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INVESTIGATING THE LINGUISTIC AND CONTEXTUAL PARAMETERS OF
THE CONSTRUCT OF COMPREHENSIBILITY

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INVESTIGATING THE LINGUISTIC AND CONTEXTUAL PARAMETERS OF
THE CONSTRUCT OF COMPREHENSIBILITY

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I certify that this thesis satisfies all the requirements as a thesis for the degree of
Doctor of Philosophy.

This is to certify that we have read this thesis and that in our opinion it is fully
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Sevinç YERLİ USUL

Signature

To my beloved family; my mom and dad, my husband Erdener, dear daughter Ayça,
and late mother-in-law İsmi; without them all would be impossible...



ABSTRACT

In today's world, it is of great importance to communicate using a foreign language. Although scholars have addressed "comprehensibility" for a long time, it has often been associated with accent or pronunciation. Further, they also believed that making a speech comprehensible is mainly the speaker's responsibility. In most studies, the judgments of the listeners are the main determinants of comprehensibility. However, the linguistic and contextual factors that contribute to the listeners' perceptions of comprehensibility have not been addressed. Further, it has become a common fact that English is spoken in many different countries and with many different accents in the globalized world. Therefore, this study explores the potential effects of contextual factors which may influence comprehensibility over and beyond linguistic factors. More specifically, linguistic and contextual factors that may affect the concept of "comprehensibility" were investigated. To collect data, speech samples on three different tasks were collected from B1 level English preparatory students of a state university in Turkey. Speech samples were rated both by native and non-native speakers of English for comprehensibility. Further some bio-info of the participants were collected to explore the effect of one's background on their comprehensibility perceptions. Furthermore, during a think-aloud procedure, the rating process was followed to delve into the raters' ideas on comprehensibility better. As a result of the data obtained, a new comprehensibility scale that arose out of the research was developed and piloted with 31 raters. Consecutively, the factor analysis was conducted, and after the necessary improvements, the scale was sent to 61 native and 61 non-native speakers for the main administration. In the final step, the factor analysis and the regression analysis were done, the results were analyzed and the raters' perceptions of comprehensibility were defined and compared. Finally, the scale

which arose out of the research was finalized and a new comprehensibility model was suggested.

Keywords: *comprehensibility, intelligibility, nativelikeness, accentedness, L2 oral proficiency, communicative competence, raters' comprehensibility perceptions*



ÖZET

Günümüz dünyasında, yabancı bir dili kullanarak anlamak ve yine o dilde anlaşılabilir olmak büyük önem taşımaktadır. “Anlaşılabilirlik” olgusu, öteden beri yabancı dil öğretiminin nihai hedeflerinden biri olsa da, genellikle aksan veya telaffuz ile ilişkilendirilmiş ve bir konuşmanın anlaşılabilir olmasının çoğunlukla konuşmacının sorumluluğunda olduğu düşünülmüştür. Literatüre göre, dinleyicilerin yargıları anlaşılabilirliğin ana belirleyicisidir; ancak, dinleyicilerin anlaşılabilirlik hakkındaki algılarına katkıda bulunan dilsel ve bağlamsal faktörler, şimdiye kadar net bir şekilde tanımlanmamıştır. Bu çalışmada ise, küreselleşen dünyada İngilizce’nin çok farklı ülkelerde ve pek çok farklı aksanla konuşulduğu gerçeğinden hareketle, anlaşılabilir olmanın sadece telaffuz ile sınırlı olamayacağı tezi savunulmaktadır. Bu sebeple, “anlaşılabilirlik” olgusunu etkileyebilecek dilbilimsel ve bağlamsal faktörler araştırılmıştır. Veri toplama aşamasında, üniversitelerin İngilizce hazırlık sınıflarında okuyan öğrencilerden, kendilerine verilen üç farklı görev esnasındaki konuşma örnekleri toplanmış ve ana dili İngilizce olan veya İngilizce’yi yabancı dil olarak konuşan katılımcılara dinlettirilmiştir. Katılımcılardan, dinledikleri konuşma örneklerini ne kadar anlaşılır bulduklarını notlamaları istenmiştir. Aynı zamanda kişinin geçmiş yaşantılarının ve deneyimlerinin anlaşılabilirlik üzerindeki etkilerini anlamak için de katılımcılardan biyografik sorular içeren bir anket doldurmaları istenmiştir. Bu aşamayı takiben, katılımcılar konuşma örneklerini tekrar notlandırırken, kendileri ile görüşmeler yapılarak, verdikleri kararları etkileyen faktörler daha iyi anlaşılmaya çalışılmıştır. Toplanan veriler sonucunda bir anlaşılabilirlik anketi hazırlanmış ve 31 kişilik katılımcı grubu ile pilot çalışması yapılmıştır. Ardından, gerekli düzenlemeler yapılarak son hali verilen anket bu kez ana uygulama için ana dili İngilizce olan ve İngilizce’yi yabancı dil olarak konuşan

61+61 katılımcı ile tekrar uygulanmıştır. Sonuçlar SPSS programından faydalanılarak, faktör analizi ve regresyon analizi yöntemleri kullanılarak analiz edilmiştir. Elde edilen veriler neticesinde hem anadili İngilizce olan hem de İngilizce'yi yabancı dil olarak konuşan katılımcılar için “anlaşılabilirlik” olgusunu etkileyebileceği düşünülen faktörler belirlenerek yeni bir model ortaya konulmuştur. Ayrıca her iki katılımcı grubunun görüşleri arasındaki farklı ve ortak noktalar belirlenerek konuya farklı bir boyut kazandırılmıştır.

Anahtar sözcükler: *anlaşılabilirlik, aksanlılık, yabancı dilde sözel yeterlilik, iletişimsel yeterlilik, değerlendiricilerin anlaşılabilirlik algıları*

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1. INTRODUCTION

1.1. Background to the Study

With the effect of globalism, the world has become smaller and the people have had the chance to go beyond their borders. With a good command of English, (so-called “lingua franca”) knowing about the whole world is not that difficult nowadays. Therefore, the need for having a good command of English or any other language seems to be more important now than any time ever. (Suna & Durmuşçelebi, 2013)

As in many other expanding, and outer circle countries (Kachru; 1986), English has a special place in Turkey, too. It is a bridge between many different countries, cultures and people. Besides being the *lingua franca*, it is the language of technology, science and every kind of communication. Therefore, the power of having a good command of English is priceless. (Saito, Trofimovich & Isaacs, 2015)

English has long been taught as a foreign language in Turkey. So far, a big amount of time, money and effort have been spent for a successful English teaching program; and accordingly, a few important changes have been made in the educational system throughout the years. However, none of these systems have been successful enough to achieve the country’s foreign language teaching goals. (Aktaş, 2005) As a result, teaching and having a good command of English, and testing it well, still seem to be a big challenge throughout the country. (Demirel, 2012; Durmuşçelebi, 2006) Although there are some national tests (such as YDS, YOKDIL etc.) which focus on testing the reading skills and vocabulary and grammar knowledge of the candidates, there are not some satisfactory tests which focus on communicative skills. In spoken exams, as has usually been the case in any other parts of the world where English is

taught as a foreign language; accent, *nativelikeness and pronunciation* issues play a vital role during the evaluation. However, in today's global world, limiting a foreign language speaker's performance just within the borders of accentedness wouldn't be fair since there is more than that. Considering that non-native speakers of English outnumber the natives now, being stuck in the accent or nativelikeness would not make any help, except for that, understanding and being understood deserve much more attention. (Clarke, 2016; Levis, 2018)

In a successful foreign language teaching program, understanding and also being understood are seen to be the main objectives of the course. According to Long's Interaction Hypothesis (1996), language learning takes place best when there is communication. Even if there are some breakdowns, the speakers may repair them in order to have a meaningful interchange. As a result, if the main idea is to send a message and to be understood in the target language; nativelikeness may be a hindrance for language learners. At this point, comprehensibility (ease of understanding) is seen to be adequate for successful communication in the target language. (Munro & Derwing, 1999). However, as it is clear from the related literature there has not been a consensus on the issue of comprehensibility (Suzuki & Kormos, 2020) and many times, even the language teachers are not fully aware of what the main contributors of comprehensibility are. (Crowther, Trofimovich, Saito & Isaacs; 2015) Thus, this study will investigate the factors contributing to comprehensibility and accordingly a new comprehensibility scale will be developed.

