general language proficiency, vocabulary size and metacognitive awareness to L2 listening comprehension among Chinese adult EFL learners. In this study, the researchers reported significant positive correlations between listening comprehension and general language proficiency. In addition, as a result of a series of regression analyses, it was found that both general language proficiency and vocabulary size make an independent contribution to listening comprehension, but that the vocabulary size explains more of the variance in the dependent variable than the overall proficiency. This means that general language proficiency is likely to be a fundamental component of L2 listening comprehension; however, it seems to play a less significant role than lexical knowledge.

L2 listening comprehension and vocabulary knowledge

Many studies show that L2 vocabulary knowledge is one of the most important correlates of listening comprehension in adult second language learners (Andringa et al., 2012; Bonk, 2000; Matthews & Cheng, 2015; Mecartty, 2000; Sağlam, 2014; Stæhr, 2009; Teng, 2016; Vandergrift & Baker, 2015; Wang, 2015; Wang & Treffers-Daller, 2017). In a study investigating the interaction between lexical knowledge and listening comprehension in a second language among Japanese speakers of English, Bonk (2000) found that acceptable comprehension levels were significantly associated with higher text-lexis familiarity. Andringa

et al. (2012), in their study attempting to explain individual differences in both native and non-native listening comprehension, found that knowledge, which was extracted from measures of vocabulary, grammatical accuracy, and segmentation accuracy, turned out to be the most important predictor of success in listening comprehension.

Some other studies exploring the multifaceted structure of listening through componential analyses found that L2 vocabulary knowledge contributes to L2 listening comprehension above and beyond some other variables such as grammar knowledge, general language proficiency, listening strategy use. Mecartty (2000), for example, aimed to examine the relationship between lexical and grammatical knowledge to reading and listening comprehension, and to combine both lexical knowledge and grammatical knowledge in one research design and to examine their relationship to reading comprehension and listening comprehension. In this study, lexical knowledge was operationalized through a word-association and a word-antonym task, while grammatical knowledge was operationalized through a sentence completion multiple-choice task and a grammaticality judgment task. Lexical knowledge was significantly related to both reading comprehension and listening comprehension, and explained a larger proportion of variance in reading comprehension than in listening comprehension. It was the only significant predictor of both reading and listening suggesting some similarities in both traits. However, in terms of the amount of variance explained by lexical knowledge, lexical knowledge source appeared to be more crucial for reading than it was for listening. In another study, Vandergrift and Baker (2015) reported that of a number of learner variables, including L1 listening ability, L1 vocabulary knowledge, L2 vocabulary knowledge, auditory discrimination ability, metacognitive awareness of listening, and working memory capacity, L2 vocabulary had the strongest and most consistent association with L2 listening comprehension. Wang and Treffers-Daller (2017) similarly noted that the variable which correlated most strongly with listening comprehension was vocabulary knowledge among general language proficiency, vocabulary knowledge and metacognitive awareness. In addition, it was found that both general language proficiency and vocabulary knowledge make an independent contribution to listening comprehension, but vocabulary knowledge explains more of the variance in listening comprehension than the overall proficiency. Sağlam (2014), in his study on the role of syntactic knowledge, vocabulary knowledge and listening strategy use on listening comprehension among Turkish EFL learners, concluded that both grammar and vocabulary knowledge have a role on listening comprehension; however, the role of vocabulary is slightly more than that of grammar, and the role of listening comprehension strategy use is very little.

Still some other studies looked into the relative contributions of two separate dimensions of vocabulary knowledge, namely depth and breadth, to L2 listening comprehension. Stæhr (2009), for example, investigated the extent to which vocabulary size and depth of vocabulary knowledge are associated with listening comprehension, and the extent to which depth of vocabulary knowledge, in addition to vocabulary size, contributes to successful listening comprehension. It was found that vocabulary size and depth of vocabulary knowledge are both significantly correlated with listening comprehension. However, vocabulary size alone accounted for a significant 49 % of the variance in listening comprehension, while depth of vocabulary knowledge added 2 % to the variance already

explained by vocabulary size. Although this change is statistically significant, it represents a very small increase, which suggests that depth of vocabulary knowledge adds very little to the variance already accounted for by vocabulary size. Teng (2016) also investigated the contribution of breadth and depth of vocabulary knowledge to academic listening comprehension among Chinese EFL learners, yet found contradictory findings to Stæhr (2009). In this study, breadth and depth of vocabulary knowledge were found to be equally and positively correlated to listening comprehension. However, depth of vocabulary knowledge explained 28 % of the variance in the listening comprehension success above and beyond vocabulary size. Similarly, Wang (2015) conduct an experimental study to test the respective effect of vocabulary breadth and depth on different parts of listening comprehension so as to provide an empirical support for vocabulary teaching in EFL listening class, and found that both vocabulary breadth and depth influenced listening scores significantly, but the overall effect of vocabulary depth was significantly greater than that of vocabulary breadth. In addition to depth and breadth, a third dimension, size, was investigated by Li and Zhang (2019) in terms of their association with L2 listening. Using a structural equation modeling technique, the researchers found that all three dimensions of vocabulary knowledge are significant predictors of L2 listening comprehension with the size of auditory vocabulary in the L2 having the strongest predictive power over L2 listening comprehension.

