Relationship Between L2 Vocabulary Size and Listening Ability

Relación entre el tamaño del vocabulario en una segunda lengua y la comprensión oral

Bigarren hizkuntzako hiztegiaren tamainaren eta ahozko ulermenaren arteko erlazioa

Martín Aoiz Pinillos
maoiz@unav.es
https://orcid.org/0000-0001-6016-1832

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Abstract

The relationship between second language vocabulary and listening comprehension has been barely explored, and in most cases with inadequate instruments. This study intends to bridge those gaps by examining the contribution of the language learners' vocabulary size to their listening ability.

The vocabulary size of 284 learners of English was assessed with both an aural and a written vocabulary test. A standardized listening test was used to assess their listening ability. Data were analysed with the Rasch model to determine the participants' abilities and the item difficulties.

Evidence from data analyses showed that L2 vocabulary knowledge and listening comprehension are strongly and positively related, that aural and written vocabulary knowledge are two clearly different dimensions, and that aural vocabulary knowledge predicts listening comprehension better than written vocabulary knowledge, especially among weaker listeners.

Based on these results, more emphasis should be placed on learners' aural vocabulary knowledge to improve their listening.

Keywords

EFL; L2 teaching; L2 learning; L2 vocabulary; L2 listening.

Summary

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Resumen. La relación entre el vocabulario y la comprensión oral en una segunda lengua ha sido poco explorada, y en la mayoría de los casos con instrumentos inadecuados. Este estudio pretende llenar esos vacíos investigando la contribución del tamaño del vocabulario de los estudiantes de lenguas en su capacidad de comprensión oral.

El tamaño del vocabulario de 284 estudiantes de inglés como segunda lengua fue valorado tanto con una prueba oral de vocabulario como con una prueba escrita. Se utilizó una prueba estandarizada de comprensión oral para valorar su capacidad de comprensión oral. Los datos fueron analizados con el modelo Rasch para determinar las capacidades de los participantes y las dificultades de los elementos de las pruebas.

Las evidencias provenientes de los análisis de datos mostraron que el conocimiento de vocabulario y la comprensión oral en una segunda lengua están relacionados de forma clara y positiva, que el conocimiento de vocabulario oral y escrito son dos dimensiones claramente distintas, y que el conocimiento de vocabulario oral predice mejor la comprensión oral que el conocimiento de vocabulario escrito, particularmente entre quienes tienen peor comprensión oral.

Con base en estos resultados, se debería poner un mayor énfasis en el conocimiento de vocabulario oral de quienes aprenden una segunda lengua para mejorar su comprensión oral.

Palabras clave. Inglés como lengua extranjera; enseñanza de segunda lengua; aprendizaje de segunda lengua; vocabulario de segunda lengua; comprensión oral de segunda lengua.

Laburpena. Bigarren hezkuntzako hiztegiaren eta ahozko ulermenaren arteko erlazioa gutxi ikertu da eta gehienetan tresna desegokien bidez. Azterketa horren bidez, hutsune horiek bete nahi dira, hizkuntzetako ikasleen hiztegiaren tamainak ahozko ulermenean duen eragina ikertuz.

Ingelesa bigarren hizkuntza gisa ikasten ari ziren 284 ikasleren hiztegiaren tamaina bai hiztegiaren ahozko proba baten edo bai proba idatzi baten bidez balioetsi zen. Ahozko ulermenaren proba estandarizatu bat erabili zen ahozko ulermenerako gaitasuna balioesteko. Datuak Rasch modeloarekin aztertu ziren parte-hartzaileen gaitasunak eta probetako elementuen zailtasunak zehazteko.

Datuen analisitik eratorritako ebidentziek erakutsi zuten bigarren hizkuntza bateko hiztegiaren ezagutza eta ahozko ulermena argi eta modu positiboan lotuta daudela, ahozko hiztegiaren eta hiztegi idatziaren ezagutza bi alderdi erabat desberdin direla, eta ahozko hiztegiaren ezagutzak hobeki aurresaten duela ahozko ulermena hiztegi idatziaren ezagutzak baino, bereziki ahozko ulermen txarragoa dutenen artean.

Emaitza horietan oinarrituta, arreta handiagoa jarri behar litzateke bigarren hizkuntza bat ikasten dutenen ahozko hiztegian beren ahozko ulermena hobetzeko.

Gako hitzak. Ingelesa atzerriko hizkuntza gisa; bigarren hizkuntzaren irakaskuntza; bigarren hizkuntzaren ikaskuntza; bigarren hizkuntzako hiztegia; bigarren hizkuntzaaren ahozko ulermena.

1. Background

Second language (L2) listening might cause anxiety in many language learners (Xu, 2011), which has a negative impact on their performance (Graham & Santos, 2015). Furthermore, L2 learners tend to perceive listening as something difficult to learn, where they feel the least successful, particularly when they are tested (Graham, 2006). This perception of listening as a difficult skill seems to extend to the classrooms, as some teachers tend to think that listening is impossible or really difficult to teach (Field, 2009). In some cases, they might adopt a «comprehension approach» (Vandergrift & Goh, 2012), where the actual teaching of the skill is equated with testing it (Siegel, 2013).

Alternatively, L2 research has shown that there exist other perspectives for the teaching of this skill, where the focus is set not on the product to achieve – listening comprehension – but on the abilities, processes and knowledge that a listener needs for such achievement. This stance towards listening has shown to be more effective than just testing the listener's ability (Hulstijn, 2003).

Unfortunately, despite the negative perception L2 practitioners have about listening, and the importance of teaching how to develop the comprehension of aural texts, listening might be considered the «Cinderella skill» (Nunan, 2002, p. 238) in L2 research. Compared to other language skills, listening has received little attention in literature, probably because it might seem more difficult to investigate (Vandergrift, 2007). Consequently, the factors that impact positively or negatively on the listeners' performance have been neglected in the literature (Graham & Santos, 2015).

Among the factors that might help our L2 students while listening in another language, the vocabulary knowledge of the target language has shown to be clearly related (Field, 2009). However, most studies have investigated the relationship between L2 vocabulary and listening comprehension by matching the scores in written vocabulary tests to the results in listening comprehension tests (Read, 2013). Therefore, they might have disregarded the possible existence of two separate dimensions in L2 vocabulary knowledge, aural and written (Milton 2009), by focusing only on the written form of words.

Moreover, most of the few studies employing aural vocabulary tests to assess the vocabulary size have drawn on research instruments that might not be the most suitable for that purpose. Dictation tests (Bonk, 2000), and aural versions of word-recognition tests (Milton & Hopkins, 2006) might show construct validity issues, as well as an overestimation of learners' aural vocabulary size (van Zeeland, 2014a).

2. Literature Review

Helping students to be better listeners in a second language has a direct positive impact on their overall linguistic performance, because in some cases, most of the language they acquire is through the linguistic information they hear (Richards, 2008; Rost, 2006). Among the studies that have focused on the listening skill, the vocabulary size of those L2 learners has been pointed out as one of the possible predictors of their listening performance (Field, 2009; van Zeeland, 2018; Vandergrift & Baker, 2015; Wang & Treffers-Daller, 2017), as well as clearly beneficial (Fung & Macaro, 2019). Furthermore, this positive impact is particularly heightened among less proficient users (Pan, Tsai, Huang & Liu, 2018).

Some researchers might draw on the model proposed by Stanovich (1980), and claim that L2 listeners have compensation strategies and mechanisms to make up for their lack of vocabulary knowledge. However, language teachers and learners need to understand that nothing is able to compensate for the lack of the relevant vocabulary (Milton, 2009). Furthermore, cognitive load theory provides an additional argument for the inability of such mechanism to compensate for the lack of vocabulary knowledge in certain situations: if a text has too many unknown words, our mind is likely to be overwhelmed (Paas & Sweller, 2014). Alternatively, if the person's long-term memory has a sufficient number of lexical terms stored, they will be less likely to find unknown words in a text and therefore, to tax their working memory excessively.

As the present study intends to explore the contribution of language learners' vocabulary size on their ability to understand aural texts, this literature review will present first a brief description of the listening model that underpins the investigation. Then, the possible influence of L2 vocabulary knowledge on listening performance will be addressed.