1.2. Statement of the Problem

As it is clear from the related literature, there are mainly two approaches that have dominated the language teaching/learning field for long; *nativelikeness and*

intelligibility. (Crowther, Trofimovich, Saito & Isaacs; 2015; Levis, 2018) The former refers to the ultimate goal of achieving a native-like pronunciation, and the latter refers to successful communication which focuses on “understanding” rather than a native-like accent. Despite this main difference between them, it is important to note that both approaches support the idea that acquiring a reasonable linguistic and communicative proficiency in the target language is crucial for language learners. (Derwing, 2003; Tokumoto & Shibata, 2011; Van Maastricht, Krahmer & Swerts, 2016)

Though it is commonly accepted by many scholars that nativelikeness as an approach may not work well in a global world, having an accent has long been perceived as a hindrance by many people in the field. (Levis, 2018; Munro & Derwing, 1999) Despite all the technological developments in this era, language classrooms still maintain their importance in many different parts of the world. There are still some traditional language classes where students are tried to be taught in the (so-called) perfect way which means sounding like a native speaker by depending on the traditional approach of *nativelikeness*.

For years, and unfortunately still today, there have been some educators, students, administrators, parents and even some scholars who have supported the power of a native-like accent for successful communication. According to Timmis (2002) teachers were taking the issue of nativelikeness even much more seriously than their students. Therefore, most speaking exams and syllabi of speaking classes have depended on pronunciation. However, in such a global world trying to teach the language only to the norms of native speakers is nonsense. As the previous research (Flege, Munro & MacKay, 1995) indicated, mastering a native-like accent is neither

easy nor necessary in order to survive in the target language. (Derwing & Munro, 2009; Moyer, 2013)

Previously, comprehensibility was usually studied in the realms of L2 pronunciation research, and it was tried to be assessed by using speaking tests. However, the dimensions of those tests were vague and inconsistent. Besides, they were not often clear on the concepts of “comprehensibility” and “accentedness.” (Isaacs & Trofimovich, 2012) For this reason, knowing the components of comprehensibility, which is claimed to be effective for a successful interaction, is important for all the stakeholders of the process. (Crowther, Trofimovich, Isaacs, & Saito, 2015; Saito, Trofimovich & Isaacs; 2016) Nevertheless; in the literature, there has not been a consensus on the issue of comprehensibility yet. Moreover, even the language teachers are not fully aware of its characteristics. Besides, its assessment still seemed to be blurry. (Crowther, Isaacs, Trofimovich & Saito; 2015; Levis, 2018; Suzuki & Kormos, 2020)

From this point forward, a new method which does not focus on just a native-like pronunciation has started to gain importance because it is comprehensibility rather than pronunciation which makes our interactions meaningful. As a result, focusing on meaning, understanding and the concept of “comprehensibility”, are the earmarks of this study.

1.3. The Purpose of the Study

Over the past forty years, a fair amount of research was conducted on L2 oral proficiency. In most of those studies, comprehensibility was linked to nativelikeness, (Van Maastricht, Krahmer & Swerts, 2016), but further research indicated that it was not the case. Different studies (Derwing & Munro, 1997) revealed that even with an

accented speech a successful interaction was possible in the foreign language. As the intelligibility approach suggested; understanding and being understood (rather than having an accent or not) were the key factors for success in foreign language classes. Therefore, the terms “intelligibility” and “comprehensibility” which refer to understanding seem to be of prime importance.

As there are different ideas on the components of comprehensibility, it is necessary to identify the factors behind it clearly and develop an instrument that does not only refer to the nativelikeness at the end. (Isaacs, Trofimovich & Foote, 2018) Furthermore, some contextual factors (such as listeners’ effect and task effect) which were usually neglected in the earlier studies, should also be included in the new model because communication is not a one-way road. It takes place between two people, so it necessitates “understanding” and also “being understood”, which means that both parties, as listeners and speakers, have the equal responsibility for a successful interaction. As Rajadurai (2007, p.91) claimed, “conversation is always collaboratively achieved: both speaker and listener must work towards the construction, transmission, and interpretation of meaning, and thus share the onus for effective communication.” It made clear that not only what was said or how it was said, but also how much it was understood was important.

Furthermore, as Saito, Trofimovich & Isaacs (2015, p. 457) suggested “teachers should be made aware that they can evaluate their learners’ speech for a variety of linguistic dimensions, using simple scalar judgments on Likert or Likert-type scales.” Besides, teachers should recognize the power of instruction by which several linguistic and contextual aspects could be touched upon and in this way, learners’ comprehensibility and communicative success should be improved.

Correspondingly, the main purpose of this study was to define the components of comprehensibility by dint of research, and in this way validate the new comprehensibility model suggested.

1.4 Research Questions

In accordance with the purpose of this study, a more inclusive comprehensibility model was suggested. Instead of focusing on just the linguistic components, contextual factors such as listeners' effect (raters' effect) and task effect were also included in the model.

At first, all the components regardless of how often they were mentioned in the earlier research studies, were put into the existing comprehensibility model. After that, some new sub/components arose from the in-depth readings, which have not been widely investigated so far, were also included in the new, suggested comprehensibility model. (see Figure 1) In this way, the new model focused on both contextual and linguistic components of comprehensibility. (see Figure 2) The components which were investigated specifically in this new model were mostly the contextual ones. They are mainly, “**raters' effect**” in which the subcomponents such as; *interlocutor's willingness, attitudes towards languages, sociocultural background, proficiency level, prior exposure to different varieties of English/ different languages, L1 effect, bilingualism, age, level of education, native/nonnative difference, familiarity with the rating process and the length of exposure to English* take place, and also “**task effect**” in which the subcomponents; such as *task type, and task familiarity* take place. In order to validate the suggested model, the following research questions were formulated.

1. What is the contribution of task type and raters' background to comprehensibility?
2. What is the contribution of pronunciation, vocabulary, fluency and structure to comprehensibility?
3. Is there a difference between the contribution of linguistic and contextual factors to comprehensibility?
4. Is there a difference between the perceptions of native and non-native speakers on the components of comprehensibility?



Components of Comprehensibility Extracted from the Related Literature

- **Segmental-Suprasegmental features of Pronunciation;** Zielinski, 2008; Saito and Saito, 2017
- **Nativeness, accentedness;** Van Maastricht, Krahmer and Swerts, 2016, Moyer, 2013
- **Listeners' L1 effect (speech processing techniques);** Zielinski 2008; Swan and Smith, 2001; Derwing & Munro, 2008; Major et al., 2002; Carey, Mannell, & Dunn, 2011, Derwing, Rossiter, & Munro, 2002; Saito, Trofimovich and Isaacs, 2015
- **Grammar;** (Major et al., 2002; Isaacs & Trofimovich, 2012; Saito, Trofimovich, & Isaacs, 2016
- **Task/context effect;** Turner, 2000; Crowther, Trofimovich, Isaacs, and Saito, 2015a
- **Fluency;** Kang et al. 2010, Tavakoli, & Wright, 2020, Derwing, Rossiter, Munro & Thomson, 2004
- **Vocabulary;** Isaacs & Trofimovich, 2012; Saito et al., 2016; Saito & Saito, 2017
- **Discourse;** Crowther, Trofimovich, Isaacs, & Saito, 2017