The role of L2 vocabulary knowledge in L2 listening comprehension has also been demonstrated in rather indirect ways. Matthews and Cheng (2015), to illustrate, investigated the relationship between recognition of high frequency words from speech and second language L2 listening comprehension among Chinese EFL learners. They used a measurement of word recognition form speech (WRS), which involves test takers listening to contextualized samples of spoken language in an effort to produce a target word present within the spoken input. The WRS test used in the study consisted of 23 target words from the one thousand-frequency range, 37 words from the two thousand-frequency range and 29 words from the three thousand-frequency range. It was found that word recognition from speech was strongly correlated with listening comprehension among Chinese EFL learners; the ability to recognize high frequency words from speech was found to be able to predict the variance in listening comprehension, and frequency levels in the WRS test were matched with listening comprehension proficiency, which is likely to guide EFL learners towards the levels of WRS associated with their desired category of listening comprehension competence.

Unlike the most of the previous research, Lange and Matthews (2020) attempted to explore the relationship between L2 listening comprehension and L2 vocabulary knowledge, as measured with an aural vocabulary test as well as a written receptive vocabulary test. They found that aural vocabulary knowledge is a more powerful predictor of L2 listening comprehension as compared to written receptive vocabulary knowledge and lexical segmentation. On the other hand, Li et al., (2020) reported that phraseological knowledge, the knowledge of formulaic sequences (Kremmel et al., 2017), explained some of the unique variance in L2 listening comprehension above and beyond aural vocabulary knowledge.

L2 listening comprehension and metacognition

Metacognition is among the most important factors contributing to L2 listening comprehension considering that "skilled listeners and readers integrate contextual knowledge and general knowledge about the world into their understanding of speech or writing" (Wang & Treffers-Daller, 2017: 142). Most of the studies investigating metacognitive listening awareness have benefitted from Vandergrift et al. (2006), who designed a listening questionnaire (Metacognitive Awareness Listening Questionnaire, MALQ) to assess L2 listeners' metacognitive awareness and perceived use of strategies while listening to oral texts. As a part of instrument development and validation in this study, the relationship between the listening behaviors reported in the MALQ and actual listening performance were correlated, and the positive moderate significant correlation confirmed the relationship between listening comprehension ability and metacognitive awareness of the processes underlying successful L2 listening. In addition, a regression analysis revealed that about 13 % of the variance in listening performance could be explained by metacognition. Additionally, Vandergrift and Tafaghodtari (2010) investigated the effects of a metacognitive, process-based approach to teaching L2 listening over a semester. In this mixed-design experimental study, results revealed that the experimental group receiving metacognitive instruction outperformed the control group on the final test of listening comprehension. In addition, the participants reported in the stimulated recalls that this process contributed to their strategy use. They also stated that they consider this approach valuable for improving attention and goal setting, and acknowledged that the listening tasks delivered through a metacognitive, process-based approach had a significant influence on their level of attention and concentration. Similarly, Li (2013) investigated non-English majors' metacognitive awareness in English listening and the relationship between metacognitive awareness and L2 listening comprehension. It was found that the participants with higher metacognitive awareness scored higher in the listening comprehension test. It was concluded that L2 learners with high metacognitive awareness can successfully regulate the process of L2 listening comprehension and become more autonomous in language learning, and thus they can finish the listening task more effectively. In a very recent study, Ramli et al. (2019) provided evidence for the significant positive contribution of metacognitive awareness to L2 listening comprehension and emphasized that metacognitive awareness helped students to find their appropriate strategies to process their listening comprehension. Also, the findings reported by Vandergrift and Baker (2015) and Stæhr (2009) point out that metacognition is indeed an important variable in explaining L2 listening comprehension although the percentage of explained variance in these is generally not very high.

Method

Setting and participants

A total of 99 Turkish EFL students from seven intact classes, who were studying at Anadolu University School of Foreign Languages (AUSFL), participated in the present study. All of the participants were at A Level when the present study was being conducted. Of the four proficiency levels at AUSFL, namely A, B, C, D; A is the highest proficiency level. English proficiency of the participants had been determined as a result of a prerequisite placement test and a proficiency exam conducted by AUSFL. The placement test consists of 30 vocabulary, 40

grammar and 30 reading comprehension multiple-choice questions. Students who obtain 60 and more in this placement test are required to sit the proficiency exam. The proficiency exam consists of three sessions, namely a multiple-choice test on listening, reading, vocabulary and grammar, a writing exam, and a speaking exam. The exams are prepared according to Global Scale of English (GSE) learning objectives. The GSE extends the Common European Framework of Reference for Languages (CEFR) to include more learning objectives (or Can Do statements) that support learning English at all levels of proficiency, across all skills and for different purposes. The GSE learning objectives describe what a learner should be able to do at every point on the Global Scale of English for reading, writing, speaking and listening.

The participants were between eighteen and twenty-one years old. They were all monolinguals of Turkish, and no participant included in the current study had an extended stay in an English-speaking country. It is worth noting that the participants seldom had contact with native speakers in authentic listening situations. These participants mainly practiced listening comprehension through listening to materials of English tests out of class.

