Unpacking Listening Comprehension: The Effect of Aural Vocabulary Knowledge and Listening Comprehension Strategies on Listening Comprehension

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Abstract

Listening comprehension may seem straightforward for first language users; however, it is hard for Second(S) and Foreign Language (FL) learners (Vandergrift and Baker, 2018). This skill might be affected by various variables such as vocabulary knowledge, topic knowledge, metacognitive awareness and many others. However, there is little research putting emphasis on the role of aural vocabulary knowledge (AVK) and listening comprehension strategies (LCS) in listening comprehension (LC). Thus, the current study attempts to investigate; first, the relationship between aural vocabulary knowledge and Listening Comprehension; second, the different listening strategies used by the learners to succeed in understanding the listening input; and third, whether aural vocabulary knowledge can influence the learners` choice of the listening strategies. It is providing more empirical evidence on the variables affecting LC, and newer insights to S/FL learners to approach LC. It is giving more details on the effect of every frequency level of the first 5000-word families knowledge on LC for the purpose of obtaining more data on the strength of the relationship between AVK and LC, and for providing empirical evidence on what aural lexical coverage is the most accurate for listening comprehension.

This study is applied on 59 Algerian EFL PhD students in the UK. Data were collected through utilising the IELTS, the A-Lex test, and the listening comprehension strategies questionnaire. Pearson correlations were executed to explore the correlation between AVK and LC. Regression analysis was operated to measure the proportion of the variance ... Different frequency levels of the AVK test were also analysed using Pearson correlations and regression analysis to derive a model. Findings confirmed that the most contributor to LC is the AVK with R= .58, and that the third frequency level of lexical coverage could significantly predict LC compared to the other levels by .59 and P=.00. Pearson correlations were also executed to explore the relationship between LCS (including the overall score and the three types of strategies) and LC. Data showed that there is no connection between the two variables. Further, the sample was divided into two groups of 23 participants each according to their performance in the AVK (High level of aural vocabulary knowledge VS Low level of vocabulary knowledge). Independent Sample T Test was run to analyse data at this level with regard to the use of LCS. Results demonstrated that there is not any connection between the two and that the listening comprehension strategies use cannot be influenced by the level of aural vocabulary knowledge. Therefore, these findings indicate that the most important variable to listening comprehension is aural vocabulary knowledge and that the knowledge of the most frequent 3000-word families can help the listeners to achieve complete understanding of the aural input.

Acknowledgement

Table of Contents

List of tables

List of figures

List of abbreviations:

A-Lex: The aural vocabulary size test

AVK: Aural vocabulary knowledge

BA: Bachelor of Arts

BNC: The British National Corpus; it contains 15000 words.

CATSS: The Computer adaptive Test of Size and Strength (This is an online vocabulary test)

DVK: The Depth of Vocabulary Test

EFL: English as a Foreign Language

ESL: English as a Second Language

FL: Foreign Language

IELTS: International English Language Testing System

L1: First Language

L2: Second Language

LC: Listening comprehension

LCS: Listening Comprehension Strategies

LVLT: The Listening Vocabulary Levels Test

MA: Master

PhD: Doctor of Philosophy

PPVT: The Peabody Picture Vocabulary Test

SL: Second Language

SPSS: Statistical Package for Social Sciences

TOEFL: Test Of English Foreign Language

VLT: The Vocabulary Levels Test

VST: The Vocabulary Size Test

WAF: The Word Associates Format (a vocabulary depth test)

WRS: Word recognition from speech test

X-Lex: The vocabulary size test

Chapter 1: Introduction

1.1 Introduction

This chapter will provide an introduction to the study by first discussing the background and context, followed by the research aims, objectives and questions, the significance and finally the structure of the study.

1.2 Background of the study

Historically, listening has been considered as a passive skill that does not require a lot of attention to handle it (Rubin, 1994). Until recently, research has started to reconsider defining listening. Currently, it is recognised as an important skill to learn in order to succeed in language learning (Buck, 2001). It is a complex construct that requires operating various types of competences and knowledge. Listening is not only considered as one of the four language skills (reading, writing, listening, and speaking). In fact, it is considered as the most fundamental among them all with regard to first language acquisition and second/ foreign language learning. It corresponds to the first stage of the learning process, and the early stages of first language acquisition (Gestani, 2017; Deregözü, 2021). Moreover, learners devote more than 50% of the time listening while functioning in a foreign language (Newton and Nation, 2009). Research acknowledged the crucial role of this skill for maintaining effective communication and for obtaining information since almost 80% of the information one can attain is obtained through listening (Hunsaker, 1990).

To arrive at successful listening comprehension, listeners use their linguistic and non-linguistic knowledge. They tend to control their use of these types of knowledge through using different listening strategies (cognitive, metacognitive, and socio-affective strategies) in addition to the activation of many processes like bottom-up and top-down processes (Buck, 2001; Goh, 2002;Wang and Treffers-Daller, 2017; Cheng and Matthews, 2018; Vandergrift and Baker, 2018; Cohen and Dörnyei, 2021). All these various types of competences, combined, are involved to help the learners understands better the aural input. Listening comprehension in second/ foreign language is influenced by a variety of variables such as auditory discrimination, working memory, vocabulary knowledge, background knowledge, and L1 vocabulary knowledge (Wang and Treffers-Daller, 2017; Vandergrift and Baker, 2018). Among all these variables, previous research has indicated that vocabulary knowledge and listening comprehension strategies are considered as essential factors.

Previous studies have confirmed that vocabulary knowledge is the most predictor of listening comprehension with the strongest connection compared to the others(Vandergrift and Baker, 2015; Wang and Treffers-Daller, 2017; Cheng and Matthews, 2018; Masrai, 2020). However, vocabulary knowledge is not simply the ability to understand a list of words; it is rather of a multidimensional nature and can be presented into two different modes (written and aural) (Nation and Webb, 2011; (González-Fernández, 2018; Nation, 2019; González-Fernández and Schmitt, 2020). These features of this variable have been ignored and existing research has looked at the effect of some of the dimensions on listening comprehension (Stæhr, 2008, 2009).

Research has confirmed that there is a difference between aural and written vocabulary knowledge; and that written tests are more associated with reading and writing skills, and aural tests are associated with listening and speaking skills (Masrai, 2022). However, most of the papers addressing this area have utilized written measures to explore the relationship between vocabulary knowledge and listening comprehension (Masrai, 2022). Hence, measuring the role of such a variable in listening comprehension using written measures gives us an incomplete understanding of the nature of the relationship that might exist between these variables. This indicates a need to investigate the relationship of vocabulary knowledge with listening comprehension using the aural mode.

Research also considers Listening comprehension strategies as an important indicator of listening comprehension success since listeners tend to use these strategies to deal with language tasks` challenges (Celce-Murcia, 2001). Previous literature has indicated that they are facilitative to the enhancement of second language listening comprehension (Vandergrift, 1997; Goh, 2002; Graham and Macaro, 2008). However, the focus on advanced proficiency learners` use of listening strategies and the way vocabulary knowledge can influence the choice of strategies is very limited (Raoofi et al., 2013), and no previous studies has studied the influence of aural vocabulary knowledge on the choice listening strategies. Hence, my study will address this gap through investigating on the different strategies Algerian PhD of English as a Foreign Language learners in the UK use in their listening comprehension.

Though the increasing interest that listening comprehension has witnessed in research recently, there are still some variables that are not extensively examined to give a complete understanding of their role in success in listening comprehension. Furthermore, it has not been determined yet of what needs to be given more attention or prioritized in listening comprehension. Therefore, this study is interested in exploring the relationship between aural vocabulary knowledge, different listening strategies and listening comprehension.

1.3 Aims, objectives and research questions

The main purpose of this study is to unpack listening comprehension and provide more empirical evidence on the variables that are associated with it. It also aims at providing a clearer understanding of this complex construct and give some newer insights for second/ foreign language learners on the way to approach listening comprehension. These aims will be attained through first, exploring whether aural vocabulary knowledge can predict listening comprehension and giving more details on the effect of every frequency level of the first 5000-word families knowledge on listening comprehension. Investigating this element stands for aiming to discover how much lexical coverage is needed to understand well an aural input. Second, to explore the different listening strategies used by English as a foreign language learners to comprehend the listening input; and how aural vocabulary knowledge can influence their choice of the listening strategies.

Research questions

This study aims to answer the following research questions:

RQ 1: To what extent does aural vocabulary knowledge predict listening comprehension?

RQ 2: To what extent do the different listening strategies correlate with listening comprehension?

RQ 3: To what extent does the aural vocabulary knowledge influence the listeners` choice of the listening strategies?

1.4 Significance of the study

Success in second/ foreign language listening comprehension depends on two types of competences Language competence (including many variables such as vocabulary knowledge) and strategic competence (Buck, 2001; Vandergrift and Baker, 2015, 2018; Cheng and Matthews, 2018; Matthews, 2018). However, research in this area is rather limited, thus we still do not have a clear picture of how and to what extent these competences and variables are linked to listening comprehension. It is beyond the scope of this dissertation to measure all the associated variables with listening comprehension; therefore, the focal points are governed by Buck (2001) listening ability model that has been considered as the most accepted model in listening comprehension so far (Buck, 2001). This study will shed light on variable that has been identified as in need of further investigation, the variable that has the strongest correlation with second language listening comprehension: L2 aural vocabulary knowledge (Wang and Treffers-Daller, 2017, Vandergrift and Baker, 2018); on the strategies used by postgraduate learners of English as a foreign, and on the link between this type of competence and the aural vocabulary knowledge. This study stands out from the previous ones in the sense that it is approaching listening comprehension variables as part of one model and not just individual variables. Despite the increasing number of studies that have investigated the effect of vocabulary knowledge on L2 listening comprehension, most of them have mainly looked at orthographic (written) vocabulary knowledge (e.g. Staehr, 2009, Wang and Treffers Daller, 2017; Vandergrift and Baker, 2018). Only few studies explored the relationship between aural (spoken) vocabulary knowledge and listening comprehension (e.g. Cheng & Matthews, 2018). Despite recognising the importance of listening for second and foreign language learning, how to approach listening is still unclear (Graham and MacAro, 2008). Thus, this study will contribute to this area through providing a better understanding of the variables that are associated with listening comprehension.

With regards to listening strategies, no study has examined the listening strategies used by postgraduate students so far, and particularly Algerian of English as a Foreign Language learners following a postgraduate programme in the UK and the way that their aural vocabulary

knowledge might influence their choice of strategies. Investigating what strategies these students employ is significant for the following reason: An increasing number of Algerian postgraduate students come to the UK to a postgraduate degree under the Algerian doctoral initiative in which the two countries have agreed to send 500 Algerian Government funded PhD scholars in English UK universities (Algerian Doctoral Initiative, 2014). Therefore, preparation courses are needed to be undertaken by these students in their home country in order to prepare them for international English language exams (i.e. TOEFL, IELTS) which are used as a proxy for admission requirements. One section of these exams measures the learners' ability to comprehend spoken input, thus it is very important to explore what strategies Algerian learners use during the listening test. The aim behind relating aural vocabulary knowledge to listening strategies is to explore the complete picture of successful listening comprehension; and to provide an understanding of what variables are more associated with listening comprehension. Thus, listening comprehension learners will have an idea of what variables they should prioritize over others to achieve comprehension of the listening input.

In sum, this study provides some significant insights to the area of listening comprehension by tackling aural vocabulary knowledge and listening strategies that research has not extensively addressed yet. It provides useful information in explaining listening comprehension and how to arrive at successful listening comprehension. Other contributions of the study are: first, it provides empirical evidence on the effect of vocabulary knowledge from an aural perspective and thus, it provides a clearer picture on the importance of aural vocabulary knowledge on second/ foreign language listening comprehension. This can inform pedagogical approaches to teaching listening and provide a theoretical background for future studies. Second, it determines what listening strategies learners tend to use and the link between them and aural vocabulary knowledge. Third, it provides a richer explanation of what variables should be prioritized over others.

1.5 Structure of the thesis

This thesis is divided into four chapters. The first chapter has presented the background of the study. The research questions, aims and significance are also tackled. Chapter Two reviews literature relevant to the nature and models of foreign/second language listening comprehension. It also provides a brief review of literature on factors impacting on second/ foreign language listening comprehension.

Chapter three presents the methodology adopted to attain the study aims and to answer the research questions. A quantitative study design is used and explained. The data collection, data analysis instruments and procedures are described. The results from the pilot study are presented. The reliability of the scales and the statistical techniques used in the analysis of data from all participants are also illustrated.

Chapter four presents findings from the analysis of data and discusses them in relation to the existing literature in the area. It gives details of the statistical tests, and descriptive statistics from all the participants. Then, it illustrates the findings and discusses their implications regarding the three research questions. Interpretation of the current study findings and some instances of similarities and difference between them and previous literature are presented.

The conclusion, the last section of this thesis, recapitulates the main findings of this study. It also acknowledges the limitation of the study and suggests some areas for future research. Then, it concludes with some pedagogical implications

Chapter 2: Literature Review

2.1 Introduction

Listening comprehension is vital not only for sustaining effective communication but also for gaining knowledge(Deregözü, 2021). Listening comprehension can be affected by various factors such as vocabulary knowledge, working memory, metacognition, listening strategies and many others. Though its fundamental position in many areas such as communication, language acquisition, S/F language learning, and in getting information; for many years, listening comprehension was surprisingly neglected by research. It was believed that researching listening is difficult (Du and Man, 2022)and hence most research has emphasized on reading comprehension much more looking at the number of the papers devoted to each skill. This chapter reviews the literature with regard to listening comprehension. It involves a general review of listening comprehension and the variables that are selected for investigation. Particularly, it discusses vocabulary knowledge and listening comprehension strategies.

2.2 Listening comprehension in second and foreign language

Listening comprehension is generally referred to as a complex construct that reflects an active process of constructing meaning from an aural input(Buck, 2001). It involves various cognitive processing systems to understand spoken input (Hamouda, 2013). These structured operations assist the listener to arrive at the final stage of this process that is forming a comprehensible mental representation of the aural received text. Listening comprehension may resemble like an easy task for first language users; however, it is not for Second and Foreign Language learners (Vandergrift and Baker, 2015;Vandergrift and Baker, 2018). It is true that generally listening comprehension involves the use of various types of knowledge and competences such as language knowledge (including linguistic and non-linguistic knowledge) and strategy knowledge (cognitive, metacognitive and socio-affective strategies) (Buck, 2001; Berne, 2004; Graham et al., 2010; Huang and Nisbet, 2019; Cohen and Dornyei, 2021). However, listeners` in a second or a foreign language context may not be receiving the information in the same level first language listeners are. Despite the fact that listening comprehension in general is processed in the same way in any language context, cultural backgrounds may be an obstacle for second and foreign language listeners to perceive the aural input as ease as first language listeners do. For instance, what is significant in one cultural background is not necessarily significant in another (Buck, 2001).

The general understanding of Listening comprehension is not crystal clear yet because it is a dynamic area of research that witnessed evolution over time (Rost 2002). In broad words, listening had traditionally been defined as the ability to understand spoken language (Rankin, 1926). Buck (2001) has provided a more detailed definition of listening comprehension through viewing it as a highly complex skill that involves both linguistic and non-linguistic knowledge. Linguistic knowledge consists of phonology, vocabulary, syntax, semantics, discourse and pragmatics (Buck, 2001). Non-linguistic knowledge includes knowledge of the topic, the context, and the general knowledge of the world (Buck, 2001). It has been acknowledged as a multi-faceted process that can be explained from different perspectives. Different theorists have attempted to describe the complex nature of the listening comprehension construct in

terms of taxonomies of sub-skills that determine the process and approaches (Buck, 2001; Chang, 2012).

The two-stage view is one of the very common taxonomies that divides listening into two sequential stages when the basic linguistic information is extracted in the first stage to be utilized for communicative purposes in the second stage (Buck, 2001; Chang, 2012). Clark and Clark (1977) explained further this view of listening comprehension through distinguishing these stages as the `construction stage` that involves constructing meaning from the received input, and the` utilisation stage` that requires the listeners` use of the interpretation constructed in the first stage (Buck, 2001).