2.1. Understanding listening

Listening is certainly a complex skill that involves a series of psycholinguistic abilities, processes, subskills, and knowledge sources (Rost, 2011). Vandergrift & Goh (2012) presented a thorough account of what L2 listening comprehension entails, and identified four sets of cognitive processes: 1) controlled and automatic processing, 2) perception, parsing and utilisation, 3) metacognition, and 4) top-down and bottom-up processing. They also highlighted the importance of both linguistic knowledge (e.g., phonological or vocabulary knowledge) and prior knowledge (e.g., background and pragmatic knowledge) to be a successful listener.

Automatic versus controlled processing refers to how rapidly and accurately language learners are able to access the knowledge sources necessary to process aural texts. The ephemeral nature of the auditory signal is one of the reasons why listening is perceived as a difficult skill because it forces the listener to process that input almost online. Research has emphasized the importance of having a high degree of automaticity in processing the acoustic input so that attentional resources are free to focus on higher-level information (Field, 2009; Hulstijn, 2003). Generally speaking, good L2 listeners are those who have *automatized* some of the listening processes, and are able to focus their attention on aspects of wider meaning (Field, 2009).

The framework of perception, parsing and utilization is based on Anderson's (2020) model of listening comprehension, one of the most widely cited in L2 research (Zhang, 2018). In the phase of perception, the first one, listeners use bottom-up processing to recognise sounds and get a phonetic representation. Then, this representation is parsed to activate potential word candidates by using both word-based cues like the onset or salience, and meaning cues, like the context or the topic (van Zeeland, 2014a). In the final stage of utilization, information from the perception and parsing stages is related to information stored in long-term memory. This representation is not sequential, but the three phases have a two-way relationship with each other.

Metacognition refers to the language learners' awareness of the cognitive processes that take place while listening, as well as their ability to monitor, regulate and make an orchestrated use of them. Again, successful listeners use metacognition more to regulate the listening processes and achieve comprehension (Graham, Santos & Vanderplank, 2008).

In the literature, the distinction between bottom-up and top-down is probably the most widely used approach to L2 listening (van Zeeland, 2014a). Bottom-up processing is identified with linguistic processing. The focus is on sounds, phonemes and parts of the words that we hear (Graham & Santos, 2015), so that we are led by the input we receive in real time (Rost, 2011). On the other hand, research considers top-down processing as equivalent to semantic and pragmatic processing. In this case, higher-level mental processes help us to build ongoing and tentative representations of what the message might be like. These mental processes make use of our previous experiences, and of what we expect from that particular listening situation (Rost, 2011).

Research has claimed that bottom-up and top-down processes do not refer to particular levels of processing aural input, but to the direction towards which these processes are heading. In a bottom-up process, small or lower-level units are progressively reshaped into larger ones; whereas in a top-down process, larger units exercise an influence over the way in which smaller ones are perceived (Field, 2009; Rost, 2006). Furthermore, these processes are not considered to be alternatives, but «mutually dependent and highly interconnected» (Field, 2008b, p. 3). In other words, listeners employ both directions of processing when trying to understand aural input. They might try to recognise and decode individual words in bottom-up processes to form larger structures of discourse, while using contextual cues and world knowledge for top-down processing to check that those larger structures have been correctly formed.

2.2. Vocabulary and Listening

When L2 listeners experience difficulties at the bottom-up level, a 'compensation' strategy might be activated, and top-down processes are used to bridge the gap. Alternatively, when the linguistic input presents no difficulties to be understood, a 'facilitating' mode is activated in the listener, and top-down processes are used to help them to decode the linguistic input more efficiently (Yi'an, 1998).

However, we should bear in mind that there do exist situations where the linguistic knowledge a listener has «is so low that no amount of strategic behaviour can compensate and overcome the comprehension problem» (Fung & Macaro, 2019, p. 4). In this respect, the importance of vocabulary in understanding aural input, particularly in L2 classrooms, is clear because no compensation strategy is an adequate substitute for the vocabulary knowledge (Milton, 2009).

Boyle (1984) was one of the first researchers to investigate which factors affect listening comprehension in L2 environments. He asked students to list the issues with the biggest impact on their listening comprehension, and they place knowing the vocabulary in a much higher position than their teachers did. Since then, research has abundantly highlighted the importance of vocabulary in listening comprehension (for example, Chang & Millet, 2014; Cheng & Matthews, 2018; Fung & Macaro, 2019; Hulstijn, 2003; Milton, 2009; Wang & Treffers-Daller, 2017).

The biggest problems L2 learners might have when they listen are text problems, the difficulties that derive from lacking the necessary vocabulary, or from their inability to recognize an already known word within rapid connected speech (Cross, 2009). Furthermore, not knowing the words might be the most important obstacle to auditory comprehension (Field, 2008a). If the listener does not know a word, it might be more difficult for them – or even impossible – to notice that word, or to determine where the word begins and ends, or to parse it onto a lexical unit and retrieve its meaning. The cognitive load theory claims that understanding a text when there are too many unknown elements in it, particularly when those elements are highly interactive with each other, will imply a heavier intrinsic cognitive load (Paas & Sweller, 2014). If we accept that our working memory is limited in the number of elements it can process simultaneously, and in the duration of that processing, we might assume the existence of situations where the load is excessive. Alternatively, it seems plausible to accept that the more elements are stored in long-term memory, the lower the chance of finding novel information items in a text and, therefore, the lower the chance for our working memory of suffering a cognitive overload. In this respect, the cognitive load theory might provide an additional source of rationale to justify the exploration of correlations between inadequate vocabulary levels and poor listening performance.

L2 learners sometimes feel anxious when they listen to native speakers and think that they «speak too fast [or] swallow their words» (Field, 2009, p. 27). They might even complain about being unable to understand most of the input in a listening task, although they can later recognize and understand the same words in the corresponding transcript of the recording (Cai & Lee, 2010). One possible explanation for this phenomenon might be that students tend to identify knowing a word with just knowing what it means and recognizing its written form, neglecting how the word is pronounced or acoustically perceived (Nation, 2001). This phenomenon might lead some learners to be completely unable to comprehend connected speech in L2 even if they do know all the words in their written form (Bonk, 2000). Therefore, researchers, teachers and learners should assume that knowing a word also implies being able to recognize it within a spoken text (van Zeeland, 2018).

The fact that some language learners are unable to notice or decode words when they are perceived acoustically indicates the existence of two different vocabulary knowledge dimensions: written and aural. Research has claimed that being able to recognize a word in its written and aural form is different (McLean, Kramer & Beglar, 2015; Milton & Hopkins, 2006), and should be assessed separately (Cheng & Matthews, 2018). However, apart from the present study, only one investigation has attempted to study those differences on the same population in an empirical study (Masrai, 2020).

On the other hand, a few research studies have shown a strong positive correlation between being a proficient listener and efficiently accessing a large vocabulary (Matthews & Cheng, 2015; Stæhr, 2009). These studies have supported the claim that sufficient listening comprehension levels are clearly related to a higher familiarity with the words in the spoken text; whereas limitations in vocabulary knowledge seldom co-occur with those comprehension levels (Bonk, 2000).

Alderson (2005) generalized this positive correlation and claimed that L2 learners' vocabulary size is largely responsible for their overall language ability. He studied the correlation between scores in a vocabulary test and other language skills, and set it at .61 in the case of vocabulary and listening (Alderson, 2005). In a similar line of research, other studies have shown that L2 learners' vocabulary size might be able to explain the variance in their listening comprehension scores in percentages that range from 23 % (Bonk, 2000) to 65% (Masrai, 2020).

Moreover, this positive influence of vocabulary on listening comprehension seems to be particularly relevant among students with lower proficiency in the target language (Pan et al., 2018), and might account for a large percentage of the variation in their ability to infer the meaning of unknown vocabulary in a text (van Zeeland, 2014b). These high figures might also explain why some researchers consider the vocabulary size a language learner has a good indicator of their listening success (Cheng & Matthews, 2018; van Zeeland, 2018).