Data collection methods and analysis

The participants' general language proficiency was assessed using Oxford Quick Placement Test (OQPT), which gives information about students' language ability in relation to CEFR, and thus is widely used in research (Wang & Treffers-Daller, 2017, p. 143). The OQPT, which is a written test, consists of 60 items. For the first five items, test takers are required to understand notices and decide where they can see these notices. For items six to 20 and items 41 to 50, test takers are required to choose the word or phrase which best fits the blanks embedded in short passages from the three or four given answer options. For items 21 to 40 and items 51 to 60, test takers are required to choose the word or phrase which best completes the sentences given with a blank. In other words, these parts are in the form of a cloze test and a multiple-choice test respectively. The OQPT is appropriate for the purposes of the present study because it consists of question types that the participants are familiar with, and provides item variety. It measures L2 learners' English vocabulary knowledge such as word meanings, collocations, synonyms and antonyms, and phrases, and grammar knowledge such as tense, passive voice and counterfactual knowledge. The maximum score students can obtain is 60. The time allocated for the OQPT is 30-45 minutes (Aydın, 2019, p. 51).

The participants' vocabulary size was assessed using The New Vocabulary Levels Test (NVLT) (McLean & Kramer, 2015). The NVLT, intended as a diagnostic and achievement instrument for pedagogical or research purposes, measures knowledge of English lexis from the first five one-thousand-word frequency levels of the BNC and the Academic Word List (AWL) (McLean & Kramer, 2015). It consists of five 24-item levels which measure knowledge of the most frequent 5.000-word families and a 30-item section which measures knowledge of the AWL. It is worth noting that the AWL was not used in the present study considering the purposes of the study and the characteristics of the sample. The time allocated for the NVLT is 30-45 minutes.

The NVLT utilizes the multiple-choice format. The test takers are required to select the word or phrase with the closest meaning to the target word, which is exemplified in a sentence, from four answer choices. A sample item is as follows:

1. time: They have a lot of **time.**
    a. money
    b. food
    c. hours
    d. friends

Metacognitive awareness was measured using Metacognitive Awareness Listening Questionnaire (MALQ) (Vandergrift et al., 2006). The MALQ consists of 21 items and five categories: planning and evaluation (five items), directed attention (four items), person knowledge (three items), problem solving (six items) and mental translation (three items). All items are randomized on the questionnaire. Respondents are required to respond using a six-point Likert scale ranging from "strongly disagree" to "strongly agree". However, a five-point Likert scale was used for the accomplishment of the present study. In addition, the MALQ was translated into Turkish employing back-translation method in order to enable the participants to comprehend the survey thoroughly. The researcher and an experienced English instructor who holds an MA degree in ELT carried out the translation process together.

The Listening Comprehension Test (LCT) was designed by the researcher. It consists of three listening texts: a conversation between a student and a resident assistant, a radio news report about the Florida hurricane and an academic lecture about an animal that was taught to communicate with humans. The texts take 2:55, 4:92 and 3:04 minutes respectively. The texts vary in length because they vary in text type as well. For each text, there are questions for the main ideas and the details. Item types include multiple-choice questions, True/False statements and ordering topics. Open-ended questions were not preferred because the participants are not familiar with open-ended questions in their school-based listening exams. In addition, practical and reliable scoring may not be ensured in open-ended questions properly. The participants listened to each text twice because there were two sections after each text asking separate questions.

The linguistic difficulty of the three texts was compared with the Flesch–Kincaid readability formula, which found the three stories had a reading ease of 89, 77.7, and 61.3, and a grade level of four, five, and nine. This shows that the conversation and news report texts are easy to read and fairly easy to read respectively, whereas the academic lecture text is standard (average), which lies in between fairly easy and fairly difficult. This variance across the listening texts in terms of readability seems normal considering the texts also vary in text type.

As for the validation process of the LCT, expert opinion was gathered from four experienced EFL instructors who were teaching English at the same institution and working in the testing office at the same time. They were first asked for feedback on the audio-scripts of the listening texts in terms of content, topic and background knowledge. Then, they were asked for an overall feedback on the LCT including the audio texts and the test items. Necessary amendments were made, and the LCT was piloted with a group of A-level students at AUSFL sharing similar features with the participants of the present study (N=34). The allocated time for the LCT is 30 minutes.

As a result of the pilot study, the test was scored dichotomously, the answers were computed and item analyses and test analyses were carried out to ensure the reliability of the test. Item facility indexes, item discrimination indexes, item variance and test variance were

calculated, and distractor efficiency analysis was conducted for the multiple-choice sections of the test. Consequently, two items were eliminated and minor changes were made on five items. Lastly, KR20 formula was calculated to find test reliability. It was found to be 0.77, which indicates that the LCT is a reliable test measuring listening comprehension.

The participants were first administered the OQPT (day 1) followed by the NVLT (day 2), the LCT and the MALQ (day 3). Each test was administered on a separate day so as to avoid test weariness. Only the LCT and the MALQ were administered one after another on the same day to enable the participants to better think of the metacognitive strategies they use in listening. The regular teachers of the five intact classes from which the participants of the present study were recruited administered the tests. The participants were informed about the purpose of the study, and they participated voluntarily.

As for the data analysis, first, item 15 (*I don't feel nervous when I listen to English)* in the MALQ was reverse-coded because it is the only negatively worded item in the scale. Then reliability of the MALQ was calculated. The results showed that Cronbach's alpha of the MALQ as a whole was 0.84. Subsequently, descriptive statistics, namely minimum, maximum and mean scores, and standard deviations, were calculated for each data collection instrument in the present study. Next, Pearson product moment correlations were computed to gain insights into the relationship between the dependent variable (listening comprehension) and the independent variables (general language proficiency, vocabulary knowledge and metacognition) in the present study. Finally, hierarchical multiple regression analyses were carried out to find the contribution of the independent variables to the dependent variable.

Findings

To begin with, it is worth noting that data coming from two participants was removed because they scored *0* and *60* (maximum score) in the OQPT, diminishing the sample size to 97.