Figure 1: Components of Comprehensibility Extracted from the Literature

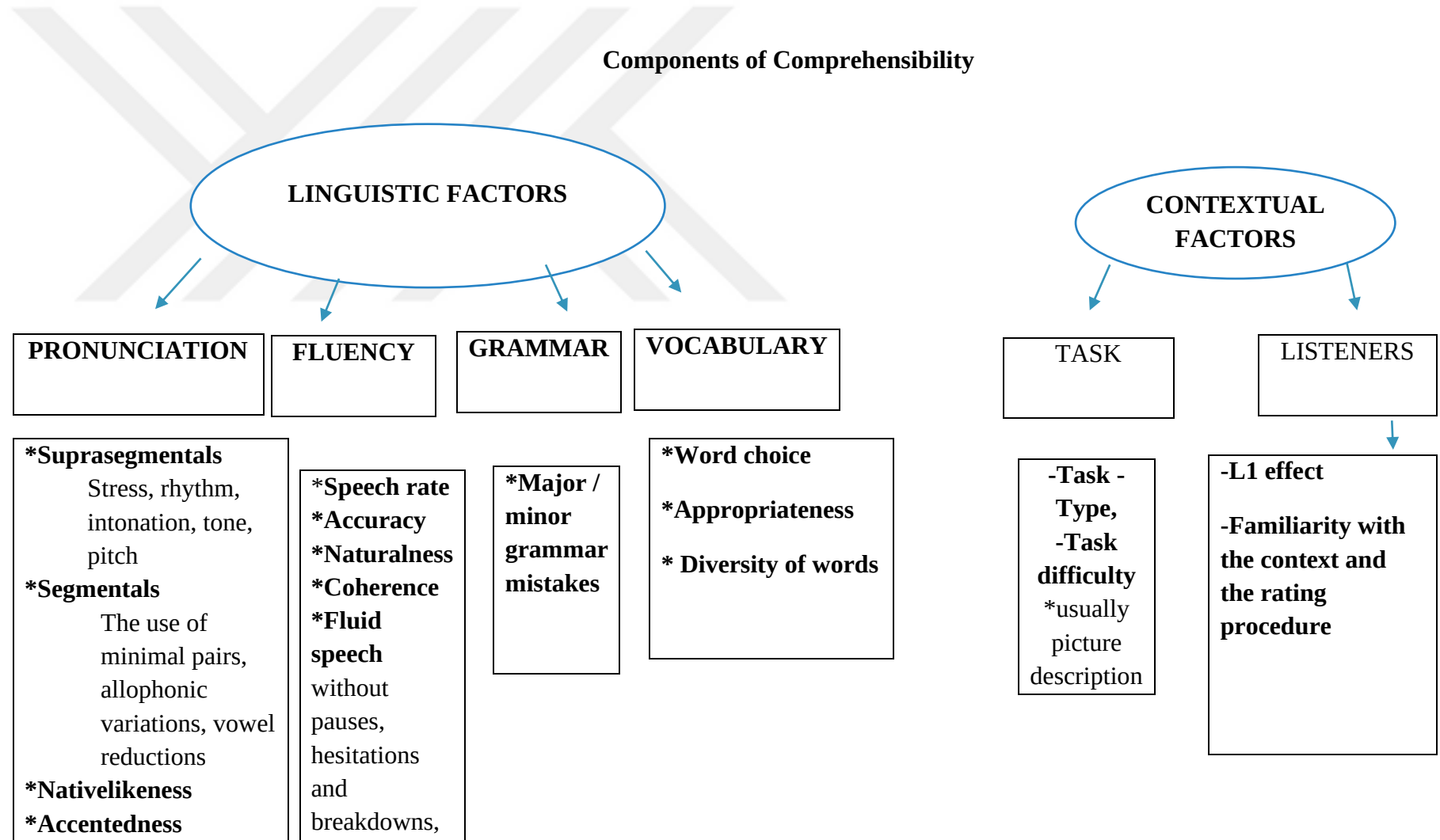


Figure 2: The Graphical Representation of the Factors Contributing to Comprehensibility Based on Literature

The Suggested Comprehensibility Model

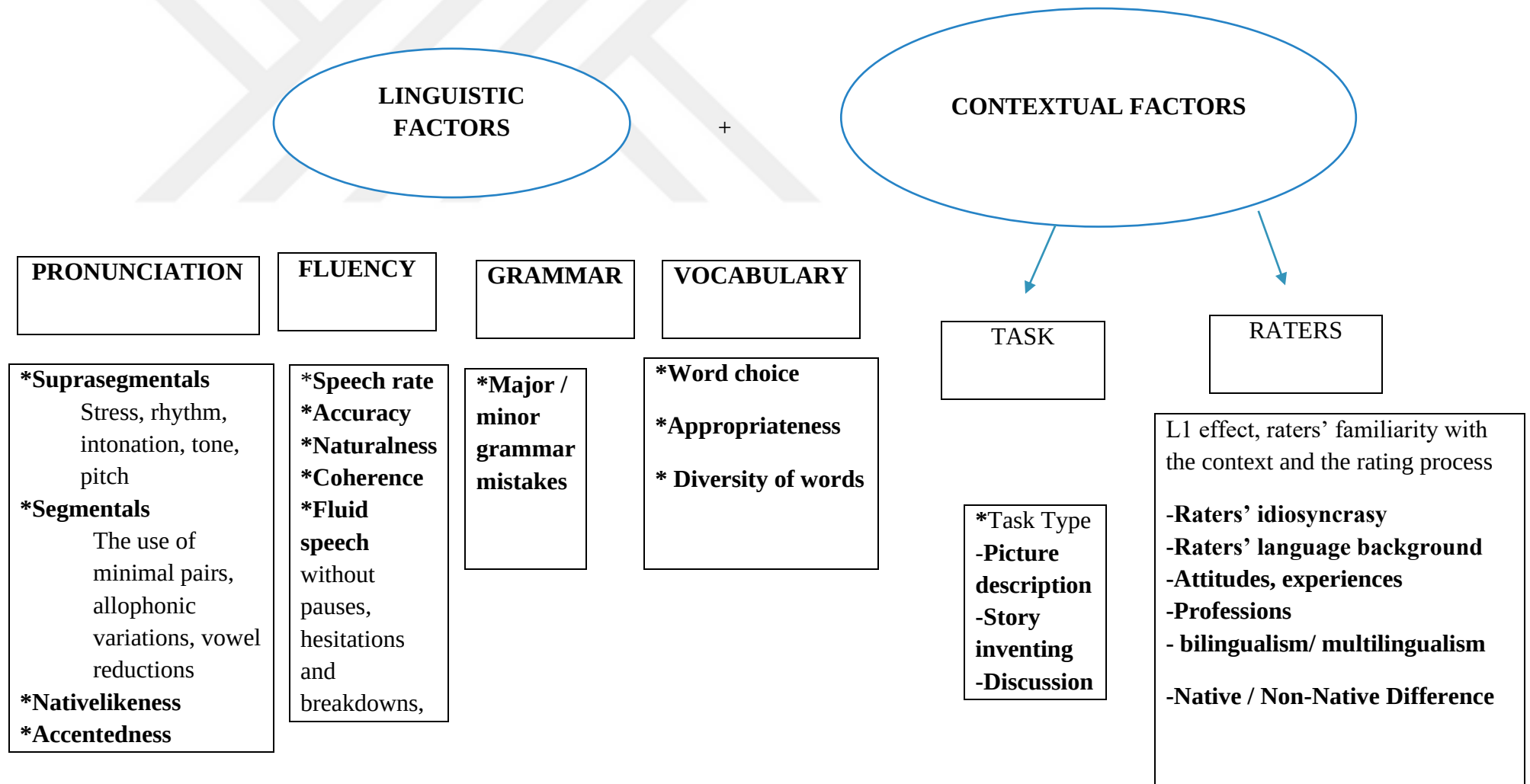


Figure 3: The Suggested Comprehensibility Model

1.5. Significance of the Study

Since comprehensibility was accepted to be one of the main objectives of foreign language classes, the language teachers and students must be well aware of its components, and they should know what to focus on while teaching and assessing the language. As Munro & Derwing (1999) concluded, depending on the pronunciation scales, which only focus on how much accented the speech is, does not help if the main goal of language learning is to be comprehensible. Rather than that, teachers should focus on the factors which may affect understanding.

In fact, some scholars wanted to find out the factors which would be effective in understanding, so lots of different studies were conducted on this matter. However, these studies were not comprehensive enough as they usually focused on limited variables at once. As the literature review indicated, comprehensibility research has mostly focused on the listeners' perceptions so far. Until Isaacs & Trofimovich's (2012) empirical study, scales generally depended on the listeners' ratings rather than focusing on the components of comprehensibility. In other words, the listener's judgment was accepted to be the main determiner of comprehensibility, and it is clear from the related literature that, these scales usually aimed at "the accent" more than any other aspects of speech. As a result, the linguistic and contextual factors contributing to listeners' perceptions of comprehensibility have not been investigated and defined extensively so far.