In the particular case of L1-Spanish learners of English, which is the target population of the present study, the need for vocabulary and listening instruction might be more acute. More than 2,000 Europeans with different L1s participated in a study of their vocabulary size in English, and one of the findings was that the scores in the vocabulary tests were comparatively worse among the learners whose mother tongue was Spanish (Alderson, 2005). Moreover, another survey carried out on school students in Spain showed that less than 15% of them had reached the level of a B2-user in listening, and that almost a third were placed below the A1-level in that particular skill (European Commission, 2012).

3. Methods

3.1. Research Context and Procedure

The state language school in Pamplona (Spain) was the setting for the data collection. State language schools, also known as official language schools, are language centres where residents in Spain can learn foreign languages like English, French or Russian at affordable prices, as they are subsidized by public educational authorities. The different courses and languages offered by these schools are independent from what students in primary, secondary and tertiary education find in their officially-approved curricula. There are almost 300 centres all over the country with about 400,000 students (Ministerio de Educación y Formación Profesional, 2020). Most of their students, including the participants in the present investigation, attend general language courses, usually held from October to May, where they receive input about and practise the different aspects of the target language like reading, speaking or listening. In general, these courses consist of 4-5 hours of classes a week, i.e., about 120 contact hours a year. The progress and learning of all students are assessed according to the same criteria and evaluation instruments in all schools in Spain.

Students from 17 B1-level English groups at this state language school were invited to participate. A total of 284 people agreed to answer the questions in three different tests: a listening vocabulary test (LVT), a written vocabulary test (WVT), and a listening comprehension test (LCT). Participants in the study had to answer 81 vocabulary questions delivered orally (see Appendix 1), then the 25 listening comprehension questions from the exam Cambridge English: Preliminary, and finally the same 81 vocabulary questions, but delivered in writing (Appendix 2). 282 participants completed the three tests, whereas one person failed to finish the last part of the WVT, and another participant provided no answers in the WVT.

3.2. Data Collecting Instruments

3.2.1. *Vocabulary Tests*

All the tools used in the data collection for the present study – the LVT, the WVT and the LCT – are based on the examination *Cambridge English: Preliminary*. Two reasons account for this decision. Firstly, because Cambridge Assessment English, responsible for the development and production of language tests like *Cambridge English: Preliminary*, has provided sound evidence of the criterion-related validity in its examinations (Lim & Khalifa, 2013). Secondly, because using a cohesive framework for the vocabulary and listening tests might enhance the internal reliability of the study results, although it implies accepting the operationalisation of the construct of listening comprehension as Cambridge Assessment English understands it.

The official vocabulary list for the exam *Cambridge English: Preliminary* (UCLES, 2012) was used to create a vocabulary test. Each entry in the list, including each of the specified meanings in polysemic words like 'play', was considered an independent item for its inclusion in the vocabulary test.

150 items were randomly selected from the vocabulary list and included in a preliminary version of the vocabulary test. For each target item, a short sentence was added to enable the recognition of the part of speech it referred to, as well as four translations into Spanish – the test-takers' L1 – to choose the answer from. An English native speaker read out the target items and their contextualizing sentences to create the listening version of the vocabulary test.

The aural and written versions of the vocabulary test were delivered to 73 B1-level English learners, with Spanish as their first language, to determine the best-performing items. After the analysis carried out with the Rasch model, 81 items were kept in the final version of the vocabulary tests.

3.2.2. *Listening Tests*

A listening paper from the test *Cambridge English: Preliminary* was used to assess the listening performance of the study participants (Cambridge University Press, 2008). The version of the listening paper used in the present study differed from the updated version Cambridge Assessment began to use in 2020, albeit in only one of its parts. Instead of the six yes/no questions based on a long conversation used in the old version of the test, short dialogues are now used as the auditory input for 6 multiple-choice questions.

Several aspects in the way this standardized listening paper is delivered are meant to reduce its difficulty, although they might lower its ecological validity. Firstly, the audio input for each part is played twice. Secondly, the questions in parts 2, 3 and 4 are presented in the same order as their corresponding answers appear in the recordings, and with enough distance between bits of relevant information, so that test-takers can process the input and answer the corresponding question. Finally, test-takers are given a few seconds to look at the questions in tasks 2, 3 and 4 before the auditory input is delivered.

Moreover, the LCT in the present study employed the same rubrics, questions, and auditory input as the PET listening paper. Similarly, the marking of the different sections followed the criteria Cambridge Assessment does (UCLES, 2019). For parts 1, 2 and 4 only one of the options received 1 mark, whereas the other choices were awarded no marks. For part 3, only completely correct answers received full marks, so spelling mistakes in otherwise correct answers (for example '*elefants*'*) will mean losing all the marks for that answer.

3.2.3. *Data Analysis: Rasch Model*

An important feature of this research study is the use of the Rasch Model for the data analysis, which implies accepting explicitly the interval nature of data, because counts «cannot replace measurement as it is known in the physical sciences» (Bond & Fox, 2015, p. 6). This model converts raw scores, which are equivalent to counting, into linear and reproducible measurement. A unique characteristic of the Rasch model is the parameter separation, i.e., its ability to compare persons and items directly, which leads to the creation of «person-free measures and item-free calibrations, as we have come to expect in the physical sciences» (Bond & Fox, 2015, p. 349). By means of a probabilistic match, it conjointly analyses two factors that affect the performance in a test, the person's ability, and the item difficulty.

Ability and difficulty are measured conjointly, and consequently, for quantitative analyses in the human sciences «Rasch measurement is the only game in town» (Bond & Fox, 2015, pp. 317-318). It provides the researchers with parameters for both the participants in their investigation and the items used to quantify the variables under study, as well as the possibility of conjoint additivity (Brentari & Golia, 2007). In practical terms, the Rasch model offers the researcher a single unit of measurement called «logit», which enables the comparison of items and persons on the same scale, as well as the comparison of different samples of people, or different items related to the same observed trait.

One logit is the distance along the line of the variable that increases the odds of observing the event specified in the measurement model by a factor of 2.718, the base of «natural» or Napierian logarithms used for the calculation of «log-» odds. All logits are the same length with respect to this change in the odds of observing the indicative event (Linacre & Wright, 1989). In other words, the same way we use Fahrenheit units to compare temperatures observed at the same time, or on different moments – either in the same place, or in different locations – we can use logits to compare person abilities and item difficulties using a single unit of measurement.

Moreover, the Rasch model provides the researcher with two different measurements of reliability: one for the sample of participants, and one for the items included in the instruments to collect the data. Those indices are «more conservative and less misleading [than Cronbach Alpha, which] overstates the reliability of the test-independent, generalizable measures the test is intended to imply» (Linacre, 1997, p. 581). The analyses are both conservative and reliable because the data collected in a study have to conform stochastically to the Rasch model before being able to be analysed, which makes it «preferable» to other ways to analyse data (McLean et al., 2015, p. 756).

Along with these two reliability figures, the Rasch model also shows the separation among items and persons in the data. In general, the bigger the separation in the items, the better they are performing in a test, as they cover all the parts along the continuum that the observed dimension might show. The same rule applies to person separation: the larger the separation, the more adequate the sample of participants is for the dimension we want to study.

4. Results

4.1. Reliability and Descriptive Statistics

Once the data collection finished and all the tests were manually marked, the results were imported onto the program Winsteps® (Linacre, 2012, 2019) to be analysed. The overall reliability of the data showed a slightly higher person reliability for the 81 items in the LVT than in the WVT, and identical reliability for the items in both tests. Person and item separations were also higher in the LVT than in the WVT (Table 4.1).

Table 4.1. Person and Item reliability and separation

Test	Person Separation	Person Reliability	Item Separation	Item Reliability
LVT	2.95	0.90	6.73	0.98
WVT	2.73	0.88	6.47	0.98
LCT	1.83	0.77	8.49	0.99

Note. Values expressed in logits.

The main descriptive statistics show clear differences in difficulty between the three tests, being the LCT the most challenging one, followed by the LVT, and the WVT.