Another perspective that attempted to explain listening comprehension is the cognitive skills approach. This approach grouped together a set of cognitive skills that facilitate listening comprehension such as mechanic skills (rely on memory to perceive and discriminate the received sounds), language knowledge (showing knowledge of facts and rules), transfer (use knowledge in new situations), communication (use of language in communication), and criticism (analysing and evaluating language) (Buck, 2001).

The psycholinguistic approach is another approach that explained listening comprehension. It attempts to identify and categorize the mental actions and cognitive strategies that the listeners utilize in their listening comprehension process. These strategies are viewed from a process-oriented perspective, that is, by taking into consideration the procedures underlying their use rather than their linguistic outcome (Ghoneim, 2013).

Unlike the previous approaches, the communicative approach attempts to explains listening comprehension from a communicative perspective. It views listening comprehension as an interaction between speaker and listener and that it is attained when the listener has effectively recognized what the speaker intended to communicate with his utterances (Vandergrift & Tafaghodtari, 2010). It considers a set of skills that relate the basic linguistic processing to the wider communicative situation (Buck, 2001)

Overall, these approaches are the most famous approaches that have attempted to explain the listening comprehension process and they demonstrated that listening is a complex construct that can be approached from different perspectives; however, the major problem with them all is that they only reflect on some lists of skills that scholars think that they are important in listening comprehension (Buck, 2001) . Thus, they do not give any clues on these skills` level of importance in listening comprehension; nor any clarifications on which skills must be learnt/taught before other taking into account teaching constraints. Therefore, care must be taken when adopting these approaches.

Following the communicative approach, (Buck, 2001) has inspired his listening framework from Bachman and Palmer (1996) `s model "The capacity model of communicative language ability". Bachman and Palmer`s model is considered as the most widely accepted general description of language ability among language testers and it is widely used in listening comprehension studies (Buck, 2001; Wang and Treffers-Daller, 2017). Buck`s enhanced listening framework was developed to help in the creation of listening comprehension tests and better understanding of what skills are involved in the listening comprehension process. This

model bridged together the skills that are essential in the process of listening. It is divided into two general types of competences that are divided into several types of knowledge and processes compiling together an exhaustive list of the various skills that are essential for the listening process. The first part of this model refers to Language Competence that refers to the language that the listener brings to the listening situation. It is composed of grammatical knowledge (understanding spoken text on a literal semantic level such as spoken vocabulary, syntax, phonology...), discourse knowledge, pragmatic knowledge and sociolinguistic knowledge. The second type of competence is referred to as strategic competence. This type of competence corresponds to the cognitive and the metacognitive strategies that fulfil the cognitive management in listening, and it consists of: cognitive strategies (the sub-components of this strategy are: comprehension processes, storing and memory processes, using and retrieval processes) and metacognitive strategies (assessing the situation, monitoring, self-evaluating, and self-testing) (Buck, 2001).

Buck (2001) considers listening as "the ability to 1) process extended samples of realistic spoken language, automatically and in real time; 2) understand the linguistic information that is unequivocally included in the text; and, 3) make whatever inferences are unambiguously implicated by the content of the passage." (P, 114). This construct is supported by Vandergrift and Baker (2015) due to its flexibility to fit most contexts and to allow listeners to show their comprehension capacity in real-life listening contexts. The current study aims to approach listening comprehension in a different way than the prevailing research. Earlier studies have mainly researched listening comprehension from the perspective of individual differences i.e.: they tend to investigate on one or a selection of variables towards listening comprehension in isolation (Du and Man, 2022). The current research is examining the relationship that might exist between the selected variables and listening comprehension as two components of one model. Following this listening model and Buck`s definition of the listening comprehension construct influences the selection of the variables that this study is putting emphasis on i.e.: aural vocabulary knowledge and listening comprehension strategies. Therefore, this construct and model suit the purposes of this thesis in a number of ways: They are adapted from Bachman and Palmer`s 2010 model which is the most widely accepted general of language ability (Buck, 2001; Wang and Treffers-Daller, 2017); their conceptualisation of LC suit S/Fl pedagogical purposes; the model underlies all the components that are involved in the listening comprehension process from the listener`s perspective. The problem with this framework is that it does not classify the skills in terms of their level of importance in LC and it does not prioritise any component over the other. Thus, it is left to the empirical studies to explore what components must be given attention to in the first place when it comes to deciding on the variables that affects LC the most. Hence, this study is interested in investigating on the role of aural vocabulary knowledge in listening comprehension, what listening strategies do successful listeners use to comprehend the listening input; and whether the choice of the listening strategies by the listeners is influenced by their vocabulary knowledge or not (i.e. what strategies they use when they do not face any difficulties in terms of the knowledge of the vocabulary, and what strategies they use to cover their insufficient vocabulary). Thus, AVK (which is part of the language competence aspect) and the listening strategies are two facets of LC that this study will investigate in depth to discover their relationship to listening Comprehension.

2.3 Variables affecting listening comprehension:

There are many variables that have an impact on second language listening comprehension such as L2 vocabulary knowledge, working memory, auditory discrimination, metacognitive awareness, and background knowledge(Wang and Treffers-Daller, 2017; Cheng and Matthews, 2018; Vandergrift and Baker, 2018). However, the variables explored in this section will be limited to those under investigation.

2.3.1 Vocabulary knowledge:

Research on the relationship between vocabulary knowledge and listening comprehension started to gain some attention in the last few years. However, there is a slight unbalance between the two constructs since most of the literature focused on the relationship between written vocabulary size and listening comprehension. Very few has taken into account the other aspects of vocabulary knowledge and even fewer have approached the link between these two variables from an aural perspective. The following section will discuss the nature of vocabulary knowledge, what is involved in knowing a word, and the studies that discussed the link between this variable and listening comprehension.

Vocabulary knowledge, known as the building blocks of language, is the variable that has the strongest connections with L2 listening comprehension (Staehr 2009; Vandergrift and Baker 2015; Wang and Treffers-Daller 2017; Vandergrift and Baker 2018). For Nation (2019), vocabulary knowledge entails the knowledge of breadth and depth of words. Vocabulary breadth or often referred to as vocabulary size stands for the extent of the learners` knowledge about words; or the number of words that they can link their forms to their meanings (Nation and Webb, 2011). Whereas depth or quality of vocabulary knowledge, as described by Read (1993), stands for the extent of the learners` ability to have a deep understanding of a word. Although vocabulary breadth is an important contributor to listening comprehension and it has been the focal point of vocabulary research for many years, it represents vocabulary knowledge only relatively. This is supported by Nation (2019) when referring to vocabulary knowledge as not merely the ability to understand a list of words, but rather a complex construct that underpins many aspects. It is therefore likely that vocabulary knowledge is beyond the capacity of linking form to meaning, instead, it is about how well the learner knows a word (Nation and Webb, 2011).

(Nation, 2001) has detailed the complexity of the vocabulary depth in his 'vocabulary knowledge framework' through dividing it into nine distinct word components. This exhaustive list has been the ground for most of today`s research (Nation, 2013; (González-Fernández and Schmitt, 2020). Nation`s framework differentiate three dimensions that compile together depth of vocabulary knowledge each one is divided into three aspects. Form refers to three aspects of knowledge i.e. knowledge of the spoken form (how the word is pronounced), the written (spelling), and word parts in which the learners are required to have the ability to distinguish the different parts a word is composed of. The second dimension 'meaning' is further subcategorized into knowledge of form-meaning link, concept and referent, and associations. The third dimension 'Use' entails grammatical functions, collocations, and constraints on use. These components are further divided into receptive and productive aspects. The three main dimensions with all their types and aspects represents the most famous and

comprehensive explanation of depth of vocabulary knowledge that research has produced so far (Gonzalez-Fernandez, 2018; Nation, 2019)

As previously stated, receptive and productive vocabulary knowledge are taking part in all the nine aspects of Nation`s framework. They are also known as passive and active aspects of knowledge. From the one hand, receptive knowledge stands for the ability of the learners to comprehend language from the received input via listening or reading. On the other hand, the productive knowledge reflects the ability of the learners to use language either in speaking or writing(González-Fernández, 2018). From another perspective, the receptive/productive mastery is a continuum where the learners learn the receptive aspect of vocabulary knowledge and then shift to the productive one once they have completed a sufficient level of mastery at the receptive level (Melka and Schmitt, 1997)Thus, this explains the various findings that research shows in terms of their interrelationship. Some have found that the two aspects are strongly tied and that the difference between them is so small by having participants with 92% knowledge of the productive vocabulary from their receptive vocabulary (Meara, 1997), and others who had a partial productive knowledge from their receptive knowledge (Webb, 2008). While others` findings prove that there is a huge difference between them, and thus, the gap in their link is big. For instance, Laufer (2005) have found that only between 16% and 35% of the vocabulary tested was known in both aspects. Consequently, these contradictory findings are the results of the various ways these two aspects have been conceptualised and due to the different measurements used in the studies. This represents a real gap in the literature; hence, a careful investigation should tap into the nature of the relationship between the two aspects and on how to measure each aspect independently from the other.

According to Nation (2019), not all these vocabulary aspects are of the same level of importance for language use, in fact; their importance varies, and some of these aspects are prioritized than others. For instance, spoken word form and form-meaning connection are the dimensions that must be learnt first since they are necessary for comprehension, in addition to basic grammatical functions that are needed for productive use. Other aspects can be learnt at a later stage through the learners` proficiency progress. Regarding LC, to date, research has acknowledged the importance of the form- meaning link (Wang and Treffers-Daller, 2017; Cheng and Matthews, 2018) However, the problem in this is that most of the available research has mainly looked at this aspect of vocabulary knowledge from a written perspective and the focus on aural vocabulary knowledge and its effect in LC is ignored.

With respect to aural and written vocabulary knowledge are two different modes of knowledge. The knowledge of the aural form represents the ability of the learner to comprehend the listening input; or use the language he learnt correctly in speaking. The knowledge of the written form of a word enables the learner to read and write. It is also known as Orthographic word knowledge which mainly indicates the understanding of how spoken language is represented in print (Masrai, 2022). Therefore, it is preferably to be used with reading comprehension. Knowledge of the aural form of vocabulary, on the other hand, is one of the early stages that a language learner goes through in his/her language learning process. It is

known as the phonological word knowledge or the spoken word form. It refers to how a word sounds, and it is used to explain variance in listening and speaking skills ((Milton and Hopkins, 2006). It also entails enhancing one`s awareness on how sounds fit together a language system (Nation, 2019). Milton et al (2010) mentioned that phonological and orthographic forms of words are stored separately in the mental lexicon in L2 learners` context. The mental lexicon refers, in linguistics, to word knowledge and its image in the leaners` brain.

Unlike aural knowledge requirements, knowing the written form of the words requires the knowledge of the phonological system. Nation (2019) argues that learning how to listen must be placed before learning how to read or write to learn a language efficiently and, thus, having a phonological awareness of the language will increase the language proficiency for the reason that learning to read or write has strong connections with the language`s phonological system because listening is the skill that precedes the other language skills especially in languages that their alphabetical system is related to its sound system like English. Learners will base their phonological knowledge (knowledge of different sounds) to be able to read the different alphabets that compound a single word. Hence, they start from sounds to reading words. Vocabulary knowledge studies focused on the written mode more than on the aural mode since the vast majority of studies have been quantitative and have utilized written measure to test their participants vocabulary knowledge (Staehr, 2008, 2009; Vandergrift and Baker, 2015; Wang and Treffers-Daller, 2017; Vandergrift and Baker, 2018). Therefore, this interest in written vocabulary knowledge can be obviously recognized through comparing the number of the standardized written tests (such as the VST, the VLT, the X-Lex, the CATSS, the PPVT, the WAF, the DVK –each of these tests is measuring a specific type of vocabulary knowledge orthographically) to the aural ones (only two aural vocabulary knowledge tests that have been validated –the A-Lex and the LVLT-). Researchers tend to use written measures so often since it can be addressed to a large sample; it is not as time consuming as the aural ones; it can cover a large number of target items. These practical factors are the main reasons behind measuring the effect of vocabulary knowledge on listening comprehension using written measures (Staehr, 2008, 2009; Vandergrift and Baker, 2015, Wang and Treffers-Daller, 2017; Vandergrift and Baker, 2018). However, using aural measures to investigate in the effect of vocabulary language on listening comprehension is valuable for various reasons. First, written and aural vocabulary are two different types of vocabulary knowledge and thus, the learners` aural vocabulary knowledge is different their written vocabulary knowledge. Second, listening comprehension is much more related to the phonological system of language than to its orthographic one. Third, the fact that listening is straightforward, and that the listener has no control over the received message, nor can s/he go back to it make using a test of similar conditions an appropriate choice.

Turning now to vocabulary size tests format, vocabulary size represents the breadth of vocabulary knowledge or the number of the words that a person is able to know (reference). Measuring lexical coverage is a major issue in similar studies. Different test formats were developed for the sake of exploring how much vocabulary is needed to master a certain skill like reading or listening. The Vocabulary levels test (Schmitt et al., 2001; Nation, 2001) and the A-Lex (Milton and Hopkins, 2005) are two vocabulary knowledge tests that use target

items from the same lists of vocabulary (the BNC). They target items are categorized according to their level of frequency and every set of items represents a frequency level. Frequency levels are compiled of 1000 word per each. The A-Lex test that corresponds for measuring the aural vocabulary knowledge is compiled of a set of 20 words for 5 different frequency levels (the first most frequent 1000, the second 1000, the third 1000, the fourth 1000, and the fifth 1000). This test use as well another set of pseudo 20 words. All together, they compile a set of 120 words. Every researcher can update the list of the word and include more or less frequency levels considering the research needs and the selected sample. The rationale behind the selection of the first 5000 most frequent words was that this level outlines the basis of the lexical coverage required for suitable levels of L2 listening (Webb & Rodgers, 2009a, 2009b). Moreover, the level of the selected sample for this study is supposed to be up to 5000 words since they are postgraduate EFL learners.

In relation to the studies that investigated its effect in listening comprehension, other issues emerge such as the difference between measuring aural and written vocabulary knowledge in addition to the multidimensional nature of vocabulary knowledge. Acknowledging the differences between the modes of vocabulary knowledge (aural vs written as discussed above), it is not appropriate to use written measure to test the relationship between vocabulary knowledge and a phonological-based aspect like the listening comprehension. Though, studies that have followed these measures have proved that there is a strong connection between the two variables by r=.53 and r=.49 for written breadth and depth respectively (Staehr 2008, 2009); and studies that investigated the roles of many variables other than vocabulary knowledge (Wang and Treffers-Daller 2017, Vandergrift and Baker, 2015, 2018) have confirmed that vocabulary knowledge is the most predictor of listening comprehension with the strongest connection compared to the other variables. Some researchers took this aural/ written difference into consideration and applied it in their studies such as Matthews and Cheng (2018) who found that the productive phonology vocabulary knowledge that they measured (along with the receptive and the productive orthographic vocabulary knowledge) is strongly associated with L2 listening comprehension by r=.71 while the orthographic aspects were connected to listening by only r=.39 and r=.55 respectively. Masrai (2019) has also confirmed the strong association of aural vocabulary knowledge (size only) and L2 listening comprehension by r=.78. The problem with these studies is that their results cannot represent the variable vocabulary knowledge, but only the aspects of vocabulary knowledge that they measured. Therefore, having a successful investigation on the effect of vocabulary knowledge in listening comprehension is related to the vocabulary measures used in the research and using written measures cannot reveal the breadth of the phonological vocabulary the participants own nor the effect that vocabulary knowledge has on their listening comprehension. Therefore, this study will contribute to this area by taking this condition into consideration and use an aural vocabulary test instead of a written one.