Though there have been different models to explain the components of comprehensibility, they are neither based on empirical data nor focused on various variables at the same time. In regard to the previous research, it is possible to say that phonology, lexis and grammar were the components mentioned more often in the literature. However, there has not been a satisfactory amount of research on the

aspects of the task effect, and the raters' effect. Previously, comprehensibility was mostly considered to be the listeners' responsibility; however, the importance of both parties (listener and speaker) during the interaction process was often emphasized in the related literature. (Rajadurai, 2007) Therefore, taking a deeper look at the effects of listeners, (raters) and the task may reveal a lot for the field.

Moreover, as was shown by different research studies, language learners from different L1s may have phonemic problems specific to the contrasts between the phonology of their native language and English as a foreign language. (Munro & Derwing, 2008; Swan & Smith, 2001; Zielinski, 2008;)

Therefore, developing scales which may assess the components of comprehensibility for different L1 backgrounds is also important for the field. Thence, suggesting a new comprehensibility model which may include some more possible components of comprehensibility and developing a practical scale depending on data seemed to be a need for the field.

In other words, the main purpose of this study was to investigate the native and non-native raters' comprehensibility perceptions, and to identify the factors that contribute to comprehensibility. In order to do that, a new comprehensibility scale that arose out of research was developed. Besides, a new and more comprehensive model of comprehensibility was suggested.

As there has not been a consensus on the constructs of comprehensibility so far, the scale developed in this study will be a base for further empirical studies which may be conducted with different participant groups.

Furthermore, as English is widely used all around the world today, instead of dealing with the "nativelikeness", this study defined both native and non-native raters'

perceptions of comprehensibility, which gave the chance to compare both groups' priorities.



2. LITERATURE REVIEW

In this chapter, the theoretical background of the study will be explained. The differences between the terms ‘comprehensibility’, ‘intelligibility’ and, ‘accentedness’ all of which are related to understanding, will be defined. Besides, the results of different studies conducted on comprehensibility will be explained and finally, the components of comprehensibility defined in the literature so far will be given.

2.1 Theoretical Foundations of the Dissertation

Language learning has always been among the popular issues for people probably since the beginning of civilizations. When people started to become social, they wanted to know more about the world and the people around them, so they needed to have more interactions. Though the reasons for learning a new language could have been diverse, the ultimate goal of it was usually the same: being able to communicate. (Levis, 2018) From this point forward, different approaches to language teaching have been suggested by scholars since earlier times. Depending on the advances in the different fields of science, and the needs of the learners, these approaches were also shaped. To illustrate, sometimes knowing just the structures of a language was enough because people needed to know the target language for literary purposes or translation by referring to their native tongue. (The Grammar Translation Method) (Brown, 2001) Sometimes, memorizing certain drills was thought to be effective for language learning. (The Audiolingual Approach) (Brown, 2001) As it can be perceived, instead of a structural way of teaching, with the Audiolingual Approach which suggested the strength of habit formation, the behaviorist theory started to be accepted. However, it

was not until the Chomskyan approach that language learners' cognitive ability was touched upon. Until that time, the cognitive capacity of the language learners had been ignored, and language learning and teaching had been thought of as a structural, mechanical, and behavioristic tasks.

Starting with the Chomskyan approach (Chomsky, 1965), which suggested that language learning could not be associated with any kind of learning behavior since it has its unique dynamics, scholars started to think about the mental potential of the humankind which allowed them to learn a language. By rejecting the behaviorist theory Chomsky advocated that "Language is not a habit structure. Ordinary linguistic behavior characteristically involves innovation, formation of new sentences and patterns in accordance with rules of great abstractness and intricacy." (Chomsky, 1966, p.153) According to Chomsky, (1965) a person could not have memorized all kinds of sentences that s/he made just by imitating and repeating. Language learning meant much more than just imitation, it had some kind of creativity and generating ability that was specific to humankind. In other words, people had the inherent capacity to learn a language and to use it. There was a hidden power that made us create lots of different sentences that we hadn't heard or learned before, which was called linguistic competence. That's to say, we, as human beings have the tacit linguistic knowledge which enables us to learn and use a language. The potential of this linguistic competence, which is a natural endowment, helps us combine sounds and meanings unconsciously. Moreover, with linguistic competence, performance was also important in Chomsky's theory. He advocated that *linguistic competence* was the knowledge that the language user had about the language; on the other hand, *performance* was the person's ability to be able to use that language in a proper way in any given context. (Chomsky, 1965)

However, for some other scholars (Hymes, 1964) there was a deficiency in Chomsky's model that attempted to explain the term "performance" and "competence". According to Hymes (1964), separating the language from its context, and just dealing with the structure was inefficient to explain the language competence. Furthermore, he was not satisfied with Chomsky's explanation of the terms 'competence' and 'performance'. As a result, he proposed a new way of competence, which included both linguistic, cultural, and the social parts of a language. In this respect, the idea to use the language in real-life contexts appropriately widened the theory of "*linguistic competence*" into a more comprehensive one; *ethnography of communication*, which was the starting point of the "communicative competence" theory. According to Hyme's theory; along with the linguistic points, *how*, *where*, *when*, and *why* the language is used, should be taken into consideration. Accordingly, some other scholars (Canale & Swain, 1980; Hymes, 1972; Richards & Rodgers, 2001) also claimed that language learning cannot be limited to just the linguistic aspects of a language, so they took the concept of 'communicative competence' one step further.

In 1980, the scholars Canale & Swain (1980), suggested the idea that effective communication necessitates some different and important skills, and they attempted to describe what these talents would be. The theory of "*communicative competence*" was defined with its components and all vital parts that lead to a successful interaction. As a result, four sub-components of communicative competence were as the following; *grammatical competence*, *sociolinguistic competence* and *strategic competence*. According to Canale & Swain (1980) all of these three competencies had important roles in a successful interaction.

According to Canale & Swain (1980) *grammatical competence*, which referred to one's linguistic knowledge of the language, was the prerequisite of the communicative competence because without this competence it was difficult for the language learners to make sentences, and to use the language accurately. Besides, *sociolinguistic competence* was necessary to be able to communicate effectively and appropriately. That's to say, without sociolinguistic competence, it was not possible for someone to speak appropriately in social settings. It was the ability to choose the appropriate words, structures and sentences for the social settings in which they needed to be used. As Canale & Swain (1980; p. 30) described sociolinguistic competence also included *discourse competence* which referred to "the interpretation of individual message elements in terms of their interconnectedness and of how meaning is represented in relationship to the entire discourse or text." (Richards & Rodgers, 2001; pp.160) At last, another sub-component of communicative competence suggested by Canale & Swain (1980) was the *strategic competence* which referred to the speakers' and the hearers' ability to maintain the interaction. With the help of strategic competence; even if there are some breakdowns, the speakers may repair it and have a meaningful interchange.

In line with the "communicative competence" theory, some scholars (Long, 1996) also claimed that language learning would take place best during verbal interactions, and successful communication is the ultimate goal of language learning/teaching. Successful communication has been accepted to be the final product of speakers' and listeners' mutual efforts for meaning-making (Richards & Rodgers, 2001), and being able to use the language in real-life settings appropriately has been claimed to be the ultimate goal of language learning/teaching for long.

With the help of the communicative competence theory, the importance of teaching and using language in real-life settings became clearer. Until those times, language teaching mostly depended on teaching grammatical rules. As a result, it is possible to say that starting with the Chomskyan approach, communicative language teaching has become more popular day by day. It has still been used in many different foreign language classes, where the ultimate goal of language learning is to communicate successfully.

According to Richards & Rodgers (2001), Communicative language teaching (CLT) had some complex and comprehensive characteristics such as,

1. Language is a system for the expression of meaning.
2. The primary function of language is to allow interaction and communication.
3. The structure of language reflects its functional and communicative uses.
4. The primary units of language are not merely its grammatical and structural features, but categories of functional and communicative meaning as exemplified in discourse. (Richards & Rodgers, 2001 p. 161)

Besides, they advocated that including tasks that resembled real-life settings in foreign language classes would enhance learning. According to CLT, if students need to use the language in a logical and meaningful way, it is going to support their language development. In other words, attempts to make students use the language in the way it is authentically used will improve both teaching and learning processes. (Richards & Rodgers, 2001; pp 160-162) The primary purpose of language learning was to be able to use that language appropriately in real-life. At that point, the idea that there is a strong connection between language and culture was also suggested and

supported by some scholars (Alptekin, 2002; Richards & Rodgers, 2001; Widdowson, 1994) because without being able to understand the culture which that language belonged to, it was impossible to use the language in the most appropriate way; in other words, learning a language meant and included learning the culture of that language, too.