Table 4.2. Comparison of MIN, MAX, MEAN and percentage of correct answers across tests

Test	MIN	MAX	*M*	*SD*	% Correct
LVT*	23	77	49.44	12.32	61.04%
WVT*	25	79	58.37	10.92	72.06%
LCT**	1	24	13.26	4.50	53.04%

Note. Calculations made on raw data, not logits. *81 items, **25 items

A graphical representation of the relative difficulty of the items and the persons' ability is provided in the Wright maps (Figures 4.1-4.3). The use of Wright maps provides the reader with the possibility of performing visual comparisons between participants' abilities and the relative difficulties of the items included in a test, as items and persons are on the same scale. Furthermore, as the Rasch analysis provides the researcher with a unit of measurement, the comparison can be performed with different samples of people, or different items related to the same observed trait.

For the LVT (Figure 4.1) we can see that the most difficult item in the test was L51 ('shut', 2.90 logits). This item lies more than three standard deviations away from the mean measure for the items in this test (marked with an 'M' on the right of the vertical axis). On the other hand, items L5 ('assistant') and L55 ('Hey!') are situated at the bottom of the axis, more than two standard deviations below the mean measure, because they are the easiest in the test. With respect to the participants' abilities, one test-taker clearly shows the biggest ability as their measures are situated more than three standard deviations higher than the mean measure for the persons in that test (marked with an 'M' on the left of the vertical axis). Moreover, when we compare the elements on the left of the vertical axis (participants' abilities) with the ones on the right (item difficulties), we can see that the left side of the axis is slightly skewed towards the top, and the right side towards the bottom. In other words, the test-takers ability was higher than the overall item difficulty, so the average test-taker had a higher probability than 50% of answering an average item in the test correctly.

Similar patterns can be observed in the data from the WVT (Figure 4.2). The most difficult item in the test was W51 ('shut', 3.23 logits), approximately two standard deviations higher than the mean measure for the items in that test. Furthermore, the skewness of abilities towards the top with respect to the item difficulties was clearer in the WVT than in the LVT. One indicator of this difference is that the ability of 7 participants was above the difficulty of item W51 – i.e., those participants were more likely to answer that item correctly than incorrectly – whereas in the LVT only one participant showed an ability above all item difficulties. More items are below the participants' mean ability in the WVT than in the LVT, and have a probability greater than 50% of being answered correctly by a person with an average ability.

Figure 4.3 shows that item LISTEN15 is clearly more difficult than the rest in the LCT, as it is situated almost 2.5 standard deviations above the mean difficulty. Nevertheless, one test-taker presented a higher ability than the difficulty of that item (Person38, 4.09 logits).

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MEASURE    PERSON - MAP - ITEM
               <more>|<rare>
    4                +
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                  .  |
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    3                +
                     |  L51
                  .  |
                ###  |
                  .  |
                     |
                  . T|
              .####  |  L16
    2            .#  +T L70
                ###  |  L23
                 ##  |  L90
              #####  |
               .### S|
              #####  |  L146
               ####  |  L145   L74
              .####  |  L136   L142   L15
    1       #######  +S L131   L132   L14    L144   L56
            .######  |
        ###########  |  L22
          ######### M|  L106   L143   L28    L36    L57    L63
         .#########  |  L124   L140   L17    L48    L49    L59    L83    L92
          .########  |  L104
          #########  |  L148
               .###  |  L11    L34    L8
    0       #######  +M L52    L75    L88
            #######  |  L1     L10    L116   L120   L138   L46
              .#### S|  L135   L65    L67    L82
               ####  |  L100   L109   L111   L133   L42    L60    L62    L85
                        L89
              #####  |  L130   L31    L96
             .#####  |  L127   L58
                .##  |  L123
                 .#  |  L35    L94
   -1            .#  +S L29    L73
                 .# T|  L103   L129
                     |  L108   L134
                     |  L121   L149   L47    L72
                     |  L50
                     |  L40
                     |
                     |  L68
   -2                +T
                     |
                     |  L5     L55
                     |
                     |
                     |
                     |
                     |
   -3                +
               <less>|<freq>
EACH "#" IS 2: EACH "." IS 1
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Figure 4.1. Wright Map – Person abilities and item difficulties in the LVT

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MEASURE    PERSON - MAP - ITEM
               <more>|<rare>
    5                +
                     |
                     |
                     |
                  .  |
                     |
    4                +
                 .#  |
                     |
                  .  |
                  #  |
                    T|  W51
    3             .  +
                 .#  |
                 .#  |
             .#####  |  W70
                 .# S|T
               .###  |
    2        ######  +
             ######  |  W146   W16    W74    W90
               .###  |  W106   W131   W145
          .########  |  W23
             ###### M|  W132   W52
           ########  |S W124   W142   W144   W57
    1        .#####  +  W136   W49    W92
             .#####  |  W63    W67
         .#########  |  W148
              .####  |  W10    W22    W56    W59
              .#### S|  W14    W48    W82
                .##  |  W120   W143   W17    W42    W62    W83
    0            .#  +M W1     W111   W133   W135   W140   W28    W58    W75
                        W96
               .###  |  W104   W109   W121   W123   W130   W34    W89
                  .  |  W100   W46    W65
                  . T|  W73    W8
                  .  |  W138   W29    W31    W68    W94
                     |  W116   W36    W50
   -1             .  +  W127   W134   W35    W47
                     |S W72
                     |  W15
                     |  W108   W5     W60    W88
                     |
                     |  W103   W129   W55    W85
   -2                +  W11
                     |
                     |T
                     |
                     |  W149
                     |
   -3                +  W40
               <less>|<freq>
 EACH "#" IS 2: EACH "." IS 1
```

Figure 4.2. Wright Map – Person abilities and item difficulties in the WVT