Overall, the common issue between these studies is that they all had investigated the impact of vocabulary knowledge on listening comprehension and that they confirmed the positive impact it has on listening comprehension. Thus, they have all agreed upon the point that vocabulary knowledge is the most important contributor to listening comprehension. These studies have proven this point through the results they obtained from measuring the association between the

two variables (i.e. results were very similar in all the studies). Apart from this shared point, there are also some other issues that differentiated between these studies such as the number of variables investigated in one study, the type of measurements used, the contexts these studies were applied in. There are some that investigated the impact of VK on LC along with other variables such as Vandergrift and Baker (2015; 2018) that used the largest number of variables compared to the available studies and that allows them to compare VK to the other variables like auditory discrimination, working memory, metacognitive awareness, and L1 vocabulary knowledge. Other studies have followed a similar path in employing several variables in one study; however, a fewer number of variables was used in comparison with the number of variables used in Vandergrift and Baker`s (2015; 2018). Wang and Treffers-Daller (2017) emphasised on three variables including VK and it has also shown similar results of those of Vandergrift and Baker (2015; 2018) in terms of the link between VK and LC though the studies were applied in two different contexts (on young participants enrolled in a French Immersion program, on a group of Chinese undergraduates respectively). The utilisation of many variables in one study is beneficial in terms of providing an encouraging environment to compare the different variables and to decide on which ones are more important than others. Nevertheless, it limits the researcher from investigating each variable in depth especially when dealing with variables of a complex nature like VK. The major concern of these studies relies on their use of some vocabulary tests that are not compatible with the requirements of LC (the aural mode). Instead of using aural tests, these studies relied on written measures only to measure this variable`s impact on LC, which is less appropriate than the aural measures since it provides some characteristics that listening in real life does not do such as the access to the information provided (this means that the test takers can have an unlimited access to the information provided which is not the case in listening: i.e. they can access the information once only and they do not have any opportunity to control this access through spending more time on some items than others nor coming back to any item at any point in time).

2.3.2 Listening Comprehension Strategies

Language competence is a vital component in listening comprehension; however, it is not the only element that listeners rely on in their listening comprehension. Following Buck (2001) `s listening ability model, listeners must use their strategic competence in addition to their language competence to succeed in listening comprehension (Buck, 2001; Wang and Treffers-Daller, 2017a; Fung and Macaro, 2021). These two types of competences are crucial in listening comprehension and are considered as two sides of the same coin. Language competence covers grammar knowledge (including vocabulary, syntax, and phonology), discourse knowledge, pragmatic and sociolinguistic knowledge; while strategy competence covers cognitive, metacognitive, and socio-affective strategies. The concept of strategy stands for the mental process that is used to understand new information (O`Malley et al; 1989). Chamot (1987) refers to strategies as "the techniques, approaches or deliberate actions that students take in order to facilitate the learning and recall of both linguistic and content area information" (71). Research revealed that there are three different types of strategies (cognitive, metacognitive and socio-affective strategies) (Dornyei and Cohen, 2002).

Listeners tend to use a variety of strategies when approaching listening comprehension either consciously or subconsciously. These strategies help them to get well prepared to receive aural input, enhance their performance in a listening task, overcome their deficiencies in terms of their linguistic knowledge, solve their language problems, regulate their thinking, control their feelings. Listeners using the cognitive strategies rely on identifying, grouping, storing and recalling language material. Those who use metacognitive strategies use consciously some processes in order to manage their language learning. They control their own cognition by planning, checking, and evaluating. In the category of socio-affective strategies, learners use this type of strategies to regulate emotions, motivation, and attitudes (Goh, 2002; Dornyei and Cohen, 2002). Different listeners use these strategies in various ways. In terms of the types and number of strategies, some listeners rely on only one type employing a very limited number of strategies, while others prefer to use a combination of various types and use a great number of strategies. In terms of frequency of use, some listeners use strategies more than others and know how to apply them properly. Strategy use in listening comprehension has gained some attention in the last thirty years and has been investigated from different angles such as the notion of the good language learner, the link between listening proficiency and the listening strategies (that was studied the most), the link between the listening strategies and the problems encountered by listeners in listening comprehension, and the difference between strategies and tactics (Goh, 2002; Berne, 2004; Graham et al, 2010; Vandergrift and Baker, 2010; 2015; Wang and Treffers-Daller, 2017; Fung and Macaro, 2019).

The current literature witnesses a disagreement with regard to the significance of the listening comprehension strategies in listening comprehension. A number of authors have indicated that listening comprehension strategies are vital in facilitating the enhancement of second language listening comprehension (Goh, 2002; Graham & Macaro, 2008; Vandergrift and Baker, 2015; 2018). On the other hand, several lines of evidence challenged their importance compared to other factors that showed better prediction to listening comprehension than listening comprehension strategies (Wang & Treffers-Dallers, 2017; Matthews, 2018; Wallace, 2020). Regarding the listening proficiency and listening strategies link, Goh (2002) investigated on the different strategies and tactics ESL listeners of different listening abilities use in listening comprehension. In this paper, a division of participants was made according to their listening abilities. The high ability group significantly used more tactics strategies than the low ability group. A similar study supported Goh (2002)`s findings demonstrated that advanced listeners use a variety of listening strategies; whereas less proficient listeners rely on memory strategies and use a limited number of strategies (Shang; 2012). Very similar results were also found by Kok (2018), that showed that strategy use is positively related to listeners` proficiency level and that the higher proficiency the learners are, the more various strategies they use. Even though these studies have been interested in explaining listening strategies used by different proficiencies' learners, Goh (2002) seems to be the most relevant among them since it has further explained the strategies used by the participants and could differentiate between the strategies and the tactics that has never been discussed before. However, these studies, including Goh (2002) `s, have not treated the listeners` proficiency in details. They have made no attempt to explain what might be behind this proficiency in listening that influenced the listeners to select some strategies over others during the listening task. Collectively, these studies outline a critical role for listening comprehension strategies in intervention studies rendering that these strategies are teachable and that they help in enhancing the listeners` understanding of the aural input. This view is contrasting those studies that investigated several

variables in addition to strategies when almost all the other contributors reflect stronger ties with listening comprehension than strategies. Nevertheless, none of these studies expressed interest in investigating the connection between the factors themselves than to listening comprehension. For instance, can the various listening comprehension contributors influence the use of the listening strategies such as vocabulary knowledge. Therefore, these studies would have been more useful if they provided further explanation of the factors influencing the proficiency of the listeners and how these factors may influence the choice of the strategies used by the listeners during various listening tasks.

Another study undertaken by Fung and Macaro (2019) investigated on how linguistic proficiency (which is part of the listening ability (Buck, 2001)) affect the use of listening strategies (Fung and Macaro, 2019). This study has contributed relatively to this area through focusing on two important components of linguistic knowledge (vocabulary and grammar). They found out that high linguistic knowledge group use more strategies than the low linguistic knowledge group. Their findings confirmed Goh`s (2002) assumptions and Graham et al (2010)`s findings on the listeners of high linguistic knowledge are freer (from the task constraints) to use numerous and various number of strategies than the low linguistic knowledge ones. This study is very important since it is the only one that went beyond the basic proficiency and listening strategies relationship through exploring linguistic knowledge which is part of listening proficiency. However, its findings are exclusively limited to some aspects of linguistic knowledge (grammar and vocabulary) that do not represent all the aspects involved in forming the linguistic competence of the listener. Another key problem with this study is that the aspects included are presented very superficially and there was no attempt to investigate them in depth. In terms of vocabulary, this paper has approached this aspect through size only and was measured by the VLT that measures written vocabulary size only. Hence, considering the difference between written and aural vocabulary knowledge, the findings from the vocabulary test cannot be applicable in listening context. Another issue with this study is that its findings cannot be generalized since it has been applied in a very specific context which is listening to the teacher.

To conclude, from one side, the relationship existing between the learner`s proficiency and the strategies s/he uses while completing a listening task was the main concern in this area. This has resulted many papers investigating the same thing over and over through distinguishing more- proficient listeners from the less proficient ones. Researchers referred to the same notion using different terminology such as proficiency, effectiveness, skills, ability. This has confirmed that more proficient listeners tend to use more various strategies than their counterparts the less proficient listeners However, none of these studies has made any attempt to elaborate on listening proficiency and tackle its components. From the other side, the listening ability is composed of linguistic competence and strategic competence. Thus, to investigate on the link between strategies and proficiency, it is inappropriate to exclude the role of the linguistic knowledge and focus only on one side which is strategic competence. Conclusions of these papers are very useful but limited. Consequently, to investigate on the use of strategies in relation to the listening proficiency, the two facets of this proficiency must be taken into consideration. Fung and Macaro, (2019) that have investigated the link between linguistic knowledge through investigating two of its most important contributors: vocabulary and grammar, have not considered the difference between aural and written vocabulary

knowledge. Thus, a better study would consider this requirement when investigating vocabulary. This thesis is addressing these gaps through investigating on the strategies used by intermediate EFL learners to comprehend the listening input, and on how aural vocabulary knowledge influences their choice of strategies.

Chapter 3: Research Design and Methodology

3.1 Introduction

The lack of empirical research in the listening comprehension area, in general, and on the variables that are linked to listening comprehension, in particular, has resulted in many gaps in the literature. Some of these gaps that this study attains to address are, first, the extent of the association that might exist between aural vocabulary knowledge and listening comprehension. Second, what frequency level of AVK may achieve the strongest connection. Third, what listening comprehension strategies correlate with listening comprehension and whether there is a link between them and AVK. This chapter represents the methodology used to conduct the current research project. The research instruments used in data collection, data collection procedures, the pilot study, the data analysis procedures, and ethical considerations will be explained.

3.2 Research questions

RQ 1: To what extent does aural vocabulary knowledge predict listening comprehension?

RQ 2: To what extent do the different listening strategies correlate with listening comprehension?

RQ 3: To what extent does the aural vocabulary knowledge influence the listeners` choice of the listening strategies?

3.3 Research Methodology

Different quantitative data collection instruments were used to collect data from 59 participants during the period of sixty days in total. This section will explain the participants, the research methods, the research procedures, and data analysis.

3.3.1 Participants

Participants in the current study were 59 Algerian EFL students following a postgraduate programme in the UK. These participants were aged between 25 and 30 years old, both males and females (10 and 49 respectively). This age group corresponds to the age of the participants as reported in the questionnaire responses. It varied from 25 to 30 because students from different levels of PhD degrees were recruited i.e. from first year to fourth year.

Concerning the participants` linguistic background, this study`s participants had Arabic as L1. Thus, they can fit to compile a homogenous group. This has decreased the involvement of different factors that could have influence the results and making them more difficult to interpret. All the participants had completed seven years of learning English during their

compulsory education period and have done 5 years of English in Algerian universities (3 years Ba and 2 years MA) before being granted a scholarship to pursue their postgraduate studies in the United Kingdom. Since the participants are postgraduate students in the United Kingdom, their English proficiency ranged from upper-intermediate to advanced level (They had at least 6.5 in the IELTS test to be offered a placement in one of these universities).

The statistical package (SPSS) that was used in this study and the regression analysis that were run to analyse the data require a minimum of 30 participants, or 10 participants per independent variable, for the reliability of the results (Dörnyei, 2007). Thus, data from 60 participants were attempted to be collected. According to Green (1991), following the rules of thumbs approach, the sample size required to run regression analysis must be above 50 cases depending on the number of the independent variables that are measured in a study. Hence, a sample of 60 participants was acceptable; however, one withdrew from the study and another one completed the AVK and the listening comprehension test. Thus, the overall number of participants was 59 for the AVK and the listening comprehension test and 58 for the listening comprehension questionnaire. In sum, the overall number of the participants was 59 for the listening comprehension and the aural vocabulary knowledge tests and 58 for the listening comprehension strategies questionnaire which is still above the minimum number of cases to ensure reliability of results.

In this thesis, participants were recruited through the convenience sampling method. This is the most frequently used sampling method when the sample is selected on the basis of the convenience of the researcher (Acharya et al., 2013). This method was the most appropriate for reaching the targeted participants because all of them were part of a social media group for academic purposes. Thus, they were reachable in a short period of time. However, not all the required number had responded to the post. Consequently, this problem was resolved through requesting from the reached participants to suggest other potential participants they know to participate in the study until the required number of participants was attained. Using this method had saved the researcher time, energy, and expenses. Nevertheless, some of the notable limitations of this method are that variability and bias cannot be measured or controlled, and that data cannot be generalized further than the sample.(Acharya et al., 2013).

3.3.2   Research Methods:

3.3.2.1 The listening comprehension test

To test the participants' proficiency in listening, participants were asked to take the IELTS listening test. This test took 30 minutes and additional 10 minutes to transfer answers to the answer sheet. Participants had listened to two monologues and two dialogues to answer 40 questions in various ways: multiple choice; short answer responses; diagram labelling; and completing tables, notes and sentences. Participants were given one point for every correct answer; hence, the maximum achievable score 40. In line with the operationalisation of

listening ability in the present study, IELTS measures the ability of students to process extended samples of realistic spoken language in real time. This test is valid, standardised and recognized by the United Kingdom as an official test to measure the test takers` proficiency in English, and it is used as an admission test in British universities for international students and used in some types of visas to enter the United Kingdom territories. It is also well-known and a reputable tool that was largely used in similar studies to measure listening comprehension (Cheng & Matthews, 2018; Masrai, 2020a, 2020b, 2022). It is also considered as a dependable as well as a valid test that serves its purposes (Bakri, 2022). The only problem that could be encountered at this stage was that the participants of this study were international students in the UK and there was a risk that they had had taken same version of the test before while preparing for their admission IELTS test. Therefore, this problem was avoided through utilising the latest version of the test, and participants were informed in the recruitment post that they must have taken the IELTS before the year posted. Participants were informed that the 2020 version of the IELTS was used and that they must not have been taken this version of the test. They were allowed to contact the researcher for participation only when they had taken the previous version (up to 2019 version). On the day of the data collection, participants were asked to confirm that they did not have taken this version of the test. The version used in this study was the IELTS Academic 15, which is a 2020 version that none of the participants reported that they had taken before (Cambridge Assessment English, 2020).

3.3.2.2 The aural vocabulary test

The test that was adopted in this study to measure the participants` vocabulary knowledge from aural input was the A-Lex (Milton and Hopkins, 2005). This test is a phonological vocabulary knowledge test. It is a computer-delivered YES/NO test in which test-takers are tested on 120 words from different frequency levels (20 from each 1000-word frequency level, and 20 pseudo words are included to be adjusted for guessing and overestimation) (Mizumoto and Shimamoto, 2008). It included 5 levels of frequencies: 1,000, 2,000, 3,000, 4,0000, and 5,000, each of which entailed 20 items and made 100 items in addition to the list of the pseudo words. Each item carried equal weighting and one point was given when a participant confirmed that s/he knew the meaning of the word. Therefore, the maximum attainable score was 20 for each level and 120 for all five levels in addition to the list of the pseudo items.

This test is one of the few valid aural vocabulary tests where the test takers will have to listen to the target word, select the correct answer and press to move to the next word. This test has been selected to measure the phonological vocabulary knowledge of this study`s participants for various factors. First, it fits the purposes of this study since it is administered in the aural mode. Second, it covers a large number of target items from all frequency levels that allow to measure the exact size of the participants` aural vocabulary knowledge and it is suitable for advanced English learners such as this study`s participants. Third, it is valid (Milton and Hopkins, 2005, 2006),and used in many previous studies (Kök, 2018; Masrai, 2020a, 2020b, 2022). Fourth, it is practical in the sense that it is not time-consuming and that it can be administered to a large number of participants. Consequently, this test served the purposes of this study.

In terms of reliability for both tests (the IELTS and the A-Lex) which is a very crucial element in testing, and to ensure that the test is reliable, descriptive and reliability statistics from SPSS were run during the pilot study using Cronbach`s alpha and its value must be higher than .70 to be accepted. This approach was widely used in similar previous studies (such as Li and Kirby, 2014; Wang and Treffers-Daller, 2017; Cheng and Matthews, 2018; Ghorbani Nejad and Farvardin, 2019).

Table 1: Reliability Statistics for AVK and its 5 Frequency levels and LC

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.791	.878	8

Table 1 presents the summary of the reliability statistics run on eight items of listening comprehension and aural vocabulary knowledge. These items are the overall scores of the AVK and the LC tests and in addition to the six frequency levels of the AVK test. Findings reveal that Cronbach`s alpha is **.79** which is of a very good level of reliability according to Field (2013). This indicates that the tests are reliable.