From this point forward, language was tried to be taught with its culture, which led to the superiority of the idea of *nativelikeness*, too. (Kianiparza, 2015) That's to say, learning a language in the way that a native speaker uses it, has become popular. A native-like proficiency, both in written and spoken tasks, was expected as the ultimate goal of language learning not only by the learners but also the teachers of the language. However, performing like a native speaker, especially on spoken tasks, is usually difficult for a language learner; moreover, with the effects of globalization and multilingualism the need for a native-like proficiency seems to be nonsense, too. (Saito, 2021) Instead of insisting on the idea of *nativelikeness*, focusing on understanding and being understood seem to be much more important. In line with the idea suggested with CLT, *comprehensibility*, in other words; being able to maintain successful communication in the target language, understanding and being understood well, seems to be a much more realistic goal in our globalized world.

Accordingly, the factors which might help understanding have been investigated by different scholars so far. (Saito & Saito, 2017; Tavakoli & Wright, 2020; Venkatagiri & Levis, 2007; Zielinski, 2018). Though most of the time they tried to assess it by using speaking tests, they were not successful enough to identify the inclusive components of understanding as they mostly focused on *accentedness* or *nativelikeness* issues.

2.2 L2 Speech Research on Accentedness and Comprehensibility

Most of the studies on comprehensibility research have usually focused on the issue of accentedness which means that pronunciation was usually accepted to be one of the main determiners of speech intelligibility/comprehensibility.

Kang, Rubin & Pickering (2010) advocated that comprehensibility and accentedness were strongly connected and it was especially the suprasegmental features that had something to say on comprehensibility. The results of their study showed that the changes in native speakers' ratings on non-native speech were at least 50% dependent on suprasegmental features.

In an effort to find out the components of comprehensibility, different research studies have been conducted and different variables defined. According to Zielinski (2008), the main problem for L2 listeners was that they tried to apply their L1 speech processing techniques to their L2. However, each language is specific in terms of speech processing, so this might lead to problems. She also claimed that segments should be produced accurately and strong syllables should be stressed to show the difference from the other syllables.

In line with Zielinski's (2008) study, Saito & Saito (2017) also suggested that both segmental and supra-segmental features of pronunciation should be included into the L2 pronunciation classes. They found that supra-segmental features were important for comprehensibility.

Additionally, Munro & Derwing (2001, p.463) asserted that differences in speech rate had something to say both on accent and comprehensibility. In a more recent study, Lima (2016) considered the matter from a different angle and claimed that among many different factors affecting comprehensibility, the ones depending on the

listeners' characteristics were the most prominent ones. As Lima explained, native and non-native listeners had different perspectives about comprehensibility. Even if they understood everything spoken, native listeners were not that tolerant when rating for the accented speech.

In their earlier study, Munro, Derwing & Morton (2006) also searched the “listeners’” effect. They wanted to see if there was a difference between the listener groups’ judgments on intelligibility, comprehensibility and accentedness. They found out that the participants’ L1 background or linguistic experience with different speech varieties did not make a significant difference. The results showed that instead of listeners’ background, components of the speech itself were more significant when determining L2 comprehensibility.

Apart from the aforementioned features defined by different scholars, having a good accent has long been accepted as one of the most prominent features of comprehensibility. (Van Maastricht, Krahmert & Swerts, 2016) Though the idea of “nativelikeness” may not work well in today’s world, having an accent has long been perceived as an obstacle. (Munro & Derwing, 1999) Accordingly, the relationship between accentedness and comprehensibility was studied a lot. (Bergeron & Trafimovich, 2017; Munro & Derwing 2001; Saito, Trafimovich & Isaacs, 2015) The results of those studies indicated that the relationship between these variables was not that strong. Though accentedness and fluency have been found to be the main components of comprehension for non-native speech in many different studies, (Derwing, Rossiter, Munro & Thomson, 2004; Munro & Derwing, 1999; Suzuki & Kormos, 2020) the features leading to comprehensibility have been accepted to be more complicated than that.

According to Saito, Trafimovich & Isaacs (2015, p.440) “comprehensibility and accentedness were two interrelated yet separable constructs and that not all linguistic errors linked to accent equally hinder comprehensibility.” They described that accent may not have all the responsibility for successful communication. In a similar vein, Nagle (2018, p.200) explained, “the articulation rate and morphology factor were significant predictors of comprehensibility but not accentedness. On the other hand, the combined phonology, syntax, and pauses factor predicted accentedness but not comprehensibility.”

As a whole, the results of the aforementioned studies, which mostly focused on linguistic and phonetic aspects of language, showed that comprehensibility was related to several different linguistic dimensions such as pronunciation, lexis, grammar, fluency and discourse structure. (Crowther, Trofimovich, Isaacs, & Saito, 2017; Suzuki & Kormos, 2020)

Therefore, a practical guide and tool to assess what comprehensibility is both for native and non-native speakers seem to be a need during teaching/learning process.

2.3. The Difference among the Terms *Comprehensibility*, *Intelligibility* and *Accentedness*

In the previous literature the terms intelligibility, comprehensibility and accentedness were usually used together. To illustrate, when evaluating an L2 speaker’s proficiency in oral communication, some kinds of scalar tests, which mostly depended on the native speakers’ judgments on the accentedness, were preferred. In other words, instead of focusing on understanding or being understandable, these tests were judging how much accented, or different the speech was. That’s to say, comprehensibility (or sometimes intelligibility) was usually paired with accentedness.

In some other cases, L2 users' speech productions were evaluated by the native speakers depending on the pronunciation tests with limited questions. In that sense, it was usually the intelligibility which was questioned. However, except for the word recognition, making meaning out of what is heard was in question. Therefore, it can be said that intelligibility, comprehensibility and accentedness were strongly combined issues and usually investigated together. (Thomson & Derwing, 2015; Venkatagiri & Levis, 2007)

In the process of language teaching and learning, having a native-like proficiency in all aspects of the target language has been accepted to be the utmost objective. (Derwing, 2003; Tokumoto & Shibata, 2011). Sounding like a native speaker, and getting out of all the effects of your foreign accent were usually the ultimate goals of pronunciation instruction. Furthermore, there were even some kinds of programs which aimed at neutralizing one's own accent to sound more like a native speaker, which was called "accent reduction program" (Munro & Derwing, 1999; pp. 286-287) From past to present, having a foreign accent has been considered to be something deplorable which needs treatment. (Munro & Derwing, 1999; Sarhandi, Memon and Khan, 2020)

However, it is accepted to be difficult to attain a native-like proficiency especially in pronunciation despite early exposure or the length of the time spent on learning. (Flege, Munro, & MacKay, 1995) Besides, in such a global and technological world today, in which languages are used beyond their borders, it seems to be nonsense to be stuck in the idea of native-like pronunciation, especially for English which is used in many different contexts with many different purposes. (Wang and Jenkins, 2016; Seidlhofer, 2011) Therefore, not only the idea of nativelikeness but also the social needs, that a language learner brings with, should be

considered. As Halliday (1997, p.31) underlined, there is “a range of possibilities, an open-ended set of options in behavior that are available to the individual in his existence as a social man.” Namely, as a social being, people have the chance and potential to use the language in many different ways as he needs, but the way he uses it has the importance. In other words, using the language in the most appropriate way in a social setting is the primary factor to successful communication. Furthermore, it is now clear from the earlier research (Derwing & Munro, 2009; Kang, Rubin & Pickering, 2010; Munro & Derwing, 1999) that connecting comprehensibility and accentedness would not work as even a heavily accented speech might be understandable. Accordingly, being stuck just in the scopes of pronunciation research while dealing with the speech mastery of language learners, will not take the issue a step further. (Derwing & Munro, 2009; Levis, 2005)

Hence, there seems to be a need for more realistic objectives, such as understanding and being understood, especially for the L2/foreign language learners’ proficiency in communicative tasks. From this point forth, dealing with the terms which are closely related to the “meaning” and “understanding” will help more.