As for the overall scores regarding the OQPT, following the guidelines of Oxford, it was found that 82 of the participants were at intermediate-level (those scoring between 25 and 36), whereas seven and eight participants were at pre-intermediate (those scoring between 11 and 24) and upper intermediate (those scoring between 37 and 48) levels respectively. These findings as well as the standard deviation in this test (*SD*=5.20) indicate that the participants of the present study do not differ a lot from each other in terms of their general English language proficiency. The participants who are either behind or ahead of the mainstream proficiency level (intermediate), on the other hand, point out that even though foreign language learners are placed at the same proficiency level as a result of an exam (placement and proficiency tests conducted by AUSFL), it is likely for them to either make far more progress than or lag behind their peers. As Table 1 below shows, the mean score (*M*=29.44) also falls into the intermediate range according to the OQPT, whereas the minimum and maximum scores are 16 and 44 respectively.

Table 1. Descriptive statistics: OQPT, NVLT, LCT

	M	*SD*	Minimum	Maximum	Full Score
OQPT	29.44	5.20	16	44	60
NVLT	77.97	15.74	47	111	120
LCT	17.38	5.48	5	32	35

N=97

With regard to the NVLT, of the 120 vocabulary items, representing 1.000, 2.000, 3.000, 4.000 and 5.000 word-frequency levels, as can be seen in Table 1 above, the participants knew almost 78 words on average (*M*=77.97). This finding indicates that of the 15,000 English word families, the participants of the present study would know 9,746 English word families. In addition, McLean and Kramer (2015) note that "learners who correctly answer at least 47-48 of the 48 items from the 1.000 and 2.000 word-frequency levels and half of the items from the 3.000 word-frequency levels on the NVLT would be deemed to have sufficient lexical knowledge to comprehend texts consisting of the most frequent 2.000 English word families" (p. 6). In this sense, a total of 32 of the participants of the present study can comprehend texts consisting of the most frequent 2.000 English word families (See Table 2 below).

Table 2. Descriptive statistics: Word-frequency levels in NVLT

	Minimum	Maximum	*M*	*SD*
1.000 WFL	17	24	22.13	1.75
2.000 WFL	7	24	17.40	3.25
3.000 WFL	6	22	14.45	3.99
4.000 WFL	1	22	11.20	5.30
5.000 WFL	0	23	13.08	5.01

*WFL=Word Frequency Level, N=97

When it comes to the LCT, the minimum and maximum scores are 5 and 32 respectively, while the mean score is *M*=17.38 (*SD*=5.48). Considering the quartiles namely Q1 and Q3, and the interquartile range for the scores that the participants obtained from the LCT, it can be reported that the participants who score below Q1=14 are low achievers; those who score above Q3=21 are high achievers, and those who score between 15 and 20 (the interquartile range) are moderate achievers of the LCT. In this sense, 26 participants, corresponding to 27 % of the whole sample are low achievers of the LCT; 30 participants, corresponding to 31% of the whole sample are high achievers of the LCT, and 41 participants, corresponding to 42 % of the whole sample, are moderate achievers of the LCT.

As for metacognition in listening among the participants of the present study, Table 3 below displays an analysis of percentages of the MALQ, mean scores and the standard deviations for each item. The table shows that item 3 (I find that listening is more difficult than reading, speaking, or writing in English) has the highest mean score (*M*=3.87, *SD*=1.30). It is followed by item 17 (I use the general idea of the text to help me guess the meaning of the words that I don't understand) (*M*=3.85, *SD*=.03), and item 5 (I use the words I understand to guess the meaning of the words I don't understand) and 12 (I try to get back on track when I lose concentration) (*M*=3.62, *SD*=1.13 and 1.03 respectively). The item that has the lowest mean score, on the other hand, is item 18 (I translate word by word, as I listen) (*M*=1.87, *SD*=1.08). It is followed by item 10 (Before listening, I think of similar texts that I may have

listened to) (*M*=2.21, *SD*=1.24), and item 4 (I translate in my head as I listen) (*M*=2.44, *SD*=1.18).

Table 3. Descriptive Statistics: MALQ, Items

No	Description of Items		1	2	3	4	5	*M*	*SD*
1	Before I start to listen, I have a plan in my head for how I am going to listen.	n	7	16	34	27	13	3.23	1.10
		%	7.2	16.5	35.1	27.8	13.4		
2	I focus harder on the text when I have trouble understanding.	n	21	16	20	25	15	2.96	1.38
		%	21.6	16.5	20.6	25.8	15.5		
3	I find that listening is more difficult than reading, speaking, or writing in English.	n	7	11	14	20	45	3.87	1.30
		%	7.2	11.3	14.4	20.6	46.4		
4	I translate in my head as I listen.	n	27	23	29	13	5	2.44	1.18
		%	27.8	23.7	29.9	13.4	5.2		
5	I use the words I understand to guess the meaning of the words I don't understand.	n	5	12	21	35	24	3.62	1.13
		%	5.2	12.4	21.6	36.1	24.7		
6	When my mind wanders, I recover my concentration right away.	n	24	27	20	19	7	2.56	1.25
		%	24.7	27.8	20.6	19.6	7.2		
7	As I listen, I compare what I understand with what I know	n	11	18	25	33	10	3.13	1.17