3.3.2.3 The listening comprehension strategies questionnaire

To investigate on the different listening strategies that the EFL learners use while listening, a listening comprehension strategies questionnaire was used. The questionnaire was developed based on some standard questionnaires that had already been acknowledged as valid measures by various previous studies (such as the Metacognitive Awareness Listening Questionnaire (MALQ) developed by Vandergrift, et al (2006) Vandergrift (1997)). It covered the three types of listening strategies (cognitive, metacognitive and socio-affective strategies). The questionnaire used 1 to 5 Likert scale: 1 (strongly disagree), 2 (disagree), 3 (neither disagree, nor agree), 4(agree) and 5 (strongly agree). In terms of reliability, descriptive and reliability statistics from SPSS were run using Cronbach`s alpha and its value must be higher than .70 to be accepted (Dörnyei, 2007).

Table 2: Reliability statistics of the listening comprehension questionnaire

Factors	Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
The Listening Comprehension Strategies	.873	.886	46

Reliability and validity of the questionnaire are investigated as shown in table 3. The results shows that Cronbach`s alpha of the listening comprehension questionnaire as a whole is .87, which is of a good level according to Field (2013).

Table 3: Reliability statistics of the three types of listening comprehension strategies questionnaire and the overall score

Cronbach's Alpha	N of Items
.825	4

As seen on table 3, the three different types of the listening comprehension strategies questionnaire and its overall score have shown a good level of reliability with Cronbach`s Alpha .82.

Selecting this method of data collection over others is based on several factors. First, this questionnaire suits the study`s purposes since it covered all the three types of listening strategies (cognitive, metacognitive and socio-effective strategies). Second, adopted from various standard measures that have already been acknowledged as valid measures by various previous studies (example of studies). The most recent version of the MALQ (Vandergrift et al, 2006) was used and since it did not cover the two remaining strategies (cognitive and socio-affective strategies, sections from Vandergrift`s (1997) listening strategies questionnaire were added to the MALQ to cover all the three strategies in one questionnaire. Third, questionnaires allowed a great scope for learner self-reflection (Yeldham, 2017). Fourth, they produced readily analysable quantitative data from answers to closed questions (Yeldham, 2017). Fifth, they were easily administered and addressed to a large number of participants. Sixth, they were not time-consuming compared to the other methods such as reflective diaries, self-reports or interviews. One issue can be caused using this method is that the possibility of the participants on relying on their long-term memory to answer the questions which can make the reliability of the data questionable. To decrease this possibility, the questionnaire was administered straight away after the IELTS and the participants were asked to reflect on their listening during IELTS when answering the questionnaire (Yeldham, 2017).

3.3.3   Pilot study

Pilot study took place in May 2021. All data instruments were piloted prior to data collection with participants having similar characteristics to the actual participants. The duration of each section (The Listening Comprehension test: 40 minutes, The Aural Vocabulary Test: 10 to 15

minutes for a minority of participants, it took 25 minutes, The Listening Strategies Questionnaire 20 to 30 minutes). The IELTS was also piloted with the AVK test in order to know the duration of all the data collection process per one participant.

3.3.4 The data collection procedures

This study has adopted a cross-sectional time horizon which stands for collecting the data at one point in time unlike the longitudinal studies that data collection lasts for a given period of time. The purpose behind this choice is guided by this study purposes in figuring out the effect of AVK and listening comprehension strategies on listening comprehension. Data collection started on Mid May 2021 and lasted for 60 days. Regarding the situation during the Covid-19 Pandemic period and taking into consideration the government updates, it was not advisable to collect data using face-to-face sessions with participants. Contact was made via email or phone to arrange a Teams meeting to sit for the tests and the questionnaire. The consent form and the participants information sheet were sent via emails prior to meetings. Participants were asked to schedule the online meeting with the researcher according to their availability and comfort. They were asked to sit individually in a quiet room and have the answer sheets that were sent to them beforehand ready. Instructions were explained first, and the audio recordings were played by the researcher after testing the equipment used. Participants were provided a reference number that they were given in the email sent to confirm the meeting. This reference number had to be mentioned in every respondent sheet the researcher received.

The participants had taken the Aural vocabulary knowledge test first and were allowed to be played the word recording three times in case there were technical problems like network or sound, and a chance to the participants to clarify any confusions. In some words, participants were asked to provide the meaning or their definition to the word so that there would be no confusion in terms of their lexical knowledge. Participants were asked to provide the definition (their understanding) to the word "Steel" so that the researcher can confirm whether the participants listened to it as Steel and not Steal. Thus, their answer to that question was dependent on which word they heard. Participants were asked to define this word so that to assure they know the exact word they were tested in. For instance, if a participant succeeded in defining the word "Steal" but not "Steel", his/her response would not be considered as correct and, therefore, this would not serve in the word count of their vocabulary knowledge.

Concerning the IELTS listening test, the questions document was sent to the participants during the meeting, and they were not allowed to open unless they were ready for the test. No reading to the questions was allowed prior to playing the audio recordings. This was clearly stated in the shared information sheet and the consent prior to the meetings. Participants were allowed to ask for a pause between the test parts for safety reasons. For instance, once dealing with participants suffering from chronic diseases like Asthma, diabetes to mention few, breaks must be allowed depending on the participants` demands (for taking medications, having a snack, or having a fresh air). The audio recordings were played once and only, and the participants were answering to the questions on a draft paper while listening to the recording. They were asked to copy their answers to the answer sheet provided and to send it to the researcher straight away. The online meeting ended at this stage since they were only left with the questionnaire to respond which was not supposed to be completed during the meeting.

With regards to the last research instrument, the listening comprehension questionnaire, participants were asked to complete it straight after the listening comprehension test. Participants were asked to do so for the reason that they can easily reflect on their listening in general and on their most recent listening activity. They were asked to put their reference number and submit their answers once completed.

3.3.4 Data analysis procedures

The first research question aims to discover the relationship between aural vocabulary knowledge and listening comprehension and to what extent can AVK predict LC. To reach this, statistical analysis was performed using the SPSS (version 25). Data obtained from the two tests were analysed using Pearson correlations to measure the strength of the relationship between the two variables (overall VK and LC). Pearson correlation is the most common test used to measure the relationship between two continuous variables (Dörnyei, 2007) and it was widely used by previous studies in this area (Cheng and Matthews, 2018; Masrai, 2020). Correlation analyses were also run to check which frequency level of the 6 tested frequency levels of aural vocabulary knowledge was connected with listening comprehension and had been executed using regression analysis to check which frequency level can predict listening comprehension.

To answer the second research question, which aims at exploring the different strategies that the participants use in LC and to what extent both variables are connected, Pearson correlations was also used to measure the extent of the connection between the two variables.

Concerning the third research question, that aims to check whether AVK can influence their choice of strategies (for example what strategies are used by the participants to overcome their vocabulary deficiency, whether this deficiency in AVK influenced their choice of strategies). Pearson correlations was used to verify whether aural vocabulary knowledge and listening strategies are connected. For further analyses and to provide a complete answer to this question, participants were divided into two groups. The division of these groups is based on their level of aural vocabulary knowledge which resulted in a high and low AVK groups. Further correlational analyses were executed on the two different groups of 23 participants each. Division of the groups was based on the participants` scores in the AVK test. Participants with very high scores or very low scores were selected. Each group was consisted of 23 element and the remaining 12 participant were excluded from being categorized under any group for the reason that their scores were medium. T test was performed to investigate on the difference between these two groups in terms of listening comprehension strategies.

3.3.6 Ethical considerations
Any research requiring collecting data about or from people demands from the researcher to take into consideration ethical issues as a protection for the participants (Creswell,2013). Prior to data collection, ethical approval was received from the university`s ethical committee. Regarding the participants, they were postgraduate students over 25 years old. They were sent an information sheet and a consent form prior the online meetings. They were informed to read

the information sheet that contain all the information about the study aims, procedures, assurance of confidentiality, and the benefits and risks of participation for both parts (the researcher, and the participant). They were informed that their participation is completely voluntary and that they have the right to withdraw at any time during that study. Contact details of the researcher were also provided in case any further enquiries. Participants were informed as well that this study is anonymous and that they were to be addressed with a unique reference number given by the researcher and that they have to mention it in every response or answer sheet for the reasons of data organization. Copies of information sheet and consent form are presented in the appendices.

Chapter 4 Findings and Discussion

4.1 Introduction

This chapter presents findings from the analysis of data and discusses them in relation to the existing literature in the area. As an introduction, this chapter begins by giving details of the statistical tests, and descriptive statistics from all the participants. Then, the analysis of data from the questionnaire and the tests are presented. The findings will be discussed in relation to the three research questions. The main emphasis of this study is related, first, to unpacking listening comprehension through investigating on the relationship between aural vocabulary knowledge and listening strategies. Second, it explored the different listening strategies used by EFL learners to achieve understanding of the aural input; and how aural vocabulary knowledge can influence their choice of the listening strategies. Hence, the current chapter illustrates the findings and discusses their implications regarding the three research questions.

4.2 Restating the research questions

This study aims to answer the following research questions:

RQ 1: To what extent does aural vocabulary knowledge predict listening comprehension?

RQ 2: To what extent do the different listening strategies correlate with listening comprehension?

RQ 3: To what extent does the aural vocabulary knowledge influence the listeners` choice of the listening strategies?

4.3 Data presentation and discussion

RQ 1: To what extent does aural vocabulary knowledge predict listening comprehension?

The first research question in this study was to examine the relationship between aural vocabulary knowledge and listening comprehension. To reach this, the effect of the vocabulary knowledge score on listening was examined through using the IELTS listening test and the A-Lex (an aural vocabulary test) to collect data. Statistical analysis was performed using the

SPSS (version 25). Data obtained from the two tests were analysed using Pearson correlations to measure the strength of the relationship between the two variables since Pearson correlation, the most common test used to measure the relationship between two continuous variables (Dörnyei, 2007), was widely used by previous studies in this area (Cheng and Matthews, 2018; Masrai, 2019). Data were further analysed through linear regression analysis to examine what extent it predicts variance in listening comprehension with regards to the different five frequency levels of lexical coverage.

The conjecture of normality presumes that data points on each variable should be distributed around the centre of the scores. Distribution of the data should be checked via the two commonly used normality tests: the Kolmogorov-Smirnov and the Shapiro-Wilk in order to proceed with data analysis (Field, 2010). To achieve normal distribution, significance values should be greater than 0.05 (P> .05). The results in table 4 showed that the test values for the student listening and AVK tests were not significant (p > .05), thus they were normally distributed.

Table 4: Test of normality distribution for the overall AVK and the LC test

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
listening comprehension test	.127	59	.019	.951	59	.018
Overall AVK	.119	59	.037	.940	59	.006

a. Lilliefors Significance Correction

Table 4 demonstrates the tests of normality that were executed to test whether the overall scores of the aural vocabulary knowledge and the listening comprehension tests were normally distributed. The Kolmogorov-Smirnov and the Shapiro-Wilk tests were run to achieve this task. Significance values from both test for the overall AVK and LC demonstrate that data are not normally distributed since all the four values of significance are lower than .05.

The following table gives the descriptive statistics for the Aural Vocabulary Knowledge test and the Listening Comprehension test.

Table 5: Descriptive statistics for overall AVK and LC

	N	Minimum	Maximum	Mean	Std. Deviation
Overall AVK	59	61	119	101.61	10.872
LC	59	15	38	30.25	5.050

Table 5 demonstrated the descriptive statistics run on the aural vocabulary knowledge and the listening comprehension tests. On a sample of N=59 participants, the minimum value of the AVK reflected that the minimum lexical coverage of the participants is covering the knowledge of 50% of the tested items (Min= 61 out of 120 target items). Whereas the maximum level reveals the fact that there were participants that showed almost a 100% of the aural lexical coverage (Max = 119 from 120 target items). Regarding the listening comprehension test, the minimum value referred to the lowest score in the listening test was Min= 15 out of 40, and the maximum values to the highest score of the test was Max =38 out of 40. Both values reflect that there were participants with very low as well as with a very high listening proficiency.

Table 6: Correlation analysis between Overall AVK and LC

Listening comprehension test	Overall AVK	
	Pearson correlations	Sig
	.581**	.000
**. Correlation is significant at the 0.01 level (2-tailed).*		

As illustrated in Table 6, data shows that there is a positive relationship between the participants` listening comprehension and their aural vocabulary knowledge. The overall scores of the two variables demonstrate that there is a fairly strong and a significant correlation between listening comprehension and aural vocabulary knowledge with r= .58 and p < .01. This can be illustrated as well in the following figure.
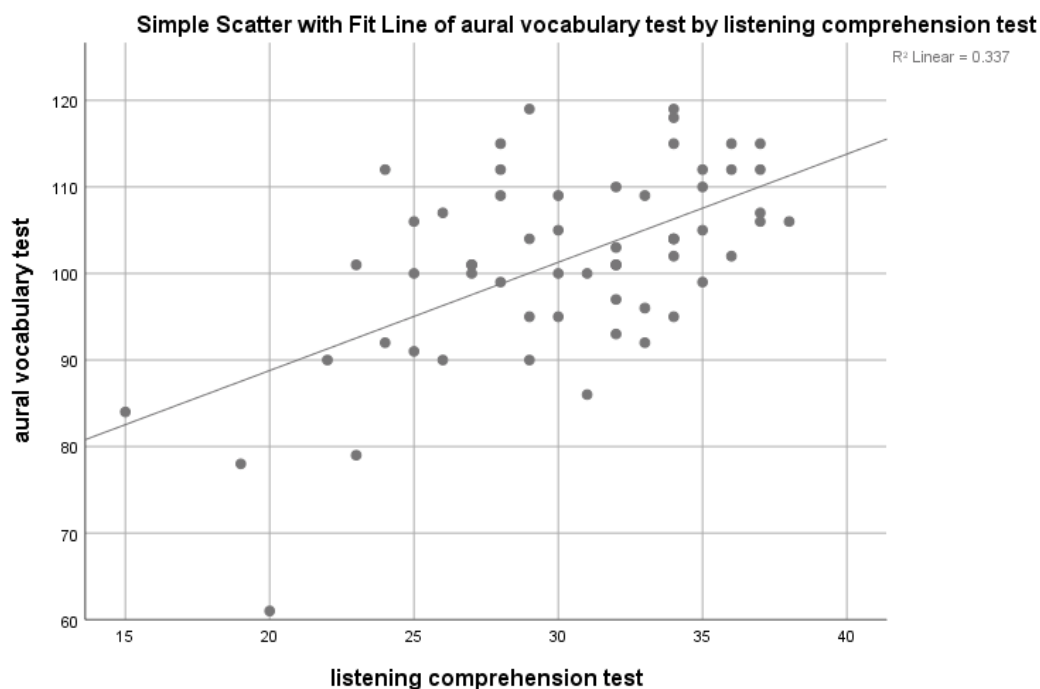
Figure 1: Graph illustrating the correlation between Overall AVK and LC.

Table 7: Linear regression analysis for overall AVK and LC

Predictor	R	R Square	Adjusted R Square	Std. Error of the Estimate	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
					B	Std.Error	Beta		
Overall AVK	.581ᵃ	.337	.326	4.147	.270	.050	.581	5.388	.000

Table 7 illustrated the linear regression results that confirmed the relationship between aural vocabulary knowledge and listening comprehension. It showed that they are not only correlated with R= 0.33 and significance of P=.00, but also that aural vocabulary knowledge can predict listening comprehension by .33. (i.e. aural vocabulary knowledge could explain the variance in listening comprehension by 33%).

To deeply examine the nature of the existing relationship between LC and AVK, more correlation analyses were run using detailed scores of the AVK test. The following set of correlation analyses corresponds to the different frequency levels of the aural vocabulary knowledge test (from the 1000 to the 5000 most frequent word families) and the listening comprehension test. The main foci behind these analyses was to disentangle the vocabulary knowledge variable and to explore which part exactly of it was related to listening comprehension.