Though “intelligibility” and “comprehensibility” are sometimes used interchangeably or to be very close in meaning, some scholars believe that there is a slight difference between them. (Nelson, 2012) Intelligibility mostly depends on the orthographic part of the speech; in other words, the accuracy of the orthographical part is the determiner. To illustrate; in an intelligibility test, the listeners are generally asked to write whatever they heard, and then their transcriptions are evaluated to see how much accurate they are. On the other hand, for comprehensibility tests “understanding” is the key factor. It refers to the listeners’ perceptions of how easy or difficult the speech is to be understood. (Munro & Derwing, 1995, pp. 289-291) In

this respect, comprehensibility and intelligibility are believed to be slightly different. While intelligibility is more related to phonology; comprehensibility mainly depends on semantics. Accordingly; for the current study, in which listeners' judgments on "understanding" are going to be evaluated, the term "comprehensibility" is preferred.

Along the same lines, Smith and Nelson (1985) referred to three different stages to maintain a satisfactory interaction continuum. They claimed that "Intelligibility", which could be defined as the recognition of word/utterance, was the first step of this continuum. "Comprehensibility", which focused on the meaning of the word/utterance followed it. At last, "Interpretability", which was defined as the listener's extra effort to make meaning by using some extra information behind the word/ utterance took part in the continuum.

In a follow-up study, Smith (1992) concluded that intelligibility was the easiest phase of the communication continuum. In addition to that, he claimed that being successful in one of those steps did not necessarily guarantee to be so in the others.

Likewise, Sewell (2010, p.258) described the terms with a nice analog as the following.

If comprehensibility and interpretability are likened to the notions of cohesion and coherence in written communication, then intelligibility is analogous to legibility; if letters or words cannot be recognized they cannot easily form part of a message, unless they are supplied by the receiver using contextual clues. (Sewell, 2010; p.258)

From this point of view, it is possible to say that not only what is said or how it is said, but also how much it is understood, or how meaningful it is for the listener is important.

In the light of the related literature, comprehensibility and intelligibility are also believed to be slightly different. While intelligibility is more related to phonology; comprehensibility mainly depends on semantics. Accordingly; for the current study, in which listeners' judgments on "understanding" are going to be evaluated, the term "comprehensibility" is preferred. As the aim of the current study was to find out both linguistic and the contextual factors affecting comprehensibility, besides dealing with the factors often defined in the literature, some other factors which were investigated rarely; such as *raters' effect* and *task effect*, were also taken into the scope of this study. In the following parts, the importance of these factors will be explained.

2.4 The Importance of Tasks in Language Teaching

Although task-based teaching is not a brand new approach, it has been more popular during recent years. For years, scholars thought that language teaching should be focused on grammar. However, recently it has been clear from many research studies that grammar is not enough itself for an acceptable competence in the target language. Most language teaching systems in classrooms were mainly based on grammatical rules and conceived language as a system which included a set of rules. However, within years, it was clear that language should be a means of "communication." As Halliday suggested; language learning mainly depended on learning how to mean. While language learners are trying to master their language skills, they are in fact struggling to learn how to survive in that language. (Halliday,1975)

In most countries, it was difficult for foreign language learners to master their language competence even after years of instruction. It was mostly because of the

structure-based approach which focused on the structures of the language rather than its real-life usages. (Skehan; 1996) In most cases, the students were able to form grammatically correct sentences; however, it was generally difficult for them to continue a real-life communication. Until the years when American Government Language Institutions discovered that language learners would be more successful if they were given task-based instruction -which was supported by authentic materials and real-life contexts- (Shehadeh, 2005: 13-14), task-based approach had not been that popular.

As the American Language Institutions suggested there is not only one correct way to teach foreign languages. In fact, the best way may be different for each class or each learner group. During the last fifty years, as the institute suggested, they tried different methods for different learner groups. From their experience of years, they advocated that the amount of time the learners spent reading and listening and interacting in the target language has something to say about their language proficiency.

Over the years, SLA research has indicated that language learners do not always learn and use the target language in the order they were taught. For example, even if the learners were exposed to many different language structures in order, at the end of the day, they themselves decide which one to use, where and how. In other words, they do not have to use the structures in the order that they were taught. Therefore, SLA research; which focuses on the theory of language learning more than language structure, is also a good support for Task-Based Language Teaching. Since learning is a unique and unpredictable process, it is possible to say that intrinsic factors are more effective than extrinsic ones during the process. (Shehadah, 2005; pp. 12-15)

“Task-based language teaching (TBLT) proposes the use of tasks as a central component in the language classroom because they provide better contexts for activating learner acquisition processes and promoting L2 learning.” (Shehadeh, 2005; p.14)

Classroom tasks are important in the way that they reflect real world communication. As Nunan described: “a classroom task is a piece of classroom work which involves learners in comprehending, manipulating, producing, or interacting in the target language while their attention is principally focused on meaning rather than form.” (Nunan, 1989, p.10). Furthermore, classroom tasks are also preferred because they are meaning-oriented like real-world interactions. Generally, being successful at any task means being successful at fulfilling a goal, like conveying or understanding the meaning in the target language as in the real-life language use. (Ellis, 2003)

According to Shehadah, (2005, p.17) “drawing learners’ attention to the formal properties of the L2 is also important for language learning, but only if it is done while maintaining emphasis on meaning, communication and fluency.” As Shehadah described in his study there are two basic kinds of tasks that can be used in language classrooms; they are real-world tasks and pedagogic tasks. Moreover, he proposed that these two can be subdivided into other types; such as, open or closed tasks and one-way or two-way tasks.

Since earlier research studies mostly focused on one-way tasks; such as “Picture description tasks”, they were limited in that they did not give the chance of information exchange as in real-life conversations. In one-way or closed tasks; the content is generally very limited, so there is not any information gap which enables the speakers to use their cognitive skills more as they do in real-life conversations. Therefore, they should not be used alone while trying to find out the real components

of comprehensibility. As a result, in this study, both open and closed tasks, in other words; both one-way, and two-way tasks that enable the interlocutors to exchange their ideas with the help of information gaps, were used. Besides, the time allocated for speech samples was generally very limited in earlier studies, which was thought to be a big handicap in more recent ones. (Suzuki & Kormos, 2020) Therefore, the speech samples were not shortened for this study, they were used as a whole in their original length. Apart from these, the difficulty and complexity of the tasks are also thought to be important for comprehensibility. In general, closed tasks are thought to be easier and simpler than open tasks because they limit the content and do not make the interlocutors produce something completely new in a short time. Rather, they usually provide the speakers with some clues, prompts, guides etc. which makes producing some speech samples easier than real-life conversations. In contrast, open tasks are more spontaneous, due to the information gaps between the interlocutors the conversations become more realistic. All in all, both task types were used in the current study in order to see the effects of different tasks on comprehensibility.

2.5 The Importance of Listeners (Raters)

In real-life conversations, people generally exchange their ideas, explain their opinions and as a listener or speaker try to do their best to make an interaction meaningful. As Long (1996) suggested even if there are some breakdowns or misunderstandings, speakers of a conversation can enhance the interaction by using some strategies. Therefore, understanding, in other words, comprehensibility is not only the responsibility of the speaker, it is also listener-oriented. In short, we can admit that both parties in a conversation “need the collaboration of their peers ...in

creating meaningful contexts and negotiating meanings in those contexts.” (Lavallo & Briesmaster, 2017, p.4)

In the field of World Englishes, Smith & Nelson’s earlier work on the issue of intelligibility has been accepted to be a cornerstone. Smith & Nelson (1985, p.334) emphasized the two-sided nature of successful communication process. They proposed that for successful communication not only the speaker but also the hearer was important. Additionally, Smith & Nelson (1985) suggested that the comprehensibility of the native speakers should not be taken for granted because they advocated the idea that “intelligibility is not only speaker oriented, it is interactional between speaker and hearer.” In other words, as some other scholars (Berns, 2008; Rajadurai, 2007) also suggested, each participant has the equal responsibility to carry on a satisfactory interaction. “Conversation is always collaboratively achieved: both speaker and listener must work towards the construction, transmission, and interpretation of meaning, and thus share the onus for effective communication.” (Rajadurai, 2007, p, 91)

Zielinski (2008) suggested that interaction was a mutual phenomenon which required both counterparts’ equal effort to be successful. She advocated that each listener and speaker had their prior experience and knowledge in their pockets to be used whenever needed. Therefore, no matter if you are the listener or the speaker of a speech, in both cases you activate your speech processing techniques, which are usually specific to your L1. In that case, listeners, as an important counterpart of the communication process should also be investigated in terms of their effects on comprehensibility. For this reason, along with other variables, raters’ effect such as; their idiosyncratic features and preferences were also investigated in this study.