	about the topic.								
		%	11.3	18.6	25.8	34.0	10.3		
8	I feel that listening comprehension in English is a challenge for me.	n	13	13	20	23	28	3.41	1.38
		%	13.4	13.4	20.6	23.7	28.9		
9	I use my experience and knowledge to help me understand.	n	3	15	36	34	9	3.31	.95
		%	3.1	15.5	37.1	35.1	9.3		
10	Before listening, I think of similar texts that I may have listened to.	n	38	24	15	16	4	2.21	1.24
		%	39.2	24.7	15.5	16.5	4.1		
11	I translate key words as I listen.	n	20	14	23	28	12	2.97	1.33
		%	20.6	14.4	23.7	28.9	12.4		
12	I try to get back on track when I lose concentration.	n	3	11	25	28	20	3.62	1.03
		%	3.1	11.3	25.8	19.2	20.6		
13	As I listen, I quickly adjust my interpretation if I realize that it is not correct.	n	11	10	30	31	15	3.29	1.19
		%	11.3	11.3	30.9	32.0	15.5		
14	After listening, I think back to how I listened, and about what I might do differently next time.	n	4	19	21	35	18	3.45	1.12
		%	4.1	19.6	21.6	35.1	18.6		
15	I don't feel nervous when I	n	12	9	18	24	34	3.60	1.37

	listen to English.								
		%	12.4	9.3	18.6	24.7	35.1		
16	When I have difficulty understanding what I hear, I give up and stop listening.	n	30	19	26	16	6	2.47	1.25
		%	30.9	19.6	26.8	16.5	6.2		
17	I use the general idea of the text to help me guess the meaning of the words that I don't understand.	n	2	5	23	42	25	3.85	.03
		%	2.1	5.2	23.7	43.3	25.8		
18	I translate word by word, as I listen.	n	46	30	12	5	4	1.87	1.08
		%	47.4	30.4	12.4	5.2	4.1		
19	When I guess the meaning of a word, I think back to everything else that I have heard, to see if my guess makes sense.	n	10	15	37	21	14	3.14	1.16
		%	10.3	15.5	38.1	21.6	14.4		
20	As I listen, I periodically ask myself if I am satisfied with my level of comprehension.	n	17	15	24	29	12	3.04	1.29
		%	17.5	15.5	24.7	29.9	12.4		
21	I have a goal in mind as I listen.	n	7	10	29	34	17	3.45	1.11
		%	7.2	10.3	29.9	35.1	17.5		

When we have a look at the MALQ in terms of its sub-components, as Table 4 below shows, person knowledge has the highest mean score (*M*=3.63, *SD*=.70). It is followed by problem solving (*M*=3.39, *SD*=.66), planning and evaluation (M=3.08, SD=.75) and directed

attention (*M*=2.90, *SD*=.70). The sub-component of the MALQ that has the lowest mean score, on the other hand, is mental translation (*M*=2.43, *SD*=.99).

Table 4. Descriptive statistics: MALQ, sub-components

	Minimum	Maximum	*M*	*SD*
Planning and Evaluation	1.40	4.60	3.08	.75
Directed Attention	1.25	4.25	2.90	.62
Person Knowledge	1.00	5.00	3.63	.70
Mental Translation	1.00	5.00	2.43	.99

With regard to the relationship among the variables, Table 5 below displays that of the four variables in the present study, namely general language proficiency, vocabulary size, listening comprehension and metacognition, a significant positive weak correlation was found between general language proficiency and vocabulary size (r=.247, p<0.01). In addition, there is a significant positive moderate correlation between vocabulary size and listening comprehension (r=.451, p<0.01). Metacognition, operationalized as MALQ in the present study, did not significantly correlate to any of the variables. However, its sub-components, namely planning and evaluation (PLAN.), directed attention (D.ATT), person knowledge (PERS.), mental translation (MENT.) and problem solving (PROB.) showed significant correlations with some of the other variables in the present study. There is a significant negative weak correlation between vocabulary size and person knowledge (r=-.231, p<0.05); a significant positive weak correlation between listening comprehension and directed attention (r=.249, p<0.05); a significant negative weak correlation between listening comprehension and person knowledge (r=-.217, p<0.05), and a significant positive weak correlation between listening comprehension and problem solving (r=.266, p<0.01). Significant correlations were also found among the sub-components of the MALQ. There is a significant positive moderate correlation between planning and evaluation and problem solving (r=.466, p<0.01); a significant positive weak correlation between directed attention and problem solving (r=.204, p<0.05), and a significant positive weak correlation between person knowledge and mental translation (r=269, p<0.01).

Table 5. Correlation among the variables

	OQPT	NVLT	LCT	PLAN.	D.ATT.	PER.	MENT.	PROB.
OQPT	1	.247**	.157	-.007	-.018	-.065	-.076	.077
NVLT		1	.451**	-.092	.090	-.231*	-.068	.070
LCT			1	.118	.249*	-.217*	-.164	.266**
PLAN.				1	.042	-.020	.097	.466**
D.ATT.					1	-.019	-.138	.204*
PERS.						1	.269**	-.083
MENT.							1	.042
PROB.								1

* Correlation is significant at the 0.05 level (2-tailed).

** Correlation is significant at the 0.01 level (2-tailed).

To iterate, listening comprehension significantly correlates with vocabulary size, directed attention, problem solving and person knowledge. The relationships between listening comprehension and vocabulary size, directed attention and problem solving are positive, while the relationship between listening comprehension and person knowledge is negative. The highest correlation is with vocabulary size, followed by directed attention, problem solving and person knowledge.