```
MEASURE    PERSON - MAP - ITEM
               <more>|<rare>
    5                +
                     |
                     |
                     |
                     |
                  .  |
    4                +
                     |
                     |
                     |  LISTEN15
                     |
                  .  |
    3                +
                     |
                  .  |T
                     |
                    T|  LISTEN18  LISTEN24
                ###  |
    2                +
             .#####  |
                     |
                .##  |
                     |S LISTEN3
                ### S|  LISTEN8
    1       #######  +
                     |
            #######  |  LISTEN14
            .######  |  LISTEN4   LISTEN6
       .###########  |  LISTEN5
                    M|  LISTEN2
    0     #########  +M LISTEN19  LISTEN7
            .######  |
            .######  |  LISTEN12  LISTEN23  LISTEN25  LISTEN9
                     |  LISTEN1   LISTEN10
             .#####  |
               .###  |  LISTEN22
   -1       .###### S+  LISTEN21
                     |  LISTEN17
                ###  |S
                .##  |  LISTEN11
                     |
                 .#  |  LISTEN16
   -2                +  LISTEN13  LISTEN20
                  # T|
                     |
                  .  |
                     |T
                     |
   -3                +
                     |
                     |
                     |
                     |
                  .  |
   -4                +
               <less>|<freq>
 EACH "#" IS 2: EACH "." IS 1
```

Figure 4.3. Wright Map – Person abilities and item difficulties in the LCT

4.2. Data Analysis: Correlation and Regression

Pearson product-moment correlations were computed for the participants' scores in the LVT, WVT and LCT. Following the recommendations from experts in quantitative analysis (Bond & Fox, 2015), the correlations were based on the person measures for each participant in those tests, expressed in logits. There was a significant positive correlation between the LVT and the WVT: r (282) = .82, z = 1.18, p <.0001. The correlation was also positive between the LVT and the LCT: r (284) = .56, z = .63, p < .0001. A positive correlation, although slightly weaker, was also found between the WVT and the LCT: r (282) = .41, z = .46 p < .0001. Therefore, from a statistical point of view, both dimensions of vocabulary knowledge have similar strong associations with listening comprehension. Following Cohen's typology (Cohen, 2013), the effect sizes were large for the correlation in the dyads LVT-LCT, and LVT-WVT. The correlation between the WVT and the LCT had a medium effect size.

Moreover, linear regression was calculated to predict the results in the LCT based on the participants' performance in both vocabulary tests. A significant regression equation was found (F (2, 280) = 67.12, p < .0001) with an R^2 = .324, although only the measures in the LVT were significant predictors of the results in the LCT (Table 4.3).

Table 4.3. Multiple regression analysis of the LCT

Variable	Model 1			Model 2		
	ß	*SE*	*p*	*ß*	*SE*	*p*
LVT	.90	.11	.001	.90	.11	.001
WVT				-.19	.10	.07
R^2					.32	

When the independent variables were entered into a single linear regression, the results showed the higher predictive power of the LVT over the WVT to account for the variability in the results of the LCT. The measures from the LVT were able to explain up to 31.3% of the variance in the LCT (F (1, 281) = 129.70, p < .0001), whereas the WVT could explain only 16.2% of that variance on its own (F (1, 281) = 55.51, p < .0001).

An additional insight on the relationship between learners' vocabulary knowledge and listening comprehension might be gained when the study participants are divided into those who passed the listening comprehension test – at least 72%

correct answers, according to Cambridge Assessment – and those who failed it. Table 4.4 shows the mean scores and measures for those two groups.

Table 4.4. Comparison of scores and measures in LVT and WVT according to performance in LCT

	Test					
	LCT		LVT		WVT	
	Score	Measure	Score	Measure	Score	Measure
Bottom LCT[a]	11.97	-.20	47.15	.44	56.70	1.19
Top LCT[b]	20	1.88	60.71	1.40	66.48	2.06

Note. Scores are calculated on raw data, measures are expressed in logits. N = 284.
[a] Scores < 18, 236 participants. [b] Scores ≥ 18, 48 participants.

The overall regression model for the top scorers in the LCT was able to explain 31.5% of the variance with the help of their scores in the LVT and the WVT (Table 4.6). The values clearly reached the significance level: F (2, 45) = 10.34, p < .0001, R^2 = .315. However, when the p-values for each of the two independent variables were analysed, the probability of a contribution of either the LVT or the WVT to the variance in the LCT results due to chance was higher than 5% (p = .28; p = .21). Among the participants who had fewer than 18 correct answers in the LCT (i.e. < 72% correct answers), up to 18.6% of the variance in their results could be accounted for by their results in the LVT and the WVT. The significance level was also reached here for the overall model: F (2, 232) = 26.55, p < .0001, R^2 = .186, and unlike what happened with the top LCT scorers, both independent variables reached the significance level in their ability to predict variability in the LCT results (p <.0001). Table 4.6 shows the main statistics in the multiple regression analyses for the person measures of the participants in the bottom-LCT group (scores <18).

Table 4.5. Multiple regression analysis for top LCT scores

Variable	Model 1			Model 2		
	ß	*SE*	*p*	*ß*	*SE*	*p*
LVT	.23	.20	.28	.23	.20	.28
WVT				.22	.17	.21
R^2					.32	

Note. N = 48.

Table 4.6. Multiple regression analysis for bottom LCT scores

Variable	Model 1			Model 2		
	ß	*SE*	*p*	ß	*SE*	*p*
LVT	.65	.10	.001	.23	.20	.001
WVT				-.26	.09	.001
R^2					.19	

Note. N = 235.

When each of the independent variables was introduced separately into the regression, their ability to explain the variance in the results of the LCT was reduced with respect to the overall model. In particular, for the group of participants who failed the LCT (< 72% correct answers, i.e., <18/25) the ability of the WVT on its own to account for the variability of results in the LCT was clearly smaller. For this group of results, the measures in the LVT were able to explain up to 15.7% of the variability in the LCT (F (1, 234) = 43.36, p < .0001, R^2 = .157), whereas the WVT could account for only 3.9% of that variance (F (1, 234) = 9.44, p = .002, R^2 = .0.39). For the variability of the results in the LCT among those participants who had 18 or more correct answers in that test (i.e., at least 72% correct answers), both the LCT and the WVT were equally predictive. The results those participants had in the LVT were able to explain up to 27% of the variance in the LCT (F (1, 46) = 16.68, p = .0002, R^2 = .270), whereas their results in the WVT could account for up to 27.7% of that variance (F (1, 46) = 17.28, p = .0001, R^2 = .277).

5. Discussion

This study has shown that aural vocabulary is a better predictor of listening success than written vocabulary, particularly among weaker listeners. The scores and measures in the listening vocabulary test correlate better with the scores and measures in the listening comprehension test than with the ones in the written vocabulary test. Furthermore, the differences between the LVT and the WVT in their ability to predict listening achievement are particularly acute among weak listeners, whereas both vocabulary tests are equally predictive for the participants who passed the listening comprehension test.

These results are in line with what previous research studies have shown with respect to the correlation between aural vocabulary knowledge and listening comprehension. Bonk (2000) established a statistically positive correlation (Kendall's tau = .446) between lexical recognition – i.e., results in dictation tests – and listening comprehension as tested in recall protocols. Similarly, Matthews and Cheng (2015), showed a positive correlation (Pearson = .73) between aural vocabulary size – i.e., ability to recognize words in a dictation test – and listening comprehension – as expressed in the results in a standardized listening test (IELTS).

However, the present study has been the first one to test both aural and written vocabulary knowledge with the same target items and on the same population. One of the unique contributions of this study to the body of knowledge in the topic of L2 vocabulary and listening is that it has enabled the comparison of two measures of vocabulary knowledge (LVT and WVT) that only vary in the way the items are delivered to the participants. Consequently, the comparisons between the two tests with respect to their ability to predict the listening performance are more reliable, because it was unnecessary to account for differences between samples of participants or items in the tests.