3. METHODOLOGY

3.1. Introduction

This study aims at finding out the linguistic and contextual components of comprehensibility, which will be helpful for foreign language teaching and learning processes. Accordingly, a comprehensive comprehensibility model depending on the related literature was proposed. Although some of those components were repeatedly justified in the previous research, some others were not dealt with that much. As the earlier research mostly depended on the native speaker raters' comments on comprehensibility, some contextual factors such as *the task effect* and *the listeners' effect* (raters' effect) were usually neglected. Correspondingly, along with the other components mentioned a lot in the previous research, this study aims at investigating how much those contextual components would be effective on comprehensibility. Therefore, the research design was shaped accordingly. In this chapter, detailed information about the participants, research design and the results will be given.

3.2. Participants

Due to the complexity of the construct of comprehensibility, there was an ongoing data collection and evaluation process. In this vein, three different groups can be addressed as the participants of this study.

3.2.1 Student participants (speakers)

The first group of participants included 10 EFL students who were attending a state university in Turkey. First year students need to show a proof of language ability to be able to study at their departments. Otherwise, they should take an English proficiency exam if the medium of instruction at their school is English. If they obtain the required score, they can directly start taking courses in their departments, or else, they have to attend the English Preparatory School of the university where they would be placed into different level groups according to the results of a placement test. To eliminate the language ability factor in the outcome of the study, student participants were all B1 level students whose ages were between 18 and 21. They were all from the “Engineering Faculty”. Out of ten participants, three of them were females while the other seven were male participants.

3.2.2 Native raters

The second participant group was 61 + 31 native speakers of English from different parts of the world; such as, the USA, Australia, Canada, Wales, Scotland, Britain, South Africa and Puerto Rico. The participants were chosen from different nationalities on purpose to be able to include as many language varieties as possible into the study. (see Figure 4)

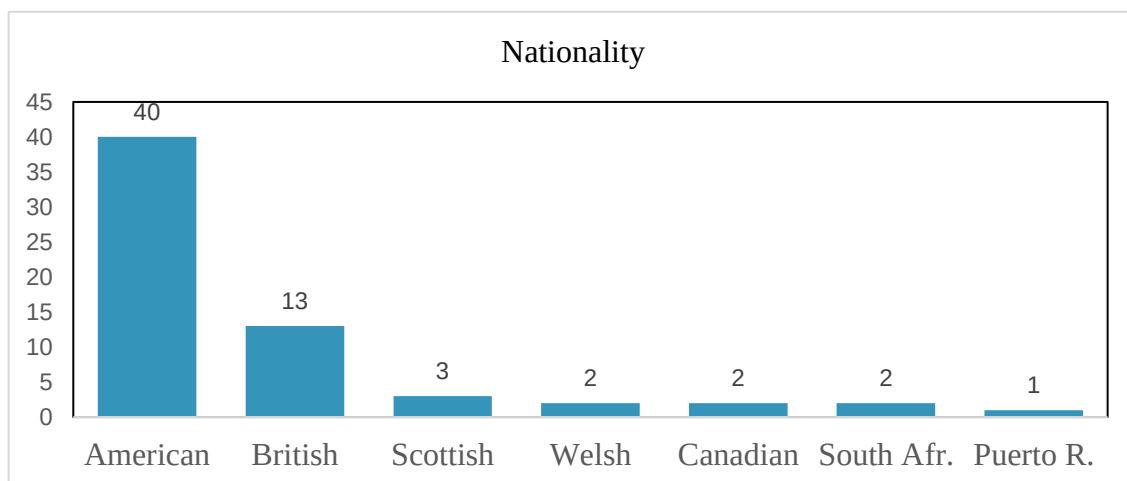


Figure 4. Native Raters' Nationalities

While 65% of the participants were female, the 35 % of them were males. All of the participants were older than 23, and they had different professions, and backgrounds. (see Figure 5)

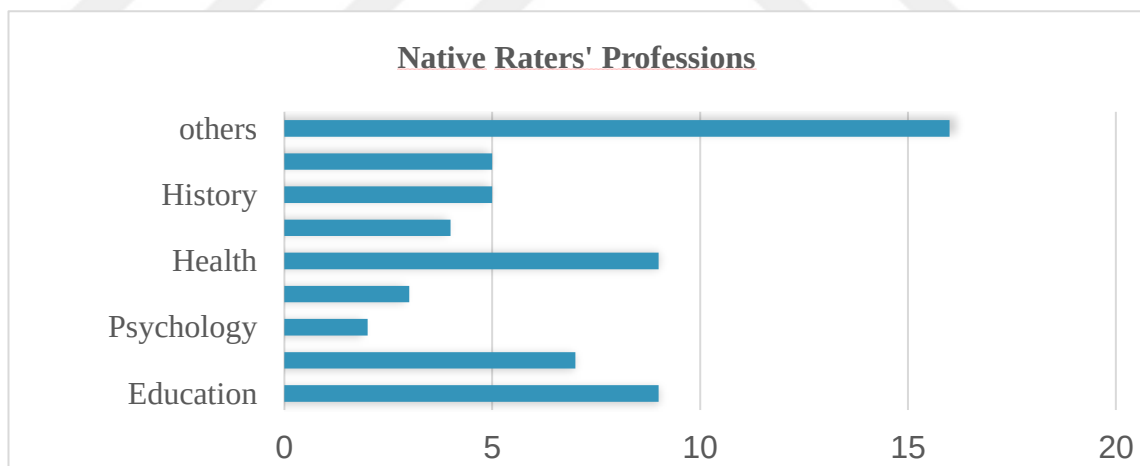


Figure 5. Native Raters' Professions

According to the analyses, most of the native raters worked in the education and health sectors. Furthermore, there were some other participants from psychology, history and some other fields; such as marketing, business, computer engineering, information and communication technologies etc. This diversity made the data richer.

Besides, the participants' educational background was also investigated and the results were as the following. More than 70% of them had BA, MA AND PhD degrees.

Nearly 40% of them stated their jobs as university lecturers, instructors, or teachers.

While 50% of them were bi/multilingual, the other 50% was monolingual.

(See Figure 6)

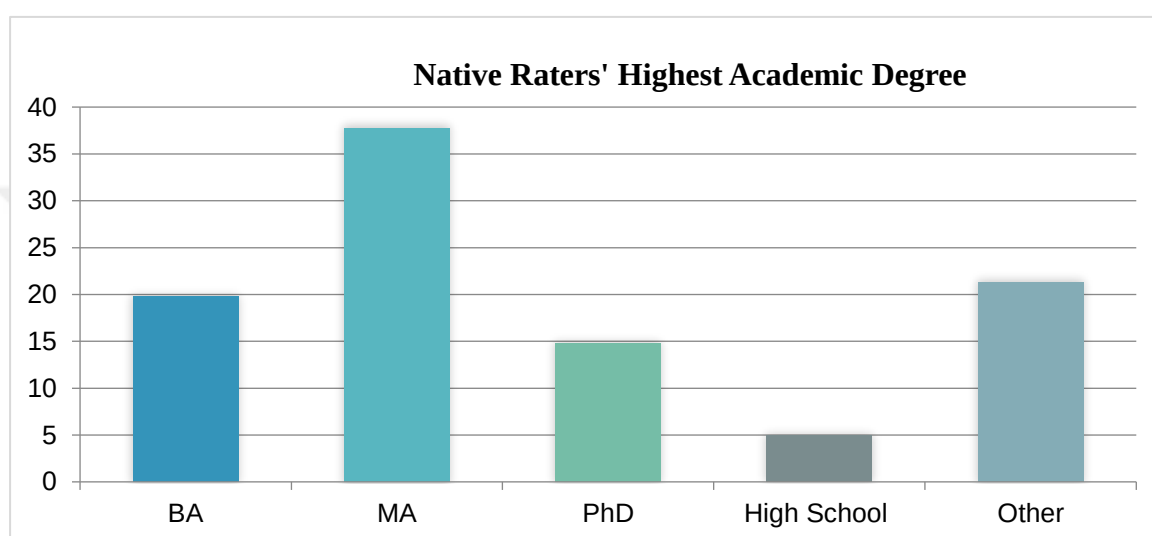


Figure 6. Native Raters' Highest Academic Degree

3.2.3 Non-native raters

The third participant group included 61 non-native speakers of English. This group of participants was chosen among the English teachers since having a good command of English was the main criteria for the non- native raters. All of them were at least bilinguals as opposed to the native raters. Most of the participants were females (88%), and their ages varied between 24-29 and 54-59. Most of them were in the group whose ages were between 30-41. (80%)