Table 8: Descriptive statistics for the 5 frequency levels of the AVK test

AVK 1		AVK 2		AVK 3		AVK 4		AVK 5	
Min	max	Min	Max	Min	Max	min	Max	min	max
9.00	20.00	9.00	20.00	2.00	20.00	10.00	20.00	8.00	20.00

Table 8 demonstrated the descriptive analysis of the five frequency levels of the aural vocabulary knowledge test. The five frequency levels are compiled of 1000 word per each (AVK 1: the first most frequent 1000 word families, AVK 2: the second most frequent 1000 word families, AVK 3: the third most frequent 1000 word families, AVK 4: the fourth most frequent 1000 word families, and AVK 5: the fifth most frequent 1000 word families). It showed the minimum and the maximum values of every frequency. It is noticeable that all the frequency levels have an equal maximum value (Max= 20) which indicated that there were

participants that could reach complete knowledge of some frequency levels since every frequency level contained 20 target items that the participants were tested on. However, the minimum values showed a different pattern where the highest scores among the min values were for the first, the second, the fourth and the fifth frequency levels (Min= 08, 08, 09, 10 respectively).

Table 9: Correlations between every frequency level of the AVK and the overall score of LC.

	AVK 1		AVK 2		AVK 3		AVK 4		AVK 5	
Listening comprehension test	PC	Sig	PC	Sig	PC	Sig	PC	Sig	PC	Sig
	.377**	.003	.468**	.000	.471**	.000	.518**	.000	.493**	.000

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

The above table illustrates the relationship between the different five frequency levels of the aural vocabulary knowledge test and listening comprehension. Pearson correlations show that all the five level of frequency had positive and significant correlations with listening comprehension with various strengths. The frequency level that had the highest correlation with listening comprehension was the fourth level (AVK 4) with R= .51 and P< .01 It was followed by Level 5, 3 and 2 with approximately the same values (R= .49, R= .47 and R= .47 and with P< .01 Respectively). Level 1 was the level with the weakest correlations among all the five levels of frequency with R= .38 and P< 0.01.

Table 10: Multiple linear regression analysis of the five frequency levels of AVK and LC.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	sig
1	.651ᵃ	.424	.370	4.009	.00

a. Predictors: (Constant), AVK5, AVK 3, AVK 1, AVK 4, AVK 2

As illustrated in table 10, a multiple regression was run to predict listening comprehension from various levels of aural vocabulary knowledge (1000 frequency level, 2000 frequency level, 3000 frequency level, 4000 frequency level, and 5000 frequency level). These variables statistically significantly predicted listening comprehension by R^2 =.424. and significance of

P=.00 Taken as a set, all the frequency levels of AVK are considered as predictors of listening comprehension. They account for 42% of the variance in listening comprehension.

Table 11: ANOVA test for the five frequency levels of AVK

	Model	Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	627.417	5	125.483	7.808	.000[b]
	Residual	851.769	53	16.071		
	Total	1479.186	58			

a. Dependent Variable: listening comprehension test

b. Predictors: (Constant), AVK 5, AVK 3, AVK 1, AVK 4, AVK 2

Table 11 demonstrates the ANOVA test for the five frequency levels of AVK. Data shows that all the five frequency levels of aural vocabulary knowledge were entered in one model. The results demonstrate that the overall model is significant by P=.000. This level of significance reflects that there are differences between the five frequency levels of aural vocabulary knowledge in relation to listening comprehension. Hence, there is very strong evidence to reject the null hypotheses.

Table 12: Coefficients from multiple regression analysis for the five frequency levels of AVK

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.100	6.807		.309	.759
	AVK 1	-.903	.693	-.275	-1.304	.198
	AVK 2	1.049	.645	.346	1.626	.110
	AVK 3	.588	.216	.323	2.727	.009
	AVK 4	.482	.385	.224	1.252	.216
	AVK 5	.362	.305	.198	1.189	.240
a. Dependent Variable: listening comprehension test						

Table 12 represents results of coefficients for the five frequency levels of aural vocabulary knowledge. Coefficients are responsible for demonstrating which of the five frequency levels

of AVK can predict LC. Findings tell that the third frequency level (AVK 3) can significantly predict listening comprehension by .59 and by p=.009. this table also demonstrates that the mentioned level is the only significant predictor of listening comprehension among all the five frequency levels.

This question aimed at assessing the importance of aural vocabulary knowledge and listening comprehension in depth and exploring the relationship between the two among a sample of native-Arabic speaking postgraduate students in the UK. It also aimed to examine in depth this relationship through computing the correlation of all the five frequency levels of the aural vocabulary knowledge with listening. Further analyses were executed to reveal to what extent the AVK can predict LC and which frequency level can predict the variance the most.

The current study`s findings indicated that EFL postgraduate students in the UK tend to rely on their aural lexical knowledge to comprehend the listening input. The analysed data demonstrated that the two investigated variables are positively and significantly correlated by R= .58 and P= .00 (See table 6). Further correlation analyses were executed to disentangle the role of aural vocabulary knowledge in listening comprehension via analysing every frequency level of the AVK. Data revealed that the strongest correlation among all the frequency levels was between the fourth level and listening comprehension by R=.5. This value was followed by the fifth and the third levels with moderate connections and to a lower extent the first and the sixth levels respectively (see table 9).

Concerning the regression analyses that were executed for the purpose of verifying whether the overall score AVK variable and the five frequency levels of AVK can predict the LC variable, multiple regression analyses were run. Data demonstrated that aural vocabulary knowledge could predict listening comprehension and explained of the variance by 34% (see table 7). Findings of the current research also showed that all of the frequency levels are considered as predictors of LC by 42% all together and that the third frequency level of aural vocabulary knowledge (AVK 3) is the most predictor of listening comprehension amongst all of the other frequency levels by B=.59 and by significance of p=.009.

Studies in this area have mainly focused on the effect of written vocabulary knowledge more than any other type of vocabulary knowledge. This makes the studied variable under researched. Hence, this study provided empirical evidence on the impact of AVK on LC that will enrich this ignored area in the literature. In terms of the general literature in the field, the findings of this study are in line with the previous findings as far as the general notion of vocabulary knowledge is concerned (e.g., Staehr, 2008, 2009; Wang and Treffer`s Daller, 2017; Cheng and Matthews, 2018; Masrai, 2020). This indicates the findings of this study supported previous finding in terms of the importance of vocabulary knowledge in listening comprehension and the strong connection between the two. However, a major concern has to be taken into consideration which is the difference between measuring aural and written vocabulary knowledge in addition to the multidimensional nature of vocabulary knowledge. Acknowledging the differences between the modes of vocabulary knowledge (aural vs written), it is not appropriate to use written measure to test the relationship between vocabulary knowledge and a phonological-based aspect like the listening comprehension. Though, studies

that have followed these measures have proved that there is a strong connection between the two variables by r=.53 and r=.49 for written breadth and depth respectively (Staehr 2008, 2009); and studies that investigated the roles of many variables other than vocabulary knowledge (Wang and Treffers-Daller 2017, Vandergrift and Baker, 2015, 2018; (Stewart et al., 2021) Ha, 2021) have confirmed that vocabulary knowledge is the most predictor of listening comprehension with the strongest connection compared to the other variables, but only the aspects of vocabulary knowledge that they measured. Therefore, having a successful investigation on the effect of vocabulary knowledge in listening comprehension is related to measuring the vocabulary knowledge from a different angle. Hence, the vocabulary measures used in the earlier studies (namely: written measures) cannot reveal the breadth of the phonological vocabulary the participants own nor the effect that vocabulary knowledge has on their listening comprehension, but aural vocabulary knowledge can do since it shares similar characteristics with listening comprehension i.e. receiving aural input to proceed with the comprehension process.

Some researchers took this aural/ written difference into consideration and applied it in their studies such as Matthews and Cheng (2018) who found that the productive phonological vocabulary knowledge that they measured (along with the receptive and the productive orthographic vocabulary knowledge) is strongly associated with L2 listening comprehension by r=.71 while the orthographic aspects were connected to listening by only r=.39 and r=.55 respectively. This paper is not very similar to the current one for the reason that the notion of aural vocabulary that was measured is productive. This means that they have been investigating on the spoken vocabulary knowledge rather than the aural. However, in this research, receptive aural vocabulary knowledge was measured and in different frequency levels. In his three papers addressing aural vocabulary knowledge and listening comprehension, Masrai (2020a, 2020b, 2022)has also confirmed the strong association of aural vocabulary knowledge (size only) and L2 listening comprehension. He found that AVK and LC are correlated by r=.78 (2020). In another paper, Masrai (2022) has investigated phonological receptive and productive vocabulary knowledge and found that the receptive vocabulary knowledge is correlated with listening comprehension by r=.59. The current study supports the previous findings and replicates Masrai (2022) study`s results since the correlation values of both studies are very approximate. The factor behind this similarity of the findings between the current research and Masrai (2022) `s was the use of the A-lex as a measure to test the participants` aural vocabulary knowledge. The only difference between these three studies and the current one relies in the fact that the A-Lex test in Masrai`s (2020a ,2020b ,2022) was exclusively used to measure the size of the aural lexical coverage. However, in the current study, this test was used for further purposes. It was detailed and divided into 5 sub scores corresponding to every frequency level. These sub scores were analysed to tell which frequency level of aural vocabulary knowledge is more correlated to LC and which one can predict listening comprehension the most.

Cheng and Mathews (2018) had measured this variable through the use of Word recognition from speech test (WRS). This test that included 89 target items. The difference between this research method and the A-lex that was used in the current study and Masrai (2022) `s is that participants were asked to listen to contextualised samples of spoken language in an effort to produce a target word present within the spoken input. It is developed with a strong focus on ensuring the stimulus sentence within which the target word is embedded does not provide sufficient information for the test taker to systematically identify the target word without first

hearing the stimulus sentence (Cheng and Mathews, 2018). However, the A-lex test focuses on the utterances of individual items and that the test takers should respond with either YES or NO. Using this research method seems to be more accurate than the WRS since it reduces the guessing element though not allowing the participants to any clues such as context. Whereas while using the WRS, context can help the test takers to guess the meaning of the word, hence, this method will not provide accurate lexical knowledge measures.

All the mentioned studies including the current one contrast with that of (Du and Man, 2022) who found that there is a weaker connection between aural vocabulary knowledge and listening comprehension with r=.38. A possible explanation of this might be the measurements used in the study to test the listening comprehension and the vocabulary knowledge. Multiple-choice tests allow participants to provide answers through guessing, hence, it may mislead the researcher and prevents them from reaching accurate results.

Turning now to the connection between the five frequency levels of the aural vocabulary knowledge and listening comprehension. The current research has used the A-lex as a measure to test the participants` aural vocabulary knowledge. This test used words from five different frequency levels representing the first 50000word families from the BNC and COCA lists. Every frequency represents 1000word families which means that the 1K is representing the first 1000 most frequent word families, the 2k is representing the 2000 most frequent word families, and the 5k is representing the 5000 most frequent word families in English. This list includes up to 10000 most frequent word families; however, the current research has used five levels only for two main reasons; first, the A -lex test is compiled of 120 words that represent five levels only (20 words for each level) in addition to 20 pseudo words. Second, the sample used in this study are international postgraduate students that their assumed average of vocabulary knowledge is around the first 5000 most frequent word families.

Another purpose of the first research question is revealing how aural vocabulary can predict listening comprehension. In order to attain this, data are analysed in two parts. The first one is correlational analysis of every frequency level with listening comprehension. The second part of this analysis is regression analysis that helps in realising a narrower investigation of the five frequency levels of aural vocabulary knowledge and which ones are possible to predict the listening comprehension.

Regarding this angle of vocabulary knowledge and in relation to the previous studies, the current study offers evidence in depth for the role of aural vocabulary knowledge in listening comprehension. Most of the available studies have investigated vocabulary knowledge broadly, whereas very rare ones have been devoted to a much narrower focus to include the frequency levels, however, in written measures only. The importance of examining this lied on the fact that it provided a clearer view on how many words listeners should have to achieve the comprehension of an aural input. Previous literature suggested that relatively good listening comprehension with a spoken lexical coverage of 95%. This quota is demanding the knowledge of between 2000 and 3000 of the most frequent word families (Van Zeeland and Schmitt, 2013). In line with this, Adolphs and Schmitt (2003), Nation (2006) confirm that the knowledge of the most frequent 3000-word families can cover 95% or more of the listening comprehension. However, knowing more than the 3000 most frequent word families is of a lesser importance according to Matthews and Cheng, 2015).

The current study`s findings reveal that all the frequency levels are significantly and positively connected to listening comprehension with various values. The fourth level (the 4000 most frequent word families) represents the strongest correlation with listening comprehension among all the five levels followed by the fifth (the 5000 most frequent word families), third (the 3000 most frequent word families) and the second (the 2000 most frequent word families) with very approximate values (by R= .51, R= .49, R=.47, R=.47, respectively). The first (the 1000 most frequent word families) level corresponds to the lowest values of correlations. These results reflect that having 4000-word families of lexical coverage can lead to a successful listening comprehension and that having less than that or slightly more will not make a big difference in one`s understanding of the aural input. These findings are contrary to previous studies which have suggested that lexical coverage of 2000 and 3000 most frequent word families is of more importance in listening comprehension than any other frequency levels (Cheng and Matthews, 2015; Du et al, 2021). Cheng and Matthews (2015) have only looked at the first three levels of frequency using written measure to test the vocabulary knowledge of their sample and found that the first, the second and the third frequency levels correlate with listening comprehension by R= .67; R= .69; and R= .72 respectively.

Another interesting study realised by Du et al (2021) supported Cheng and Matthews (2015) `s findings that the second and the third frequency levels are more connected to listening comprehension than any other level. However, their values are pretty low in comparison with previous and the current studies (Level 1 R= .21; Level 2 R= .35; Level 3 R= .32; Level 4 R= .21 Level 5 R= .28). These results are not in line with what previous researchers have found. They have demonstrated that the second frequency level could explain 12% of the variance in listening comprehension followed by the third one with a difference of only 2% (14%). A possible explanation of these low values could be their use of a multiple-choice test to measure the aural vocabulary knowledge; hence there is a potential use of guessing in the participants` responses which makes the findings of their study questionable.

In sum, the current study`s results contribute a clearer understanding of the role of aural vocabulary knowledge in listening comprehension and which levels of frequency are most likely to be connected with it. While the other studies have mainly focused on written vocabulary knowledge and have used a wide range of instruments to measure vocabulary and listening, this study demonstrates that aural vocabulary knowledge is an important predictor in listening comprehension and that all of the frequency levels of aural vocabulary knowledge could predict listening comprehension. More precisely the fourth frequency level reveals the strongest correlation to LC and the third frequency level of aural vocabulary knowledge predicts the most variance in LC. Hence, the larger lexical coverage the listener has, the better understanding of the listening input will achieve.

RQ 2: To what extent do the different listening strategies correlate with listening comprehension?

The second research question aimed at exploring the different strategies that the participants used in LC and to what extent both variables were connected. Data were collected using a listening comprehension questionnaire based on some standard questionnaires that have already been acknowledged as valid measures by various previous studies (such as the Metacognitive Awareness Listening Questionnaire (MALQ) developed by Vandergrift and the listening strategy questionnaire (Vandergrift, 1997a; Vandergrift et al., 2006) It covered the three types of listening strategies (cognitive, metacognitive and socio-affective strategies. Pearson correlations were used to measure the extent of the connection between the two variables. However, positive correlations do not imply causation. For that reason, in case of positive correlations, the data were further explored for a potential causal relationship between the predictor variables and listening comprehension and a step wise regression analysis were used for this purpose. Step Wise regression analysis were executed to quantify the extent to which each score of the three types of listening strategies and which strategies predicted the variance in the listening comprehension test scores.

Prior to data collection, reliability of the questionnaire was calculates as shown in Chapter 3. The results showed that Cronbach`s alpha of the listening comprehension questionnaire as a whole (46 items) was .87, which is of a good level according to Field (2013).