With respect to regression models, previous studies have shown that the ability of language learners' vocabulary size to predict variability in their listening performance range from 23% (Bonk, 2000) to 65% (Masrai, 2020). For example, Bonk (2000) determined that 23% of the variance in listening comprehension might be explained by the vocabulary size a learner has. Unlike this investigation, he equated the listening comprehension ability with the person's accuracy in recalling read-out passages of about 40 seconds in length, and associated the scores of that recall task with the results in a dictation task to find possible correlations.

Using dictation exercises as research instruments to estimate learners' aural vocabulary size might raise validity and reliability issues, as they might be testing not only the test-takers' ability to recognize the aural form of words, but also their ability to transcribe those words correctly. Similarly, the use of recall protocols to assess the ability to comprehend aural texts might lack validity with respect to what language users encounter in real-life situations. Being able to comprehend aural input obviously implies remembering what the speaker has just said, so that we can analyse the utterances to decipher them, and then build meaning with the help of other parts of that aural discourse, and of our previous knowledge (Field, 2009). However, the ability to remember small excerpts of aural texts in the process of comprehension might be different from being able to recall details from a 40-second passage. In this case, there might be an unnecessary burden upon memory, which differs from what language users usually experience in their everyday listening events.

Stæhr (2009) set at 51% the amount of variance in a listening test explained by learners' vocabulary size. He might show higher figures when compared to the present investigation (51% vs 32.4%) because of the lower reliability indices in the three tests employed, particularly in the listening comprehension test (Cronbach's alpha = 0.60). In the present study, the LCT showed an item reliability of 0.99. Furthermore, the use of the Rasch Model in this investigation enhances its reliability as the indices it presents are «more conservative and less misleading» than other reliability measures (Linacre, 1997, p. 581). Moreover, the low reliability index in Stæhr's study might be attributable to the use of a C2-level listening test (*Cambridge English: Proficiency*) to assess the listening ability among participants who were expected to have an overall linguistic level of B2. In fact, the mean score in the listening test in Stæhr's study was 66%, whereas the mean result in the vocabulary levels test was 85%, which might reflect a clear disparity in the difficulty of the tests.

Matthews and Cheng (2015) showed that up to 54% of the variance in the listening results might be attributable to the ability to recognise words. Unlike Stæhr (2009), Matthews and Cheng assessed the vocabulary knowledge in its aural form, but failed to use a more valid instrument than a dictation test. Unlike what language users find in real-life listening events, the participants in that study were given written sentences where they had to write the target word. The sentences were read out, and the participants simply had to fill in the blanks (e.g., «The most _____ language is South Korean»; Matthews & Cheng, 2015, p. 10). There is a huge advantage in a word recognition test if the listener can anticipate when the target word is coming, and which neighbours it has. Furthermore, this kind of tests fail to assess the ability to recognize words and link them to a meaning, as participants are only told to write down the input they have perceived, without showing understanding of its meaning. Listeners with a minimal notion of the English phonology might be able to transcribe the words they have just heard, without having to demonstrate if they are able to link them to their correct meaning.

Not surprisingly, there is a clear disparity of results between the two tests they employed: the Word Recognition Speech test had 71.71% correct answers, whereas the mean score in the listening comprehension tests represented 36.70% of the maximum possible score (Matthews & Cheng, 2015). These differences indicate that the dictation tests employed are clearly easier than the listening comprehension tests used in that investigation.

Masrai (2020) discovered that both learners' aural and written vocabulary size, with the help of their working memory capacity, can explain up to 65% of the variance in a standardized listening test. Furthermore, aural vocabulary size contributed the most to explaining that variability. These results are in line with the ones presented in the present study, although with higher figures. The reasons for those differences in the figures might lie on the fact that he used Yes-No tests to assess his participants' aural and vocabulary size, which might have impacted negatively on the validity and subsequent reliability of the findings.

Three aspects of this Yes-No tests should be critically appraised. Firstly, the test-takers themselves decide if they know the target words. Secondly, there is no clear criterion about what knowing the target words implies. It could be just being sure that the word exists in the target language, or it could be that they can recall their meaning, or maybe it could mean being able to use it correctly in a sentence. Since the inclusion of nonwords in the test is the only manner to control that test-takers are being accurate in their judgements, an overestimation in the results might occur (Eyckmans, 2004; van Zeeland, 2014a). A final criticism refers to the aural version of this Yes-No vocabulary test. The test is usually done on a computer, and its test-takers can play the target word as many times as they wish, and take as long as they want to answer each question (McLean et al., 2015).

6. Conclusion

About a third of the total variance in the scores of a standardized listening comprehension test might be attributed to the test-takers' vocabulary knowledge (Table 4.3). The aural vocabulary knowledge is able to explain a bigger percentage of the total variance in a listening test than the written vocabulary knowledge. Furthermore, this comparatively higher ability of the aural vocabulary size to predict the performance in a listening comprehension test was particularly evident among weak listeners (Tables 4.5 and 4.6).

Based on correlation coefficients, the LVT and WVT might be testing much of the same thing. However, the unique contribution of the LVT to explaining the variance in the LCT presents a solid argument in favour of keeping this type of aural vocabulary knowledge testing in future research. This preference for the LVT over the WVT might be especially important among lower-level language learners in general, and among weak listeners in particular, as it correlates comparatively better with the LCT, and explains more of its variance (Tables 4.5 and 4.6).

Two main conclusions might be drawn from these findings. First of all, a listening vocabulary test is a better predictor of listening success than previous forms of written vocabulary tests, like the Vocabulary Levels Test (Schmitt, Schmitt & Clapham., 2001) or the Vocabulary Size Test (Beglar & Nation, 2007). Therefore, results from previous studies which have related written vocabulary size to listening performance (Stæhr, 2009; van Zeeland & Schmitt, 2013) should be considered differently. Furthermore, as listening vocabulary tests and written vocabulary tests might tap into similar dimensions, but LVTs are better predictors of listening performance, they should be considered the preferred standard in studies relating vocabulary and listening comprehension.

Secondly, the present study has confirmed that two separate dimensions of vocabulary exist: aural and written. The implications for language classrooms, designers and publishers of L2 materials, and investigators are evident. More attention should be paid to aural vocabulary as a separate dimension, in particular among weaker students. Furthermore, the clear differences between the aural and written vocabulary shown by language learners should force us to rule out the idea that knowing the written form of a word is enough to truly know that word. Its aural form might be as important, particularly in oral communication.

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Appendices

Appendix 1. Listening Vocabulary Test