As for the contribution of individual differences in listener characteristics to listening comprehension, a multiple regression analysis was carried out, in which the dependent variable is LCT and the independent variables are MALQ, OQPT and NVLT. As the Table 6 below indicates, the R square of this regression model was found to be .226 and significant at the 0.01 level. This means that the variables in this regression model altogether significantly explain 22.6 % of the variance in the dependent variable, listening comprehension. When the model is further examined in order to see the unique contribution of each independent variable; MALQ, which represents metacognitive awareness in listening, and OQPT, which stands for Oxford Quick Placement Test, do not have a significant relationship with the dependent variable, listening comprehension. In other words, metacognitive awareness and general language proficiency do not make a significant contribution to the explanation of the variance in listening comprehension among intermediate-level adult Turkish EFL learners. On the other hand, the third variable in the model, NVLT, has a significant R square change value of .191, which means that controlling for metacognition and general language proficiency, vocabulary size itself significantly explains 19.1 % of the variance in listening comprehension.

Table 6. Hierarchical multiple regression analysis 1 (Dependent variable: LCT)

	R	R Square	Adjusted R Square	Standard Error	F Model	R Square Change	F Change
MALQ	.0898[a]	.010	-.001	5.49	.93	.010	.931
OQPT	.187[b]	.035	.015	5.44	.71	.025	2.475
NVLT	.475[c]	.226	.201	4.90	9.03	.191	22.901*

a. Predictors (Constant), MALQ

b. Predictors (Constant), MALQ, OQPT

c. Predictors (Constant), MALQ, OQPT, NVLT

* F is significant at the 0.01 level.

Considering that the correlation analysis revealed that listening comprehension significantly correlates with some of the sub-components of the MALQ, namely directed attention, problem solving and person knowledge as well as vocabulary size, another multiple regression analysis was carried out with the dependent variable being LCT scores and the independent variables being person knowledge, directed attention, problem solving and NVLT. As shown in Table 7 below, the R square of this regression model was found to be .296 and significant at the 0.01 level. This means that person knowledge, directed attention, problem solving and vocabulary size altogether significantly explain 29.6 % of the variance in listening comprehension. Table 7 also shows that all of the variables in this model make unique contributions to listening comprehension. Person knowledge alone accounts for a significant 4.7 % of the variance in listening comprehension when it is entered into the regression model

at the first step, p<0.05. When directed attention is put into equation, it adds 6 % to the variance already explained by person knowledge, p<0.05. Problem solving also explains an additional 4 % of the variance in listening comprehension, p<0.05. Lastly, vocabulary size accounts for 14.8 % of the variance in listening comprehension above and beyond person knowledge, directed attention and problem solving.

Table 7. Hierarchical multiple regression analysis 2 (Dependent variable: LCT)

	R	R Square	Adjusted R Square	Standard Error	F Model	R Square Change	F Change
PERS.	.217[a]	.047	.037	5.38	4.68	.047	4.688*
D.ATT.	.327[b]	.107	.088	5.24	5.62	.060	6.291*
PROB.	.385[c]	.148	.121	5.14	5.39	.041	4.512*
NVLT	.544[d]	.296	.266	4.70	9.62	.148	19.398**

a. Predictors (Constant), PERS.

b. Predictors (Constant), PERS., D.ATT.

c. Predictors (Constant), PERS., D.ATT., PROB.

d. predictors (Constant), PERS., D.ATT., PROB., NVLT

* F is significant at the 0.05 level. ** F is significant at the 0.01 level.

Discussion

The findings of the present study reveal that of the three independent variables, namely general language proficiency, metacognitive awareness and vocabulary size, general language proficiency and metacognitive awareness do not significantly correlate with listening comprehension. The two variables do not make significant contribution to listening comprehension, either. Some of the sub-components of the MALQ and vocabulary size, on the other hand, display significant correlations with listening comprehension, as the correlation analysis reveals, and explain significant and unique variance in it, as the regression analyses point out. These findings are interpreted and discussed below.

The findings of the MALQ prove that Turkish EFL learners have difficulty in L2 listening, which is the rationale for conducting the present study. Sixty-seven % of the participants reported that they find that listening is more difficult than reading, speaking, or writing in English. In addition, almost 60 % of the participants stated that they feel nervous when they listen to English, and 53 % indicated that they feel that listening comprehension in English is a challenge for them. In addition, of the five sub-components of the MALQ, person knowledge has the highest mean score, and has a significant negative correlation with listening comprehension although the correlation is weak. Moreover, person knowledge alone accounts for a significant 4.7 % of the variance in listening comprehension. An interpretation of the items in the person knowledge sub-component of the MALQ is necessary for a better understanding of these findings. Person knowledge represents listeners' perceptions with regard to the difficulty of L2 listening and their self-efficacy in L2 listening (Vandergrift et al., 2006). This sub-component consists of items assessing the perceived difficulty of listening compared with the three other language skills, learners' linguistic confidence in L2 listening, and the level of anxiety experienced in L2 listening. Considering that learner perceptions,

anxiety, and self-efficacy have been found to be significantly and directly related to academic expectations, approach to learning, and academic performance, the significant negative relationship between person knowledge and listening comprehension and the significant variance in listening comprehension explained by person knowledge make sense to a great extent. These findings indicate that EFL learners who think that listening is difficult and those who feel anxious while listening to English are likely to be less successful in comprehending what they listen to. Vandergrift et al. (2006), Vandergrift and Baker (2015) and Wang and Treffers-Daller (2017) reached the same conclusion regarding the importance of person knowledge as well. These results are congruent with the considerable evidence in the literature about the relationship between foreign language anxiety and a range of aspects of language learning (Dewaele et al., 2008) and between listening and anxiety in particular (Mills et al., 2006). That person knowledge received the highest mean score may be because learners are aware of their problems with listening (Goh, 2000) and person knowledge is therefore more easily accessible to conscious inspection than other components of metacognition (Wang & Treffers-Daller, 2017, p. 148).