Table 13: Descriptive statistics of the three types of the listening comprehension strategies

	N	Min	Max	Mean	Std. Deviation	Variance
Metacognitive strategies	58	47.00	94.00	74.4138	9.04576	81.826
Cognitive strategies	58	50.00	94.00	70.1552	10.96534	120.239
Socio-affective strategies	58	6.00	25.00	17.7931	4.11142	16.904
Total score of strategies	58	108.00	205.00	158.2414	19.81255	392.537
Valid N (listwise)	58					

Table 13 presents the descriptive statistics run on the three types of listening comprehension strategies. On a sample of N=59 participants, one value of the questionnaire was missing due to participant not responding to the questionnaire, hence, this is reported as a missing value. The minimum and the maximum and the mean values of both metacognitive awareness strategies and cognitive strategies are very approximate (Min= 47; Min=50; Mean =74.41; Mean=70.15; Max =94 for each respectively) because the numbers of the items of the questionnaire for each type are approximate (22 items and 21 items respectively). Socio-affective strategies values are lower compared to the previous two types is due to the low number of items presented in the questionnaire (6 items) with a minimum of 6 and a maximum

of 25 and a mean of 17.79. Standard Deviation values for all the studied items as illustrated above are low for all the three types of the listening comprehension strategies. This demonstrates that they are clustered close to the mean rendering that the data are normally distributed. The following set of graphs clearly illustrate this.
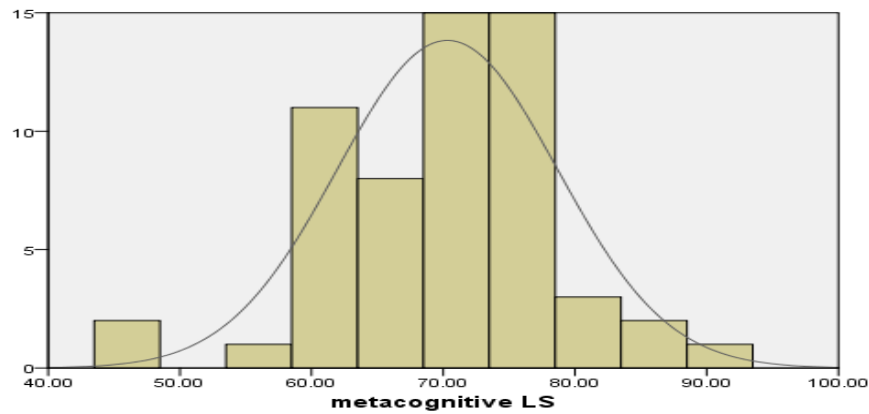
Figure 2: Graph illustrating the normal distribution of metacognitive listening comprehension strategies
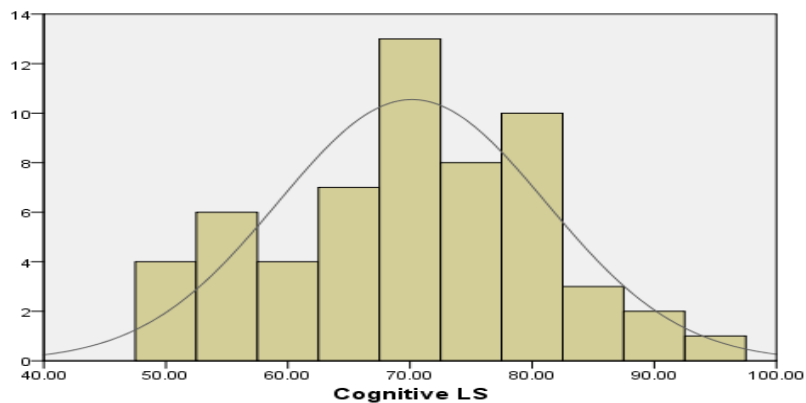
Figure 3: Graph illustrating the normal distribution of the cognitive listening comprehension strategies
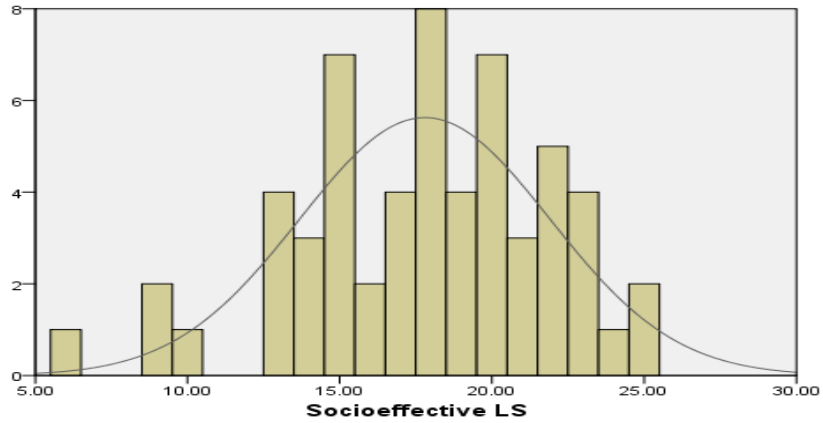
Figure 4: Graph illustrating the normal distribution the socio-affective listening comprehension strategies
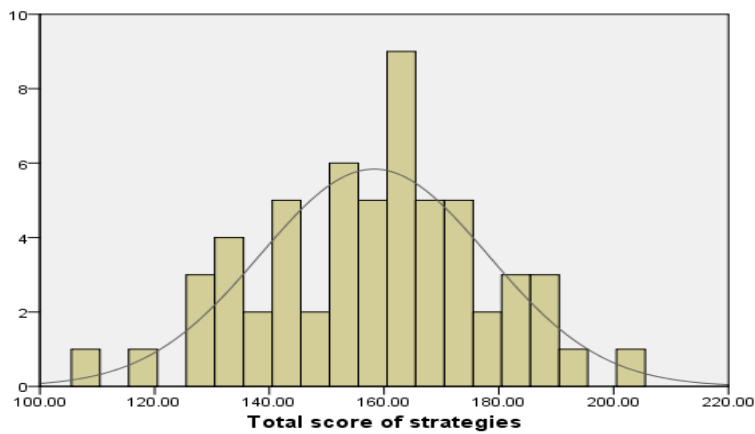
Figure 5: A graph illustrating the normal distribution of the listening comprehension strategies

Table 14:Pearson correlations of listening comprehension with the overall score of listening strategies and their three different types

	Total score of strategies	Metacognitive strategies	Cognitive strategies	Socio-affective strategies
Pearson correlation	.090	.015	.135	.048
Sig. (2-tailed)	.500	.910	.312	.722
N	58	58	58	58

Table 14 represents the Pearson correlation analyses that were executed on the total score of listening comprehension strategies and the three different types of listening comprehension strategies (Metacognitive strategies, Cognitive strategies, and Socio-affective strategies).

Results demonstrate that there is no single variable among these four is correlated with listening comprehension since tall of their significance values are greater than .05 (P= .50; .91; .31; .72). This indicates that the represented positive R values positive are not statistically significant. This leads to the conclusion that these results only occurred by chance and that there is not enough evidence to say that this correlation exists in the population. Further correlational analysis is run on individual items from the listening comprehension strategies questionnaire to explore which ones are connected to listening comprehension (presented in table 15). The rationale behind running the correlation between individual items of LC strategies and the overall LC score is to provide more detailed data on the relationship between LC strategies and LC in terms of single items. Grouping the strategies into three different categories (metacognitive, cognitive, and Socioaffective strategies) and one overall score (listening comprehension strategies) might be covering the role of some of the strategies that might be linked to LC. Therefore, their role would never be exposed unless being executed individually. In short, it is necessary to run Correlation analyses to exactly verify which strategy is linked to listening comprehension.

Table 15: Pearson correlations on the 46 individual items of the listening comprehension strategies questionnaire

		listening comprehension test
listening comprehension test	Pearson Correlation	1
	Sig. (2-tailed)	
	N	59
Before I start to listen, I have a plan in my head for how I am going to listen	Pearson Correlation	0.186
	Sig. (2-tailed)	0.163
	N	58
As I listen, I quickly adjust my interpretation if I realize that it is not correct.	Pearson Correlation	.317*
	Sig. (2-tailed)	0.015
	N	58
After listening, I think back to how I listened, and about what I might do differently next time.	Pearson Correlation	0.227
	Sig. (2-tailed)	0.087
	N	58
I use the unknown words in an utterance to guess their meaning	Pearson Correlation	0.124
	Sig. (2-tailed)	0.354
	N	58
	Pearson Correlation	0.190

I use information beyond the sentential level to guess the meaning	Sig. (2-tailed)	0.152
	N	58
I use a combination of questions and world knowledge to brainstorm logical possibilities.	Pearson Correlation	.317[*]
	Sig. (2-tailed)	0.015
	N	58
I use knowledge of one language (eg. cognates) to facilitate listening in another	Pearson Correlation	0.153
	Sig. (2-tailed)	0.253
	N	58
I use available reference sources of information about the target language, including dictionaries, textbooks, and prior work.	Pearson Correlation	0.176
	Sig. (2-tailed)	0.186
	N	58
I recall information based on grouping according to common attributes	Pearson Correlation	0.140
	Sig. (2-tailed)	0.293
	N	58
When I guess the meaning of a word, I think back to everything else that I have heard, to see if my guesses make sense.	Pearson Correlation	0.216
	Sig. (2-tailed)	0.104
	N	58
*. Correlation is significant at the 0.05 level (2-tailed).		
**. Correlation is significant at the 0.01 level (2-tailed).		

Table 15 provides the correlations among 10 items out of 46. These ten items were selected to be presented in this table for the reason that they are the only items that show positive connections with listening comprehension which is higher than the remaining 36 ones, yet not all of them achieved significance since there were some P values greater than 0.05. The strongest correlations among these ten items are:

"As I listen, I quickly adjust my interpretation if I realize that it is not correct."

and

"I use a combination of questions and world knowledge to brainstorm logical possibilities."

with equal values of R= .31 and P<.05. These two items have achieved positive significant correlation with listening comprehension. As they reflect the two most important listening comprehension strategies out of a total number of 46 various ones.

Language competence is a crucial component in listening comprehension; however, it is not the only element that listeners rely on in their listening comprehension. Following Buck (2001) `s listening ability model, listeners must use their strategic competence in addition to their language competence to succeed in listening comprehension. Therefore, the main purpose of this question is delving into the different strategies used by the participants and to what extent they are relating to listening comprehension. Also, it aims to explore whether there are any strategies that could predict the variance in listening comprehension or not. This question is not only looking at three different types of listening comprehension strategies (cognitive, metacognitive, and socio-affective strategies), but also it is examining the listening comprehension strategies at an individual level.

The current study`s findings indicate that EFL postgraduate students in the UK tend to rely only on their vocabulary knowledge and neglect their strategic knowledge since none of the results illustrated above showed significance concerning the LC strategy use (See table 14). Studies in this area have mainly focused on the use of metacognitive strategies more than any other strategy. This makes the other two strategies under researched. In terms of the general literature in the field, these finding are slightly consistent with that of Serri et al. (2012) who was one of the few researchers that investigated on the use of listening strategies in general. They found that all of their participants used cognitive strategies more than the metacognitive and the socio-affective ones, whereas the current study has found that metacognitive strategies was the least used strategy among the participants.

With regard to their connection to listening comprehension, data demonstrate that this connection is positive, yet, very weak (R= .015 and R= .048 for metacognitive and socio-affective strategies and a slightly higher correlation concerning cognitive strategies with R= .13). Unexpectedly, correlation analyses are not statistically significant (P>0.05). This indicates that there is not enough evidence to prove the existence of this low correlations between the three different types of listening comprehension strategies and listening comprehension. Hence, there is no relationship between the two variables. These findings do not seem to be consistent with Ramli et al (2019) which found that the metacognitive strategy was most frequently used by the students in listening; it can be seen from the percentage of the metacognitive strategy (60.5%), Cognitive Strategy 58.8%, and Socio-affective Strategy 57.8%. The findings of Sok and Shin, (2022) are in the same line with the previously mentioned two and contradicting the current findings. They have found that listening strategies had significant influence on their participants` listening comprehension and that the students' listening strategies influenced listening comprehension significantly with sig. value (.00). Though their results resemble significant, they are still moderate when comparing it with the other individual selected (Aptitude). The current study is not supporting those mentioned because of the criteria of the undertaken research itself. They had mainly looked at

metacognitive listening strategies only. The common point between those studies is that they have investigated on listening strategies solely without dipping into other factors that may predict listening comprehension that can fit not one model. In addition to the different measures they tend to use to collect data and analyse them. Hence, comparisons between the current study and the previously mentioned ones is challenging. Both of the studies have utilized the MALQ for the metacognitive strategies; however, they have used different measures to test their participants` listening comprehension performance. Sok and Shin, (2022) have used the listening comprehension subtest of the Wechsler Individual Achievement Test-Third Edition. This test contains 20 items and is 20 minutes long. It requires from the participants to listen to some English passages and answer the questions accordingly. Ramli et al (2019) have developed a listening comprehension test that contains 6 transcripts, 3 short conversations, 1 dialogue, and narrative and descriptive listening text. Participants were required to answer TOFL like (questions multiple choice). In terms of the sample, the former study was applied on 6th grade ESL pupils, and the later was applied on ESL university students.

It is encouraging to compare these results with those found by other studies with similar characteristics; namely, studies that investigated various factors in addition to the listening comprehension strategies such as Tavakoli et al. (2012) and Wang and Treffers-Daller (2017) who investigated on the effect of metacognitive awareness, general language proficiency and vocabulary size found that the variable which had the most modest correlation was metacognitive awareness (in comparison with the others that showed higher correlations).

To enhance this study`s findings, further correlational analyses are executed on forty-six individual listening strategies, and findings demonstrate that only two of them could show positive significant connections with listening comprehension that is slightly higher than the others. Expectedly, one of them was a cognitive strategy, and the other was a metacognitive strategy with equal values of R= .31 and P<.05 (as mentioned in the previous section). However, none of the socio-affective strategies was individually contributing to listening comprehension. The metacognitive strategy that the participants tend to rely on their listening comprehension ("As I listen, I quickly adjust my interpretation if I realize that it is not correct.") indicates that the listeners are tentative about their listening and that they are ready to take suitable actions to achieve successful listening comprehension. The cognitive strategy that they tend to frequently use in their listening comprehension ("I use a combination of questions and world knowledge to brainstorm logical possibilities.") implies that the participants are relying more on their background knowledge through relating new aural input to their stored information to generate understanding of the received aural information. These findings are contributing to the existing body of literature in the sense that none of the studies before (to my knowledge) has detailed the statistical analysis with regard to listening comprehension strategies link to listening comprehension. The only existing evidence on this type of relationship is general either to metacognitive strategies only, and to a lesser extent to the listening comprehension strategies in general.

To conclude this section, the literature identifies that both linguistic factors and strategic knowledge play an important role in listening comprehension, although the former appears to contribute more than the latter (Wang and Treffers-Daller, 2017). The current section supports what has the literature declared so far, however to a restricted extent. For instance, the current

findings indicate that not all of the listening strategies are important for listening comprehension but only few items (as previously discussed) and that the aural vocabulary knowledge factor is much more considerable than the listening comprehension strategies. Thus, focus should be directed to enhancing the learners` aural vocabulary knowledge level to succeed in listening comprehension. Another important element that this section stressed on is that the fact that other studies have mainly focused on the relationship between listening comprehension strategies and mostly metacognitive awareness` relationship with listening comprehension. As a reaction to this, the current study has not only explored the connection between AVK and listening comprehension strategies, but also, it disentangled them from different levels. It started from the broad variable to the most detailed ones (from total scores of strategies to individual items of the questionnaire).

RQ 3: To what extent does the aural vocabulary knowledge influence the listeners` choice of the listening strategies?

The third and the last research question of this study targeted to look at a different angle of this study and to bridge between the two listening comprehension factors. To this end, it aimed to check whether AVK can influence the participants` choice of strategies (for example what strategies were used by the participants to overcome their vocabulary deficiency, whether this deficiency in AVK influenced their choice of strategies). In the first phase of the analysis, Aural vocabulary knowledge test scores were divided into low and high groups. Each group consisted of 23 cases. The rationale behind this number was that the researcher aimed at having two equal groups reflecting high and low lexical coverage. Participants with medium lexical coverage were excluded from the classification. Independent Sample T-Test was used to compare the two groups to verify whether the use of the listening comprehension strategies from high and low lexical coverage participants. This division served the study and particularly this question to investigate on whether the level of aural vocabulary knowledge could have an impact on the listening comprehension strategies.