This test has TWO PARTS. Each part will take you about 20 minutes to finish. It is very important that you do the two parts of the test and that you try to answer **ALL THE QUESTIONS** in the test. There are no negative marks for incorrect answers.

Listening Vocabulary Size Test – Listen to the recording and select the answer (a, b, c, OR d) with the closest Spanish translation to the key word in the question.

Example 1 – You will hear:

SCHOOL – This **school** is new.

A. cama
B. escuela
C. parque
D. supermercado

The closest translation for the target word that you have heard is '*escuela*', so the answer you have to mark is **B.**

Example 2 - You will hear:

PLAY – They **play** it very often.

A. beber
B. cocinar
C. comer
D. jugar

The closest translation for the target word that you have heard is '*jugar*, so the answer you have to mark is **D.**

Example 3 - You will hear:

STRONG – They are really **strong**.

A. alto
B. feliz
C. fuerte
D. rico

The closest translation for the target word that you have heard is '*fuerte*, so the answer you have to mark is **C.**

Example 4 - You will hear:

TODAY – They need it **today**.

A. hoy
B. siempre
C. también
D. todavía

The closest translation for the target word that you have heard is '*hoy*', so the answer you have to mark is **A.**

PRUEBA DE VOCABULARIO

Esta prueba tiene DOS PARTES. Terminar cada parte te llevará unos 20 minutos. Es muy importante que hagas las dos partes de la prueba y que intentes contestar TODAS LAS PREGUNTAS en la prueba. No hay puntos negativos por respuestas incorrectas.

Prueba de Comprensión Oral de Vocabulario – Escucha la grabación y selecciona la respuesta (a-d) con la traducción en español más próxima a la palabra clave de la pregunta

Ejemplo 1 – Escucharás:

SCHOOL – This **school** is new.

A. cama
B. escuela
C. parque
D. supermercado

La traducción más próxima a la palabra que has escuchado es '*escuela*', así que la respuesta que tienes que marcar es **B**.

Ejemplo 2 – Escucharás:

PLAY – They **play** it very often.

A. beber
B. cocinar
C. comer
D. jugar

La traducción más próxima a la palabra que has escuchado es '*jugar*, así que la respuesta que tienes que marcar es **D**.

Ejemplo 3 – Escucharás:

STRONG – They are really **strong**.

A. alto
B. feliz
C. fuerte
D. rico

La traducción más próxima a la palabra que has escuchado '*fuerte*, así que la respuesta que tienes que marcar es **C**.

Ejemplo 4 – Escucharás:

TODAY – They need it **today**.

A. hoy
B. siempre
C. también
D. todavía

La traducción más próxima a la palabra que has escuchado '*hoy*', así que la respuesta que tienes que marcar es **A**

1. ____________________
a) cubo
b) entrada
c) factura
d) rama

2. ____________________
a) ayudante
b) comerciante
c) representante
d) suplente

3. ____________________
a) pañuelo
b) payaso
c) peine
d) ternero

4. ____________________
a) reconocer
b) recuperar
c) reducir
d) rehusar

5. ____________________
a) cerdo
b) enchufe
c) pipa
d) tarta

6. ____________________
a) adelante
b) además
c) del mismo modo
d) solo

7. ____________________
a) acera
b) cuero
c) etiqueta
d) pico

8. ____________________
a) equipo
b) prueba
c) sistema
d) trimestre

9. ____________________
a) carne
b) compañero
c) espejo
d) documental

10. ____________________
a) comercio
b) hojalata
c) ladrón
d) maletero

11. ____________________
a) amplio
b) digno
c) húmedo
d) salvaje

12. ____________________
a) aunque
b) a menos que
c) por lo tanto
d) sin embargo

13. ____________________
a) criatura
b) cultura
c) defensa
d) diseño

14. ____________________
a) besar
b) dar patadas
c) mentir
d) reír

15. ____________________
a) dolorido
b) inteligente
c) libre
d) suave

16. ____________________
a) camión
b) éxito
c) interruptor
d) sueldo

17. ____________________
a) lo
b) me
c) nos
d) te

18. ____________________
a) especial
b) histórico
c) local
d) necesario

19. ____________________
a) aumentar
b) combinar
c) herir
d) mejorar

20. ____________________
a) asunto
b) escenario
c) gusto
d) impuesto

21. ____________________
a) grabación
b) informe
c) pensamiento
d) razón

22. ____________________
a) enfermedad
b) muñeca
c) sobre
d) tambor

23. ____________________
a) multitud
b) pato
c) polvo
d) techo

24. ____________________
a) confiado
b) crudo
c) frecuente
d) preciso

25. ____________________
a) cerrar
b) gastar
c) gritar
d) rasgar

26. ____________________
a) cabaña
b) contable
c) lavabo
d) taxi

27. ____________________
a) ¡Guay!
b) ¡Oye!
c) ¡Vale!
d) ¡Vaya!

28. ____________________
a) botón
b) capítulo
c) cesta
d) esfuerzo

29. ____________________
a) afilado
b) agradable
c) disponible
d) educado

30. ____________________
a) este
b) norte
c) oeste
d) sur

31. ____________________
a) alimentar
b) colgar
c) congelar
d) pegar

32. ____________________
a) a veces
b) absolutamente
c) con cuidado
d) diariamente

33. ____________________
a) conseguir
b) haber
c) poder
d) ver

34. ____________________
a) derrota
b) ensayo
c) muestra
d) retraso

35. ____________________
a) alquiler
b) ausencia
c) hierro
d) mejora

36. ____________________
a) cartón
b) cojín
c) desafío
d) goma

37. ____________________
a) competir
b) consistir
c) discrepar
d) persuadir

38. ____________________
a) abrochar
b) arreglar
c) ordenar
d) subrayar

39. ____________________
a) apoyo
b) asignatura
c) mantel
d) traje

40. ____________________
a) apropiado
b) bajo
c) grande
d) pobre

41. ____________________
a) bigote
b) jarrón
c) melocotón
d) tazón

42. ____________________
a) estudios
b) gafas
c) medias
d) peniques

43. ____________________
a) imagen
b) paga
c) plan
d) precio

44. ____________________
a) concurso
b) devolución
c) planchado
d) vendaje

45. ____________________
a) botella
b) pájaro
c) paseo
d) reloj

46. ____________________
a) culpa
b) elemento
c) mobiliario
d) rana

47. ____________________
a) aterrizar
b) quemar
c) reservar
d) unirse

48. ____________________
a) batir
b) manejar
c) permitir
d) sostener

49. ____________________
a) aduanas
b) refrescos
c) saludos
d) servicios

50. ____________________
a) algún
b) cada
c) este
d) ningún

51. ____________________
a) añadir
b) cazar
c) lanzar
d) molestar

52. ____________________
a) forma
b) lado
c) punto
d) vista

53. ____________________
a) con
b) para
c) que
d) sin

54. ____________________
a) capaz
b) enfadado
c) satisfecho
d) sorprendido

55. ____________________
a) acantilado
b) cajón
c) jaula
d) mejilla

56. ____________________
a) abajo
b) deprisa
c) lejos
d) tarde

57. ____________________
a) decepción
b) desarrollo
c) intercambio
d) meta

58. ____________________
a) alubia
b) cebolla
c) guisante
d) lechuga

59. ____________________
a) hambre
b) juez
c) sala
d) sombrero

60. ____________________
a) construir
b) romper
c) saltar
d) soplar

61. ____________________
a) altura
b) beca
c) ejemplo
d) rodilla

62. ____________________
a) fábrica
b) pañuelo de papel
c) traducción
d) variedad

63. ____________________
a) deseoso
b) desordenado
c) roto
d) tímido

64. ____________________
a) mediodía
b) niebla
c) pastilla
d) seta

65. ____________________
a) luna de miel
b) maleta
c) página de inicio
d) poste

66. ____________________
a) agujero
b) colina
c) equipaje
d) esperanza

67. ____________________
a) aconsejar
b) desear
c) lamentar
d) lograr

68. ____________________
a) armario
b) moneda
c) tasa
d) tripulación

69. ____________________
a) paquete
b) patinaje
c) peatón
d) postre

70. ____________________
a) abrazo
b) cabra
c) guante
d) hoja

71. ____________________
a) animar
b) castigar
c) reemplazar
d) situar

72. ____________________
a) descuidado
b) incapaz
c) inconsciente
d) poco amable

73. ____________________
a) bolsa de mano
b) caligrafía
c) tablón de anuncios
d) titular

74. ____________________
a) actitud
b) fondo
c) grupo
d) promedio

75. ____________________
a) advertir
b) adivinar
c) amenazar
d) recomendar

76. ____________________
a) casi nunca
b) de alguna forma
c) en algún lugar
d) por error

77. ____________________
a) enlace
b) premio
c) rango
d) red

78. ____________________
a) barbilla
b) codo
c) pulgar
d) tobillo

79. ____________________
a) bufanda
b) folleto
c) investigación
d) monedero

80. ____________________
a) asqueroso
b) bochornoso
c) encantador
d) precioso

81. ____________________
a) al otro lado de
b) dentro de
c) detrás de
d) frente a

Appendix 2. Written Vocabulary Test

WRITTEN VOCABULARY SIZE TEST

This is the second part of the vocabulary test. Please, DO NOT CORRECT any answers in the previous test. It is also very important that you try to answer **ALL THE QUESTIONS** in the test. There are no negative marks for incorrect answers.

Read the questions and select the answer (a, b, c, OR d) with the closest Spanish translation to the key word in each question.

Example 1 – You will hear:

SCHOOL – This **school** is new.

A. cama
B. escuela
C. parque
D. supermercado

The closest translation for the target word that you have heard is '*escuela*', so the answer you have to mark is **B.**