Problem solving has the second highest mean score, and has a significant positive correlation with listening comprehension. In addition, it explains an additional 4 % of the variance in listening comprehension above and beyond person knowledge and directed attention significantly. Problem solving represents a group of strategies used by listeners to inference and to monitor these inferences (Vandergrift et al., 2006). The six items representing this factor include strategies such as using known words to deduce the meaning of unknown words, using the general idea of a text to deduce unknown words, using one's experience and general knowledge in interpreting the text, adjusting one's interpretation upon realizing that it is not correct, monitoring the accuracy of one's inferences for congruency with the developing interpretation, and comparing the developing interpretation with one's knowledge of the topic (Vandergrift et al., 2006, p. 450). It is evident that EFL learners who can guess the meaning of unknown words either depending on the words they already know or using the general idea of the text and monitor their guesses, and those who can make profitable use of their previous experience and knowledge about the topic to interpret the listening text and check their interpretation are likely to be more successful in comprehending what they listen to.

Of the metacognitive strategies that the participants of the present study employ in listening, planning and evaluation follows problem solving. However, it doesn't correlate significantly to listening compression and does not make any significant contribution to listening comprehension, either. Planning and evaluation represents the strategies listeners use to prepare themselves for listening, and to evaluate the results of their listening efforts (Vandergrift et al., 2006). The four items in this factor include strategies such as having a plan for listening, thinking about similar texts as a guide for listening, having a goal in mind while listening, periodically checking one's satisfaction with the ongoing interpretation while listening, and evaluating the strategic effectiveness of one's listening efforts (Vandergrift et al., 2006, p. 450). This finding indicates that although EFL learners employ planning and evaluation strategies frequently, this does not have a profound effect on their listening comprehension scores, which indicates that listening comprehension is more of a matter of instantaneous understanding and is ephemeral.

Planning and evaluation is followed by directed attention in terms of the mean of the participants' responses to the questionnaire. Although it received a lower mean score than planning and evaluation, it has a significant positive correlation with listening comprehension, and accounts for a significant 6 % of the variance in listening comprehension above and beyond person knowledge. Directed attention represents strategies that listeners use to concentrate and to stay on task (Vandergrift et al., 2006). The four items under this factor include strategies such as getting back on track when losing concentration, focusing harder when having difficulty understanding, recovering concentration when one's mind wanders, and not giving up when one experiences difficulties understanding, which all represent the important roles played by attention and concentration in the process of listening comprehension (Vandergrift et al., 2006, p. 451). This finding indicates that EFL learners who "are able to maintain attention and to concentrate on the incoming information or on their train of thought while regulating the other metacognitive processes and persisting in spite of difficulties" are likely to be skilled listeners (Vandergrift et al., 2006, p. 451).

Lastly, mental translation has the lowest mean score, and it neither has any significant correlation with listening comprehension, nor predicts it. In addition, it is worth noting that one of the items included in this factor, which is about translating word by word during listening, received the lowest mean score from the participants of the present study. Mental translation represents strategies that listeners must learn to avoid if they are to become skilled listeners (Vandergrift et al., 2006). The three items under this factor all tap the online mental translation strategy. The findings suggest that most of the intermediate-level adult Turkish EFL learners participating in the present study do not translate in their head either in general or in terms of key words as they listen. However, this does not seem to influence their listening comprehension at all.

The present study differs from Wang and Treffers-Daller in the sense that MALQ as a whole did not correlate with and explain unique variance in listening comprehension, but some of its components, namely person knowledge, problem solving and directed attention did so, whereas in Wang and Treffers-Daller (2017) none of the other categories in the MALQ, except person knowledge, correlated significantly with listening comprehension. However, the present study confirms the results of Vandergrift and Baker (2015), who also found significant roles of person knowledge, problem solving and directed attention in listening comprehension, and X. Zuo (2013), who found that metacognitive strategies were significantly correlated with listening comprehension performance. The divergent findings regarding the role of metacognitive awareness in listening comprehension may be attributed to what Wang and Treffers-Daller (2017) and Vandergrift and Baker (2015) consider as the key problem with the MALQ: "that the MALQ does not tap into actual metacognitive activity but rather asks learners to self-report on their awareness of listening processes" (Wang and Treffers-Daller, 2017, p. 148).

As for the vocabulary size, assessed using the New Vocabulary Levels Test (NVLT), it was found that there is a significant moderate positive correlation between vocabulary size and listening comprehension, and vocabulary size accounts for 14.8 % of the variance in listening comprehension above and beyond person knowledge, directed attention and problem solving. These findings indicate that the more vocabulary EFL learners know, the more skilled listeners

they are likely to become. The findings also indicate that although both vocabulary size and metacognitive awareness make unique contributions to listening comprehension, the role of vocabulary size is far more important. The results of the present study support the findings of Mecartty (2000), Adolphs and Schmitt (2003), Stæhr (2009), M. Liu (2011), van Zeeland and Schmitt (2013) Andringa et al. (2012), Vandergrift and Baker (2015) and Wang and Treffers-Daller (2017) regarding the importance of vocabulary size for listening comprehension among L2 learners. Vandergrift and Baker (2015) maintain that the significant finding for L2 vocabulary lends credence to the possibility of a threshold for L2 listening, similar to an L2 reading threshold, which assumes a relationship between L2 vocabulary knowledge and listening comprehension success. In other words, it is claimed that listeners need to attain a certain level of vocabulary knowledge before they can efficiently transfer L1 listening skills to L2 listening tasks. The findings of the present study also reinforce this claim.