Table 16: descriptive statistics for the two levels AVK groups regarding listening comprehension strategies

Group Statistics				
AVK	N	Mean	Std. Deviation	Std. Error Mean
Low AVK	23	162.4545	18.32700	3.90733

Listening comprehension strategies	High AVK	23	167.2174	20.60882	4.29724

The table illustrated above represents the descriptive statistics for the low AVK and the high AVK groups. Both groups are consisted of the same number of participants N=23. The low AVK values in terms of Mean, Std Deviation and Std Error Mean are lower than those of the high AVK values. The main aim behind the division of the sample to two groups is to verify whether the level of aural vocabulary lexical coverage of the participants can influence their strategy use while listening or not. Hence, this division is based on their level of aural vocabulary knowledge which resulted in a high and low AVK groups.

Table17 : Independent Sample T Test of the low and high AVK groups` listening comprehension strategies

| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | | 95% Confidence Interval of the Difference | |
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference		Lower	Upper
Listening comprehension strategies	Equal variances assumed	.033	.856	-.818	43	.418	-4.76285	5.82350		-16.50705	6.98135
	Equal variances not assumed			-.820	42.781	.417	-4.76285	5.80805		-16.47763	6.95194

The illustrated table above demonstrates that data from both groups are not significant since their P value is greater than .005. Therefore, this study found that participants of low AVK and high AVK are similar and that there is no difference between the two groups with regard to their use of listening comprehension strategies. This might explain the possibility that the selected sample depend more on their aural vocabulary knowledge than their strategy knowledge.

Table 18: Correlation analysis between the total score of strategies, its three different types and the overall AVK

		Metacognitive strategies	Cognitive strategies	Socioaffective strategies	Total score of strategies
Overall AVK	Pearson Correlation	.046	.210	.081	.150
	Sig. (2-tailed)	.729	.113	.545	.262
	N	58	58	58	58

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

Table 18 demonstrate the correlation analyses that were executed between the overall score of aural vocabulary knowledge and the total score of listening comprehension strategies in addition to its three different types (metacognitive strategies, cognitive strategies, and Socioaffective strategies). The rationale behind executing these statistics relies on the fact that the results from the T Test are not statistically significant; hence, they did not demonstrate that there exists a relationship between the level of AVK and listening comprehension strategies with its three different types (see table 17). As illustrated above, results indicate that there are no correlations between the executed variables since all the significance values are greater than .05 (p= .72; .11; .54; and .26). Therefore, all the executed statistical tests reveal that there is no relationship between aural vocabulary knowledge and listening comprehension strategies.

Aural vocabulary knowledge has a pivotal role in listening comprehension along with the different listening comprehension strategies; although, they do not share the same level of importance when it comes to impacting listening. The current study`s findings indicate that AVK`s role is much more crucial than that of listening strategies. However, whether there is a connection between these two vital elements or not is still a blur in the existing body of knowledge. This section of the chapter sheds light on this relationship and on whether aural vocabulary knowledge can influence the listeners' choice of their strategies.

Very interesting findings are revealed through the independent T Test. After splitting the sample into two groups with regards to the participants` aural vocabulary knowledge (N=23 for each group), descriptive and T test analyses are executed to explore which group of the two outperforms the other in terms of listening strategies scores and whether there are any differences among in the connections between these variables.

This finding broadly contradicts the work of other studies in this area linking linguistic knowledge with strategic competence. (Taheri et al., 2018; Fung and Macaro, 2021) who investigated on how linguistic proficiency (which is part of the listening ability (Buck, 2001)) affect the use of listening strategies. This study has contributed relatively to this area through focusing on two important components of linguistic knowledge (vocabulary and grammar). They found out that high linguistic knowledge group use more strategies than the low linguistic knowledge group. These findings confirmed (Goh`s (2002) assumptions and (Graham et al., 2010) `s findings on the listeners of high linguistic knowledge are freer (from the task constraints) to use numerous and various number of strategies than the low linguistic knowledge ones. This study is very important since it is the only one that went beyond the basic proficiency and listening strategies relationship through exploring linguistic knowledge which is part of listening proficiency. However, its findings are exclusively limited to some aspects of linguistic knowledge (grammar and vocabulary) that do not represent all the aspects involved in forming the linguistic competence of the listener nor on the different types of listening comprehension strategies. Another key problem with this study is that the aspects included are presented very superficially and there was no attempt to investigate them in depth.

This section has attempted to provide a clear understanding of the nature of the connection between two independent factors that predict listening comprehension and on whether there is a possibility of one influencing the other. Thus, it brings focus to an angle that is not really receiving much interest in the literature in comparison to the impact of direct factors on listening comprehension. Results illustrated that there is no relationship between the listening comprehension strategies and aural vocabulary knowledge since both high and low levels of AVK groups showed no difference in their use of the listening comprehension strategies. Therefore, AVK cannot influence the listeners` choice of the listening comprehension strategies.

4.4 Conclusion

In conclusion, this chapter offers findings from the analysis of data and discusses them in relation to the current literature in the area and from various angles. its main purpose was to first, unpack listening comprehension through investigating on the effect of aural vocabulary knowledge. Second, to explore the different listening strategies used by EFL learners to succeed in understanding the listening input; and how aural vocabulary knowledge can influence their choice of the listening strategies. It has provided clear evidence for the fact that aural vocabulary knowledge explains unique variance over and above listening comprehension strategies in listening comprehension and this gives it the status of the most important contributor in listening comprehension. It also gave insights on the role of listening comprehension strategies in listening comprehension compared to aural vocabulary knowledge and provided answers to the research questions.

RA 1: Aural vocabulary knowledge is the most important factor in listening comprehension since the two variables are strongly correlated by R=.58. All the frequency levels of AVK correlate with listening comprehension and mostly the fourth level (AVK 4). All the frequency levels could predict LC and strongly the third level (AVK3).

RA 2: The three types of listening comprehension strategies have no connection with listening comprehension in various numbers. Since the overall score of each component of the LC strategies questionnaire is not significantly correlated with the overall LC score. Only two single items in the LC strategies questionnaire are correlated with the overall LC score

RA 3: AVK cannot influence the choice of listening comprehension strategies and that AVK and listening comprehension strategies are not related.

Conclusion and Limitations

Listening is one of the four language skills. It is vital and considered as the most important skill in language learning. Despite its value, it remains the Cinderella skill in terms of research due to the small number of papers devoted to this skill compared to reading comprehension (Vandergrift, 1997; Vandergrift and Baker, 2018; Wallace, 2022). Due to its complex nature, researchers claim that it is difficult for researcher to develop accurate tests to measure it and for language learner to learn a new language (DU and Man, 2022). This complex construct requires a number of skills and competences to be performed in accurate way. It is influenced by various factors such as aural and written vocabulary knowledge, depth of vocabulary knowledge, L1 vocabulary knowledge, working memory, listening comprehension strategies (Deregözü, 2021).

This study has attempted to disentangle listening comprehension though investigating on the effects of AVK and listening comprehension strategies. It has attempted to obtain the study aims and provide answers to the previously mentioned research questions utilising quantitative study design. The dissertation has investigated the relationship between aural vocabulary knowledge and five different frequency levels of aural vocabulary knowledge with EFL listening comprehension. Particularly, it scrutinized the degree to which overall and 5 different frequency levels of aural vocabulary knowledge relate to, and are able to predict, a measure of listening comprehension.

To my knowledge, this study is the first to tap into the relationship of five various frequency levels of aural vocabulary knowledge. Findings could show that there is a strong relationship between the overall score of AVK and listening comprehension. This confirms that it is the most important contributor to listening comprehension and that every language learner is advised to start with enhancing their aural vocabulary so that to develop their performance in listening comprehension in particular and in language learning in general. with the variance explained in listening performance among postgraduate EFL learners. This study has studied listening comprehension from the part of the listening comprehension strategies as being the second half of the listening ability model. It was presumed that strategic competence is a vital element in listening comprehension and that it serves to facilitate the listening process. However, this study`s data have shown different outcomes. Findings revealed that the listening comprehension strategies are not connected to listening comprehension; therefore, they are not as much important as aural vocabulary knowledge. Consequently, following the listening ability framework, the study`s outcomes provide evidence to classify some of the factors of this level with regard to their contribution to listening comprehension. Aural vocabulary must be prioritized over listening comprehension strategies since it is much more fruitful to have lexical coverage rather than strategic competence. For this reason, the findings of the study is contributing to developing the area of listening comprehension in a second/foreign language context, the area of vocabulary knowledge, and the area of listening comprehension strategies through providing empirical evidence that can be used as a basis for future research.

Although this study design has allowed the researcher to reach all the study aims and to provide answers to every single question, there are some limitations that would result in a stronger study if they could be realised. First, the number of the participants, recruiting a larger sample would be beneficial for this type of research; however, due to time and some practical constrains, the sample of this study was limited to 59. Second, the characteristics of the sample, this study has been applied on a homogenous group of participants that shared a lot of similarities such as the linguistic and the academic backgrounds which are two vital elements in research in such area. More interesting findings would be generated if the sample was heterogenous in terms of linguistic and academic backgrounds. For instance, having a sample of different academic level can result in having several groups to compare. Hence, exploring which participants tend to depend more on strategic competence rather than their language abilities. This study is limited in terms of the mode of data collection which has to be done online due to the COVID-19 Pandemic. What made it more challenging is that participants were tested using aural measures. This would be done better if it was through face-to-face meetings. Having a more hybrid and a larger sample that includes participants with various educational backgrounds would offer more interesting and significant findings. This study has used only quantitative data, adding to the research qualitative data would generate more noteworthy findings.

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Appendices

Appendix **A**

<div align="center">

The listening comprehension test

Reference number:

The IELTS Listening Test

</div>

Part 1   Questions 1-10

Complete the notes below.

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

- Write your answers in the blank space **(…….)**

 Bankside Recruitment Agency

- **Address of agency: 497 Eastside, Docklands**

- **Name of agent: Becky   1…………………………….**

- **Phone number: 07866510333**

- **Best to call her in the   2 …………………………….**

 Typical jobs

- **Clerical and admin roles, mainly in the finance industry**

- **Must have good 3…………………….. skills**

- **Jobs are usually for at least one 4………………………….**

- **Pay is usually   5 £……………………………. per hour**

 Registration process

- **Wear a 6………………………. in the interview**
- **Must bring your 7……………………. to the interview**
- **They will ask question about each applicant`s 8……………………….**

Advantages of using an agency

- **The 9……………………………………. you receive at interview will benefit you**
- **Will get access to vacancies which are not advertised**
- **Less 10……………………. is involved in applying for jobs**

PART 2   **Questions 11-20**

Choose the correct letter **A,B**, or **C**.

- Put your answers in **bold**

Mathews Island Holidays

11. According to the speaker, the company

   A. Has been in business for longer than most of its competitors.
   B. Arranges holidays to more destinations than its competitors.
   C. Has more customers than its competitors.

12. Where can customers meet the tour manager before travelling to the Isle of Man?

   A. Liverpool
   B. Heysham

C. Luton

13. How many lunches are included in the price of the holidays?

    A. Three

    B. Four

    C. Five

14. Customers have to pay extra for

    A. Guaranteeing themselves a larger room

    B. Booking at short notice

    C. Transferring to another date

Questions 15-20

Complete the table below

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

- Write your answers in the blank space **(…….)**

Timetable for Isle of Man holiday

	Activity	Notes
Day 1	Arrive	Introduction by manager
		Hotel dining room has view of the **15……………………….**
Day2	Tynwald Exhibition and Peel	Tynwald may have been founded in the **16………………………………..** not 979.
Day3	Trip to Snaefell	Travel along promenade in a tram; train to Laxey; train to the **17………………………………..** of Snaefell.
Day4	Free day	Company provides a **18………………………………..** for local transport and heritage sites.
Day5	Take the **19……………………..** Railway train from Douglas to Port Erin	Free time, then coach to Castletown-former **20………………………………..** has old castle.
Day6	Leave	Leave the island by ferry or plane.

Part 3   Questions 21-30

Questions 21-26

What did findings of previous research claim about the personality traits a child likely to have because of their position in the family?

Choose **SIX** answers from the box and write the correct letter, **A-H**, next to questions 2-26.

- Write your answers in the blank space **(…….)**

Personality Traits

A. Outgoing

B. Selfish

C. Independent

D. Attention-seeking

E. Introverted

F. Co-operative

G. Caring

H. Competitive

Position in family

21 the eldest child   ……………………………….

22 a middle child   ……………………………….

23 the youngest child   ……………………………….

24 a twin   ……………………………….

25 an only child   ……………………………….

26 a child with much older siblings   ……………………………….

Questions 27 and 28

Choose the correct letter **A, B** or **C**

- Put your answers in **bold**

27 What do the speakers say about the evidence relating to birth order and academic success?

    A. There is conflicting evidence about whether oldest children perform best in intelligence tests.

    B. There is little doubt that birth order has less influence on academic achievement than socio-economic status.

    C. Some studies have neglected to include important factors such as family size.

28 What does Ruth think is surprising about the difference in oldest children`s academic performance?

    A. It is mainly thanks to their roles as teachers for their younger siblings.

    B. The advantages they have only lead to a slightly higher level of achievements.

    C. The extra parental attention they receive at young age makes little difference.

Questions 29 and 30

Choose **TWO** letters, **A-E**

Which **TWO** experiences of siblings rivalry do the speakers agree has been valuable for them?

- Put your answers in **bold**

    A. Learning to share

    B. Learning to stand up for oneself

    C. Learning to be a good looser

    D. Learning to be tolerant

    E. Learning to say sorry

PART 4   Questions 31-40

Complete the notes below

Write **ONE WORD ONLY** for each answer

- Write your answers in the blank space **(…….)**

The Eucalyptus Tree in Australia
Importance

- It provides 31 ……………………………. and food for a wide range of species

- Its leaves provide 32……………………………………. which is used to make a disinfectant

Reasons for present decline in number

A) Diseases

    (i) `Mundulla Yellows`

- Cause

    — Lime used for making 33……………………………………was absorbed

    — trees were unable to take in necessary iron through their roots

    (ii) `Bell-miner Associated Die-back`

- Cause

    — 34…………………………………….feed on Eucalyptus leaves

    — they secrete a substance containing sugar

    — bell-miner birds are attracted by this and keep away other species

B) Bushfires

William Jackson`s theory

- High-frequency bushfires have impact on vegetarian, resulting in the growth of 35……………………………………….

- Mid-frequency bushfires result in the growth of Eucalyptus forests, because they:

    — make more 36……………………………. available to the trees

    — maintain the quality of the 37…………………………………….

- low-frequency bushfires result in the growth of 38`…………………. rainforests`, which is:

— a 39…………………………….. ecosystem

— an ideal environment for the 40…………………………………. of the bell-miner

This is the end of the test.

Thank you for your collaboration.

Appendix B

The Listening Strategies Questionnaire

The statements below describe some strategies for listening comprehension and how you feel while listening in English. This is not a test, so there are no "right" or "wrong" answers. By responding to these statements, you can help yourself and the researcher understand your progress in listening.

This questionnaire contains four sections :

In the first section (Background), you will be asked to answer on some basic questions about your background; and you will be asked to provide your reference number. This reference number will be given to you by the researcher prior to sharing this questionnaire. This reference will be used for research purposes only and will not have any relationship to your identity.

In the rest three sections (Metacognitive awareness, Cognitive, and Socio-affective strategies), you will be asked to give your opinion about the statements (whether you agree or disagree) and rate your opinion on a five-point Likert scale rating from 1 (strongly disagree) to 5(strongly agree) with a neutral point).

1   Strongly disagree: I don`t know this strategy, I have never used it and will never do.

2   Disagree: I don`t know this strategy. I probably have heard of this strategy, but I have never used it.

3   Neither agree nor disagree: I know this strategy, but I am not interested in using it.

4   Agree: I know this strategy, and I sometimes use it.
5   Strongly agree: I really know this strategy, and I use it more frequently (if not always). Please indicate your opinion after each statement.