Example 2 - You will hear:

PLAY – They **play** it very often.

A. beber
B. cocinar
C. comer
D. jugar

The closest translation for the target word that you have heard is '*jugar*', so the answer you have to mark is **D.**

1. TICKET: This ticket is perfect.

a) cubo
b) entrada
c) factura
d) rama

2. ASSISTANT: The **assistant** is here.

a) ayudante
b) comerciante
c) representante
d) suplente

3. CLOWN: The **clown** is here.

a) pañuelo
b) payaso
c) peine
d) ternero

4. REFUSE: They want to **refuse** it today.

a) reconocer
b) recuperar
c) reducir
d) rehusar

5. PIG: This **pig** is new.

a) cerdo
b) enchufe
c) pipa
d) tarta

6. FORWARD: They want to go **forward**.

a) adelante
b) además
c) del mismo modo
d) solo

7. PAVEMENT: This type of **pavement** is new.

a) acera
b) cuero
c) etiqueta
d) pico

8. TERM: This **term** is perfect.

a) equipo
b) prueba
c) sistema
d) trimestre

9. MATE: This **mate** is new here.

a) carne
b) compañero
c) espejo
d) modo

10. TIN: This type of **tin** is new.

a) comercio
b) hojalata
c) ladrón
d) maletero

11. WIDE: This is really **wide**.

a) amplio
b) digno
c) húmedo
d) salvaje

12. ALTHOUGH: I am happy **alt-hough** this is new to me.

a) aunque
b) a menos que
c) por lo tanto
d) sin embargo

13. CREATURE: This type of **crea-ture** is new to me.

a) criatura
b) cultura
c) defensa
d) diseño

14. LAUGH: They **laugh** very of-ten.

a) besar
b) dar patadas
c) mentir
d) reír

15. SMOOTH: This is really **smooth**.

a) dolorido
b) inteligente
c) libre
d) suave

16. SWITCH: This **switch** is new.

a) camión
b) éxito
c) interruptor
d) sueldo

17. YOU: They need **you** today.

a) lo
b) me
c) nos
d) te

18. LOCAL: They are **local** schools.

a) especial
b) histórico
c) local
d) necesario

19. IMPROVE: They **improve** very often.

a) aumentar
b) combinar
c) herir
d) mejorar

20. STAGE: This **stage** is new.

a) asunto
b) escenario
c) gusto
d) impuesto

21. RECORDING: This **recording** is new.

a) grabación
b) informe
c) pensamiento
d) razón

1. TICKET: This **ticket** is perfect.
a) cubo
b) entrada
c) factura
d) rama

2. ASSISTANT: The **assistant** is here.
a) ayudante
b) comerciante
c) representante
d) suplente

3. CLOWN: The **clown** is here.
a) pañuelo
b) payaso
c) peine
d) ternero

4. REFUSE: They want to **refuse** it today.
a) reconocer
b) recuperar
c) reducir
d) rehusar

5. PIG: This **pig** is new.
a) cerdo
b) enchufe
c) pipa
d) tarta

6. FORWARD: They want to go **forward**.
a) adelante
b) además
c) del mismo modo
d) solo

7. PAVEMENT: This type of **pavement** is new.
a) acera
b) cuero
c) etiqueta
d) pico

8. TERM: This **term** is perfect.
a) equipo
b) prueba
c) sistema
d) trimestre

9. MATE: This **mate** is new here.
a) carne
b) compañero
c) espejo
d) modo

10. TIN: This type of **tin** is new.
a) comercio
b) hojalata
c) ladrón
d) maletero

11. WIDE: This is really **wide**.
a) amplio
b) digno
c) húmedo
d) salvaje

12. ALTHOUGH: I am happy **although** this is new to me.
a) aunque
b) a menos que
c) por lo tanto
d) sin embargo

13. CREATURE: This type of **creature** is new to me.
a) criatura
b) cultura
c) defensa
d) diseño

14. LAUGH: They **laugh** very often.
a) besar
b) dar patadas
c) mentir
d) reír

15. SMOOTH: This is really **smooth**.
a) dolorido
b) inteligente
c) libre
d) suave

16. SWITCH: This **switch** is new.
a) camión
b) éxito
c) interruptor
d) sueldo

17. YOU: They need **you** today.
a) lo
b) me
c) nos
d) te

18. LOCAL: They are **local** schools.
a) especial
b) histórico
c) local
d) necesario

19. IMPROVE: They **improve** very often.
a) aumentar
b) combinar
c) herir
d) mejorar

20. STAGE: This **stage** is new.
a) asunto
b) escenario
c) gusto
d) impuesto

21. RECORDING: This **recording** is new.
a) grabación
b) informe
c) pensamiento
d) razón

22. DISEASE: This **disease** is new.
a) enfermedad
b) muñeca
c) sobre
d) tambor

23. DUST: The **dust** is here.
a) multitud
b) pato
c) polvo
d) techo

24. CONFIDENT: They are really **confident**.
a) confiado
b) crudo
c) frecuente
d) preciso

25. SHUT: They **shut** it very often.
a) cerrar
b) gastar
c) gritar
d) rasgar

26. CABIN: The **cabin** is here.
a) cabaña
b) contable
c) lavabo
d) taxi

27. HEY: **Hey**, Peter! How are you?
a) ¡Guay!
b) ¡Oye!
c) ¡Vale!
d) ¡Vaya!

28. EFFORT: This **effort** is new.
a) botón
b) capítulo
c) cesta
d) esfuerzo

29. PLEASANT: They are really **pleasant**.
a) afilado
b) agradable
c) disponible
d) educado

30. WEST: This is the **west** coast of the country.
a) este
b) norte
c) oeste
d) sur

31. HANG: They want to **hang** them today.
a) alimentar
b) colgar
c) congelar
d) pegar

32. DAILY: They need it **daily**.
a) a veces
b) absolutamente
c) con cuidado
d) diariamente

33. HAVE: They **have** done it.
a) conseguir
b) haber
c) poder
d) ver

34. DELAY: This **delay** is new.
a) derrota
b) ensayo
c) muestra
d) retraso

35. IMPROVEMENT: This type of **improvement** is new.
a) alquiler
b) ausencia
c) hierro
d) mejora

36. CUSHION: This **cushion** is new.
a) cartón
b) cojín
c) desafío
d) goma

37. CONSIST: They **consist** of parts.
a) competir
b) consistir
c) discrepar
d) persuadir

38. MEND: They want to **mend** them today.
a) abrochar
b) arreglar
c) ordenar
d) subrayar

39. SUBJECT: This **subject** is new.
a) apoyo
b) asignatura
c) mantel
d) traje

40. LOW: They are very **low**.
a) apropiado
b) bajo
c) grande
d) pobre

41. MUG: The **mug** is here.
a) bigote
b) jarrón
c) melocotón
d) tazón

42. TIGHTS: The **tights** are here.
a) estudios
b) gafas
c) medias
d) peniques

43. PAY: This **pay** is new.
a) imagen
b) paga
c) plan
d) precio

44. IRONING: This **ironing** is new.
a) concurso
b) devolución
c) planchado
d) vendaje

45. WALK: This type of **walk** is perfect for me.
a) botella
b) pájaro
c) paseo
d) reloj

46. ITEM: This **item** is new.
a) culpa
b) elemento
c) mobiliario
d) rana

47. LAND: They want to **land** today.
a) aterrizar
b) quemar
c) reservar
d) unirse

48. HANDLE: They **handle** it very often.
a) batir
b) manejar
c) permitir
d) sostener

49. REGARDS: The **regards** are here.
a) aduanas
b) refrescos
c) saludos
d) servicios

50. EVERY: **Every** object here is perfect.
a) algún
b) cada
c) este
d) ningún

51. THROW: They want to **throw** them today.
a) añadir
b) cazar
c) lanzar
d) molestar

52. SIDE: This **side** is new.
a) forma
b) lado
c) punto
d) vista

53. THAN: They are better **than** my brother.
a) con
b) para
c) que
d) sin

54. PLEASED: They are very **pleased**.
a) capaz
b) enfadado
c) satisfecho
d) sorprendido

55. CHEEK: The **cheek** is here.
a) acantilado
b) cajón
c) jaula
d) mejilla

56. FAST: They need it **fast.**
a) abajo
b) deprisa
c) lejos
d) tarde

57. DEVELOPMENT: This **development** is new.
a) decepción
b) desarrollo
c) intercambio
d) meta

58. PEA: This type of **pea** is new.
a) alubia
b) cebolla
c) guisante
d) lechuga

59. HALL: This **hall** is new.
a) hambre
b) juez
c) sala
d) sombrero

60. BLOW: They want to **blow** them today.
a) construir
b) romper
c) saltar
d) soplar

61. HEIGHT: This **height** is perfect.
a) altura
b) beca
c) ejemplo
d) rodilla

62. TISSUE: This **tissue** is perfect.
a) fábrica
b) pañuelo de papel
c) traducción
d) variedad

63. MESSY: They are really **messy**.
a) deseoso
b) desordenado
c) roto
d) tímido

64. PILL: This **pill** is perfect.
a) mediodía
b) niebla
c) pastilla
d) seta

65. HOMEPAGE: This type of **homepage** is new to me.
a) luna de miel
b) maleta
c) página de inicio
d) poste

66. HILL: The **hill** is here.
a) agujero
b) colina
c) equipaje
d) esperanza

67. REGRET: They **regret** them very often.
a) aconsejar
b) desear
c) lamentar
d) lograr

68. CABINET: This type of **cabinet** is perfect.
a) armario
b) moneda
c) tasa
d) tripulación

69. PEDRESTRIAN: The **pedestrian** is here.
a) paquete
b) patinaje
c) peatón
d) postre

70. GLOVE: The **glove** is here.
a) abrazo
b) cabra
c) guante
d) hoja

71. PUNISH: They want to **punish** them today.
a) animar
b) castigar
c) reemplazar
d) situar

72. UNKIND: They are really **unkind**.
a) descuidado
b) incapaz
c) inconsciente
d) poco amable

73. HANDWRITING: This type of **handwriting** is perfect.
a) bolsa de mano
b) caligrafía
c) tablón de anuncios
d) titular

74. BACKGROUND: This **background** is perfect.
a) actitud
b) fondo
c) grupo
d) promedio

75. WARN: They **want** to warn them today.
a) advertir
b) adivinar
c) amenazar
d) recomendar

76. SOMEHOW: They need them **somehow**.
a) casi nunca
b) de alguna forma
c) en algún lugar
d) por error

77. NET: This **net** is perfect.
a) enlace
b) premio
c) rango
d) red

78. THUMB: The **thumb** is here.
a) barbilla
b) codo
c) pulgar
d) tobillo

79. BROCHURE: This type of **brochure** is perfect.
a) bufanda
b) folleto
c) investigación
d) monedero

80. CHARMING: They are really **charming**.
a) asqueroso
b) bochornoso
c) encantador
d) precioso

81. IN: They are **in** it.
a) al otro lado de
b) dentro de
c) detrás de
d) frente a