Conclusion and Suggestions

The rationale behind the present study is that the listening skill is crucially important for L2 learners in the sense that languages are learned through exposure to the foreign language, which can be achieved mainly by listening. In addition to its importance, it is a complicated skill as well, and is challenging for L2 learners. Although it is an important and difficult language skill for L2 learners, it is densely investigated. Therefore, the present study aimed at closing this gap in the field by exploring the impact of individual differences in language knowledge, namely general L2 proficiency and L2 vocabulary knowledge, and metacognitive awareness of strategies used in the listening process on L2 listening comprehension.

Results revealed that vocabulary knowledge and some sub-components of the MALQ, namely person knowledge, problem solving and directed ttention play a significant role in L2 listening comprehension. General language proficiency, on the other hand, was not found to have a significant relationship with L2 listening comprehension. Most of the findings of the present study with regard to the role of vocabulary knowledge and metacognitive strategies used in listening are congruent with previous research.

The findings of the present study suggest some pedagogical implications to improve EFL learners listening comprehension. First, considering the role of L2 vocabulary knowledge in listening comprehension, teachers should focus on enhancing learners' vocabulary knowledge in particular. For this purpose, teachers could employ intentional vocabulary learning activities and create opportunities for incidental vocabulary learning from aural and written input (Wang & Treffers-Daller, 2017). They could also make use of multimedia software to develop L2 learners' vocabulary knowledge for L2 listening comprehension as L2 learners' ability to recognize words from speech plays an essential role in L2 listening comprehension (Hulstijn, 2003). Mecartty (2000) gives several pragmatic reasons for developing lexical knowledge. First, "it is the building block of both comprehension and communication" (p.338). This means that learners need to know the basic vocabulary to understand any form of language. Second, lexical knowledge is one of the many factors that determine proficient and non-proficient readers in foreign language as well as in native language. Third, a higher level of proficiency paves the

way for learners to be able to distinguish among the range of meanings in lexical items and vice versa.

The findings also point out the significance of learner perceptions, anxiety, and self-efficacy in listening comprehension. Therefore, it is necessary to help L2 learners reform their perceptions of listening skill in a rather positive way. This can be achieved with the help of listening exercises appropriate for their proficiency level and encouraging them to listen to the target language as much as possible outside the class as well. Raising awareness among L2 learners of listening strategies will help them develop their listening abilities, and show them that listening indeed is not an "unmanageable" skill. This will decrease their listening anxiety and increase their self-efficacy. As for the listening strategies, of the metacognitive ones, the findings of the present study emphasize the importance of problem solving and directed attention. L2 learners had better be trained about using known words and the general idea of a text to deduce the meaning of unknown words (lexical inferencing), using their experience and general knowledge to interpret the text, adjusting their interpretation upon realizing that it is not correct, monitoring the accuracy of their inferences for congruency with the developing interpretation, and comparing the developing interpretation with their knowledge of the topic. This can be achieved through practice exercises in which learners listen to texts and are asked to guess the meaning of unknown words depending on local and global contextual clues as well as their world knowledge. They may listen to the introduction of a listening text, make guesses about the text, and check their guesses and interpretations after they listen to the rest of the text. It is also necessary to inform EFL learners about the role of attention and concentration in the process of listening comprehension.

Although utmost attention was paid to data collection procedures, there are some methodological limitations in the present study. First, the vocabulary measurement that was used in the present study assessed the written form of the word only. However, the relationship between vocabulary and listening could have been based on a measurement tool that involves an auditory presentation (hearing) of a word rather than a visual presentation (reading) of its orthographic form (Stæhr, 2009; Vandergrift & Baker, 2015). Since a measure of oral receptive vocabulary was not available, the New Vocabulary Levels Test was used in the present study. Second, "the MALQ does not tap into actual metacognitive activity but rather asks learners to self-report on their awareness of listening processes" (Wang & Treffers-Daller, 2017, p. 148). Therefore, metacognition could have been assessed more directly through observations or think-aloud protocols; however, it would not have been practical and inappropriate considering the large sample size in the present study. Third, general language proficiency was assessed using a standard placement test, and thus there were only multiple-choice questions even though some questions were in cloze-test format. An achievement test in which there were fewer items but wider item variety could have been employed; however, it would have been a challenging task to ensure its reliability and validity. In addition, the results of the present study are limited to intermediate-level adult Turkish EFL learners. A similar study with learners of higher or lower L2 proficiency and/or those coming from a different L1 could bear different findings. Lastly, some other learner variables such as background knowledge and topic familiarity could have been included, which may be the concern of further research. Additionally, further research could employ path analysis or SEM (Standard

Equation Modeling) to provide a provisional model of L2 listening comprehension. Despite these limitations, the present study shed some light on the componential structure of L2 listening, and recommends some pedagogical implications for ELT practitioners in Turkey.

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