Circle the number which best shows your level of agreement with the statement. Please circle only ONE number for each statement

* Required

Section 1

Background

1. Are you? (1 Point)

◯ male ◯ female

prefer not to say ◯

2. In what year are you studying? (1 Point)

[   ]

3. please enter your age (1 Point)

[   ]

4. In case you have taken the IELTS before, please enter your listening score and the year you had the test

(1 Point)

[   ]

5. Would you please enter your reference. * (1 Point)

[   ]

Section 2

Metacognitive awareness section

6. Before I start to listen, I have a plan in my head for how I am going to listen. *
(1 Point)

1	2	3	4	5
◯	◯	◯	◯	◯

7. I focus harder on the text when I have trouble understanding. (1 Point)

1	2	3	4	5
◯	◯	◯	◯	◯

8. I find that listening in English is more difficult than reading, speaking, or writing in English *
(1 Point)

1	2	3	4	5
◯	◯	◯	◯	◯

9. I translate in my head as I listen. * (1 Point)

1	2	3	4	5
◯	◯	◯	◯	◯

10.I use the words I understand to guess the meaning of the words I don't understand. * (1 Point)

   1   2   3   4   5
   ◯   ◯   ◯   ◯   ◯

11.When my mind wanders, I recover my concentration right away * (1 Point)

   1   2   3   4   5
   ◯   ◯   ◯   ◯   ◯

12.As I listen, I compare what I understand with what I know about the topic. *
(1 Point)

   1   2   3   4   5
   ◯   ◯   ◯   ◯   ◯

13.I feel that listening comprehension in English is a challenge for me * (1 Point)

   1   2   3   4   5
   ◯   ◯   ◯   ◯   ◯

14.I use my experience and knowledge to help me understand. * (1 Point)

   1   2   3   4   5
   ◯   ◯   ◯   ◯   ◯

15.Before listening, I think of similar texts that I may have listened to. * (1 Point)

1	2	3	4	5
◯	◯	◯	◯	◯

16.I translate key words as I listen * (1 Point)

1	2	3	4	5
◯	◯	◯	◯	◯

17.I try to get back on track when I lose concentration. * (1 Point)

1	2	3	4	5
◯	◯	◯	◯	◯

18.As I listen, I quickly adjust my interpretation if I realize that it is not correct.
*
(1 Point)

1	2	3	4	5
◯	◯	◯	◯	◯

19.After listening, I think back to how I listened, and about what I might do differently next time.
*
(1 Point)

1	2	3	4	5
◯	◯	◯	◯	◯

20.I don`t feel nervous when I listen to English * (1 Point)

    1   2   3   4   5

    ◯   ◯   ◯   ◯   ◯

21.When I have difficulty understanding what I hear, I give up and stop listening *
(1 Point)

    1   2   3   4   5

    ◯   ◯   ◯   ◯   ◯

22.I use the general idea of the audio text to help me guess the meaning of the words that I don`t
understand *
(1 Point)

    1   2   3   4   5

    ◯   ◯   ◯   ◯   ◯

23.I translate word by word as I listen * (1 Point)

    1   2   3   4   5

    ◯   ◯   ◯   ◯   ◯

24.When I guess the meaning of a word, I think back to everything else that I have heard , to see
if my guesses make sense. *
(1 Point)

1   2   3   4   5

○   ○   ○   ○   ○

25.As I listen, I periodically ask myself if I am satisfied with my level of comprehension *

(1 Point)

1   2   3   4   5

○   ○   ○   ○   ○

26.I have a goal in my mind as I listen * (1 Point)

1   2   3   4   5

○   ○   ○   ○   ○

Section 3

The cognitive strategies section

27.I use the unknown words in an utterance to guess their meaning. * (1 Point)

1   2   3   4   5

○   ○   ○   ○   ○

28.I use the tone of voice to guess the meaning of the unknown words in an utterance. *

(1 Point)

1   2   3   4   5

○   ○   ○   ○   ○

29.I use facial expressions, body language, and hand and movements to guess the meaning of
unknown words by a speaker. *

(1 Point)

1 2 3 4 5

◯ ◯ ◯ ◯ ◯

30.I use the background sounds and relationships between the speakers in oral text, material in the response sheet, or concrete situational referents to guess the meaning of unknown words. *

(1 Point)

1 2 3 4 5

◯ ◯ ◯ ◯ ◯

31.I use information beyond the sentential level to guess the meaning. * (1 Point)

1 2 3 4 5

◯ ◯ ◯ ◯ ◯

32.I generally refer to prior personal experience. * (1 Point)

1 2 3 4 5

◯ ◯ ◯ ◯ ◯

33.I use the knowledge I gained from experience in the world. * (1 Point)

1 2 3 4 5

◯ ◯ ◯ ◯ ◯

34.I use the knowledge I gained in academic situations. * (1 Point)

1   2   3   4   5

◯   ◯   ◯   ◯   ◯

35.I use a combination of questions and world knowledge to brainstorm logical possibilities. *
(1 Point)

1   2   3   4   5

◯   ◯   ◯   ◯   ◯

36.I make up a story line, or adopt a clever perspective. * (1 Point)

1   2   3   4   5

◯   ◯   ◯   ◯   ◯

37.I use mental or actual pictures, or visuals to represent information * (1 Point)

1   2   3   4   5

◯   ◯   ◯   ◯   ◯

38.I make a mental or a written summary of language and information presented in a listening task *
(1 Point)

1   2   3   4   5

◯   ◯   ◯   ◯   ◯

39.I render ideas from one language to another in a relatively verbatim manner. *
(1 Point)

1   2   3   4   5
◯   ◯   ◯   ◯   ◯

40.I use knowledge of one language (eg. cognates) to facilitate listening in another. *
(1 Point)

1   2   3   4   5
◯   ◯   ◯   ◯   ◯

41. I repeat a chunk of language (a word or a phrase) in the course of performing in a listening task. *

(1 Point)

```
   1      2      3      4      5
   ○      ○      ○      ○      ○
```

42. I use available reference sources of information about the target language, including dictionaries, textbooks, and prior work. *

(1 Point)

```
   1      2      3      4      5
   ○      ○      ○      ○      ○
```

43. I recall information based on grouping according to common attributes. * (1 Point)

```
   1      2      3      4      5
   ○      ○      ○      ○      ○
```

44. I write down key words and concepts in abbreviated verbal, graphic, or numerical form to assist performance of a listening task. *

(1 Point)

```
   1      2      3      4      5
   ○      ○      ○      ○      ○
```

45. I consciously apply learned or self-developed rules to understand the target language. *

(1 Point)

1   2   3   4   5

46.I select alternative approaches, revised plans, or different words or phrases to accomplish a listening task. *

(1 Point)

```
 1      2      3      4      5
 ◯      ◯      ◯      ◯      ◯
```

Section 4

the socio-affective strategies section

47.I ask for explanation, verification, rephrasing, or examples about the language and/or a task; posing questions to myself. *

(1 Point)

```
 1      2      3      4      5
 ◯      ◯      ◯      ◯      ◯
```

48.Working together with someone other than interlocutor to solve a problem, pool information, check a learning task, model a language activity, or get feedback on oral or a written performance. *

(1 Point)

```
 1      2      3      4      5
 ◯      ◯      ◯      ◯      ◯
```

49.I reduce anxiety through the use of mental techniques that make one feel more competent to perform a listening task. *

(1 Point)

1   2   3   4   5

◯   ◯   ◯   ◯   ◯

50. I provide personal motivation through positive self-talk and /or arrange rewards for oneself during a listening activity or upon its completion. *

(1 Point)

1   2   3   4   5

◯   ◯   ◯   ◯   ◯

51. I become aware of and get in touch with my emotions while listening, in order to avert negative ones and make the most positive ones. *

(1 Point)

1   2   3   4   5

◯   ◯   ◯   ◯   ◯

The Aural Vocabulary Test

This is an Aural vocabulary test. There is a total of 120 words that you will be asked whether you know or not. First, you will be asked to listen to an audio recording that will be played by the researcher. Second, you will have to choose the option that suits you.
Each word will be played independently.

Thank you

* Required

1. Would you please enter your reference number? *

2. Do you know this word? * (1 Point)

   ○ Yes, I do

   ○ No, I do not

3. Do you know this word? * (1 Point)

   ○ Yes, I do

   ○ No, I do not

4. Do you know this word? * (1 Point)

◯ Yes, I do

◯ No, I do not

5. Do you know this word? * (1 Point)

◯ Yes, I do

◯ No, I do not

6. Do you know this word? * (1 Point)

◯ Yes, I do

◯ No, I do not

7. Do you know this word? * (1 Point)

◯ Yes, I do

◯ No, I do not

8. Do you know this word? * (1 Point)

◯ Yes, I do

◯ No, I do not

9. Do you know this word? * (1 Point)

    ○ Yes, I do

    ○ No, I do not

10. Do you know this word? * (1 Point)

    ○ Yes, I do

    ○ No, I do not

11. Do you know this word? * (1 Point)

    ○ Yes, I do

    ○ No, I do not

12. Do you know this word? * (1 Point)

    ○ Yes, I do

    ○ No, I do not

13. Do you know this word? * (1 Point)

    ○ Yes, I do

    ○ No, I do not

14. Do you know this word? * (1 Point)

     ◯ Yes, I do

     ◯ No, I do not

15. Do you know this word? * (1 Point)

     ◯ Yes, I do

     ◯ No, I do not

16. Do you know this word? * (1 Point)

     ◯ Yes, I do

     ◯ No, I do not

17. Do you know this word? * (1 Point)

     ◯ Yes, I do

     ◯ No, I do not

18. Do you know this word? * (1 Point)

     ◯ Yes, I do

     ◯ No, I do not

19. Do you know this word? * (1 Point)

  ◯ Yes, I do

  ◯ No, I do not

20. Do you know this word? * (1 Point)

  ◯ Yes, I do

  ◯ No, I do not

21. Do you know this word? * (1 Point)

  ◯ Yes, I do

  ◯ No, I do not

22. Do you know this word? * (1 Point)

  ◯ Yes, I do

  ◯ No, I do not

23. Do you know this word? * (1 Point)

  ◯ Yes, I do

  ◯ No, I do not

119. Do you know this word? * (1 Point)

○ Yes, I do

○ No, I do not

120. Do you know this word? * (1 Point)

○ Yes, I do

○ No, I do not

121. Do you know this word? * (1 Point)

○ Yes, I do

○ No, I do not

Appendix D
The Consent form

Manchester Metropolitan University

Consent Form

Title of Project: The Effect of Aural Vocabulary Knowledge and Strategy Knowledge on Listening comprehension

The Researcher name: Naima Benyahlou

1.	I confirm that I have read and understood the information sheet Version 3 Date March 2021 for the above project and have had the opportunity to ask questions about the tests and the questionnaire procedures.	
2.	I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason to the named researcher.	
3.	I understand that I will be asked to have an online meeting to take various tests.	
4.	I give permission for my questionnaire and tests` responses to be stored safely (in a password protected file) as part of this research project.	
5.	I understand that my responses will remain anonymous.	
6.	I understand that at my request my test scores can be made available to me.	
7.	I understand that no expenses and payments are involved in this research.	
8.	I agree to participate in this research project.	

The Name of the researcher   Date   signature
The name of the participant   Date   signature

To be signed and dated in presence of the participant.

Signed in two copies, one for the participant and one for the researcher.

To be always kept together with the PIS.

Version: 3   **Date:** March 2021
Ethical approval number (EthOS): 10771   Date: 04/03/2021

Appendix E
The participants` information sheet

Participant Information Sheet

The Effect of Aural Vocabulary Knowledge and Strategy Knowledge on Listening comprehension

1. Invitation to research

I would like to invite you to take part in a research study. My name is Naima Benyahlou, and I am a postgraduate student at the Manchester Metropolitan University. Before you decide you need to understand why the research is being done and what it would involve for you. Please take time to read the following information carefully. Ask questions if anything you read is not clear or would like more information. Take time to whether or not to take part. This research project aims at investigating the effect of aural vocabulary knowledge and strategy knowledge on listening comprehension of Algerian postgraduates in UK universities.

2. Why have I been invited?

Your participation is crucial for my study. You have been invited to take part of this study for two reasons: you are an **Arabic-speaking postgraduate** student in the UK and **English is your foreign language**.

3. Do I have to take part?

It is up to you to decide. I will describe the study and go through the information sheet, which I will give to you. You will have one week to read the participants information sheet and think about the participation. Once you decide to take part in this study, I will then ask you to sign a

Version: 3   **Date:** March 2021
Ethical approval number (EthOS): 10771   **Date: 04/03/2021**

consent form to show you agreed to take part. You are free to withdraw at any time, without giving a reason.

4. What will I be asked to do?

Your participation in this study will involve an online meeting the researcher once to sit for two tests (a listening comprehension test and an aural vocabulary knowledge tests) that will take around 60 minutes, and will be followed by a questionnaire that will last from 20 to 30minutes. Your participation in this study is completely voluntary and you are free to choose the time and date of the tests. There will be breaks between each test and the questionnaire. You are allowed to ask the researcher to pause or stop the test recordings (meetings will not be recorded) whenever you feel uncomfortable or wish to rest, and you have the right to decide when to carry on the tests. You have the right to decide whether to have both of the tests on one day, or on two days.

Your individual data of the questionnaire and the test scores, will be anonymized and given a research code known only by the researcher. A master list identifying participants to the research code data will be held on a password protected computer and on the secure MMU drive accessed only by the researcher.

5. Are there any risks if I participate?

This study does not cause the participants any type of risks.

6. Are there any advantages if I participate?

We cannot promise the study will help you but the information we get from the study will help

to increase understanding of the importance of aural vocabulary knowledge in comprehending

the second/foreign language listening input. The results of this study will help F/SL learners in

discovering the importance of developing their aural vocabulary knowledge and listening strategies, as well as of becoming aware of their knowledge gaps.

If you have a concern about any aspect of this study, please speak to the researcher who will help do her best to answer your questions.

If you withdraw from the study all the information and data collected from you, to date, will be destroyed and your name removed from all the study files.

7. What will happen with the data I provide?

When you agree to participate in this research, we will collect personally-identifiable information from you.

The Manchester Metropolitan University ('the University') is the Data Controller in respect of this research and any personal data that you provide as a research participant.

The University is registered with the Information Commissioner's Office (ICO), and manages personal data in accordance with the General Data Protection Regulation (GDPR) and the University's Data Protection Policy.

We collect personal data as part of this research (such as name, telephone numbers or age). As a public authority acting in the public interest we rely upon the 'public task' lawful basis. When we collect special category data (such as medical information or ethnicity) we rely upon the research and archiving purposes in the public interest lawful basis.

Your rights to access, change or move your information are limited, as we need to manage your information in specific ways in order for the research to be reliable and accurate. If you withdraw from the study, we will keep the information about you that we have already obtained.

We will not share your personal data collected in this form with any third parties.

Version: 3 **Date:** March 2021
Ethical approval number (EthOS): 10771 Date: 04/03/2021

If your data is shared this will be under the terms of a Research Collaboration Agreement which defines use, and agrees confidentiality and information security provisions. It is the University's policy to only publish anonymised data unless you have given your explicit written consent to be identified in the research. **The University never sells personal data to third parties.**

We will only retain your personal data for as long as is necessary to achieve the research purpose. Data published in this research will not contain any clues that reveal the identity of the participants. Your data will be anonymised and can be presented only through the use of pseudonyms.

For further information about use of your personal data and your data protection rights please see the University's Data Protection Pages.

8. What will happen to the results of the research study?

The results of the study will be used to complete a thesis and later to be published in the academic literature. You will not be identified in any publication unless you have given your consent.

Who has reviewed this research project?

This research project is supervised by Dr. Marijana Macis, Dr. Samuel Larner, Dr. Phung Dao and will also be reviewed by Research Ethics and Governance Managers.

Who do I contact if I have concerns about this study or I wish to complain?

If you have any queries or concerns about the project, please do not hesitate to contact the researcher via:

Tel: 07398634356 or email: naima.benyahlou@stu.mmu.ac.uk

Or:

Professor Susan Baines: Faculty Head of Research Ethics and Governance, Email: s.baines@mmu.ac.uk

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Ethical approval number (EthOS): 10771   **Date: 04/03/2021**

Katherine Walthall: Research Group Officer, Tel:+44(0)1612476673 , Email
artsandhumanitiesethics@mmu.ac.uk

THANK YOU FOR CONSIDERING PARTICIPATING IN THIS PROJECT

Version: 3 **Date:** March
2021
**Ethical approval number
(EthOS): 10771 Date:
04/03/2021**