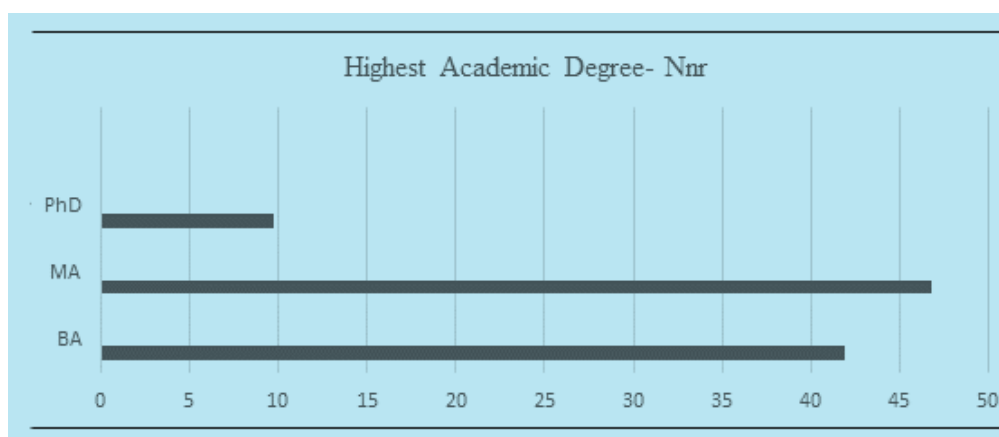


Figure 7. Non-native Raters' Highest Academic Degree

Most of the non-native raters held an MA degree. (47%) Others usually had a BA degree and just %10 of them had a doctorate degree. Like the native raters, most of these non-native raters had a bilingual working or social environment.

3.3. Research Design

In order to collect data, a mixed-method approach was preferred. The data collection procedure started by collecting speech samples on three different tasks from the student participants. Following that, these speech samples were sent to both native and non-native speakers of English to be rated for comprehensibility. Then, with some follow up questions and bio-info questionnaires some detailed information was collected about the participants' language learning backgrounds, attitudes towards language learning and ideas on comprehensibility. To supplement the data, a *think-aloud protocol* was employed while the raters were rating the speech samples. The idea behind this step was to learn more about their comprehensibility insights. Accordingly, the items of the scale were written, and it was piloted with 31 rater

participants. After the piloting phase, the questionnaire items were revised and arranged for the final administration which provided the final data for this study. To improve the items on the scale, a step by step data collection procedure, “the *explanatory-sequential design*” was followed during the study. (Creswell, 2009) Depending on each data set, some improvements and revisions were made on the latest form of the scale to be developed.

Since the data collection process was varied and diverse, each data collection step will be explained in detail as follows.

3.3.1. Step 1: Speech samples and the follow-up questions

Data collection for this step included three tasks. First, speech samples on three different tasks were collected from the student participants. Five different sessions were conducted with ten students who were chosen on the voluntary basis. Each session was completed with two students. At first, they were given three different pictures (see Appendix A) and they were asked to choose one of them and talk about it. Second, they were given two different groups of scrambled phrases. They were supposed to choose one of them and make up a story. Since they needed some preparation for this task, they were given a few minutes to prepare. Third, the students were asked to choose a discussion topic and support their ideas on it. It was not an individual task like the previous ones, so they decided on the discussion topic together. During all these data collection processes, the speech samples were recorded and kept to be sent to the raters.

Along with the speech samples, some follow-up questions (see Appendix H) were sent to 5 native and 5 non-native raters who were advanced level L2 users of English. While native raters' occupations were various, all non-native raters were English teachers. The raters were asked to evaluate the speech samples by using the existing

comprehensibility scale (Isaacs, Trofimovich and Foote; 2017) (See Appendix D).

Following that, within the follow up questions, they were asked to put four criteria of comprehensibility (Pronunciation, Fluency, Vocabulary and Grammar) mentioned in the literature so far (Isaacs, Trofimovich and Foote; 2017) into the order of priority.

3.3.1.1. Choosing the task types of the speech samples

As described above, three different task types were chosen on purpose to collect the speech samples. The idea behind this was to see the effect of different tasks on the speakers' performance and the raters' ideas on comprehensibility. Accordingly, ***picture description, discussion and story inventing*** tasks were designed and the related speech samples were collected.

While deciding on the appropriate tasks for the current study, some specific reasons were taken into consideration. Although there are lots of activities that might be chosen by a language teacher to enhance her/his students' communicative skills, or simply just to make them speak; some of them were preferred intentionally for this study.

The first task chosen for this study was a "***picture description task***." According to Brown, (2004, as cited in Lavalley and Briesmaster, 2017, p.4) picture-cued tasks were effective because they stimulated students' oral performance both extensively and intensively. Additionally, Wright (1989) supported that, visual materials motivated students more and non-verbal stimuli made students focus on meaning more. Lavalley and Briesmaster (2017) also indicated that picture description would work well especially at the beginning of the class because it makes students focus on the content, which may be an advantage for triggering students' imagination and making them more eager to speak. In the light of this information, and with the idea of finding the

effects of immediate speech production on comprehensibility, the first task during the data collection process was determined to be “*picture description*.”

The second task during the data collection process was “Story inventing”. For this purpose, the participants were instructed to make up a story out of scrambled phrases.

Although in the first and second task types the idea was to make students produce some meaningful, logical and linguistically accurate speech, they were still different in the way they presented the cues to start the speech production process. Differently from the first task, for “story inventing” task, the participants were using some linguistic codes which had been previously set. At the same time, they were using some logical connections to make up a meaningful story. These different task types were purposefully chosen to serve the idea of seeing task effect on comprehensibility.

For the third task, the participants had a “discussion” on a given topic. In addition to investigating the effects of task type, the idea behind this task was to see the effect of performing a dialogue similar to real-life communication. Due to the nature of discussion, the students were the counterparts in a conversation with some information gaps.

All the tasks and materials for this study were chosen to serve the idea of making students speak in the target language eagerly, easily and authentically.

For instance, students’ academic level, ages and interests were all taken into consideration for choosing the materials. For this purpose, their textbooks along with the topics covered in youth magazines were all reviewed to choose the appropriate and manageable tasks. Besides, in order to make students engage in speaking, the materials were selected from interesting, enjoyable and current themes. Furthermore,

the order of the tasks was planned in a way that would trigger students' speaking performance.

3.3.2. Bio-Info Questionnaires and the Component Ordering

After the first step of the study, more data was needed to understand the reasons behind the raters' comprehensibility judgments and the student participants' language background. Therefore, they were given the bio-info questionnaires.

The bio-info questionnaires aimed at finding out the participants' attitudes towards language learning, language background and earlier experience on language learning. Accordingly, the questions focused on the participants' past experiences, their childhood exposure to languages, being bi/multi lingual and their feelings towards languages and language learning. (See Appendix 4)

In the raters' bio-info questionnaire, some extra tasks such as putting the components of comprehensibility into the order of importance were added. The components were the ones which were defined as the "components of comprehensibility" in the literature. (Derwing, Rossiter, Munro & Derwing, 1999; Munro & Thomson, 2004; Van Maastricht, Krahmert & Swerts, 2016) After the first step of data collection, it was the second time that the raters were asked to put the components into the order of importance. However, the difference was that in the first step with the follow-up questions the components given were limited. There were just four main options to be ordered. On the other hand, this time there were more options and the components were more diverse.

3.3.3. Think Aloud Procedures

At this phase of the study, raters were asked to listen to some speech samples again because like a think-aloud procedure, the researcher tried to get any ideas behind their comprehensibility ratings. During that phase, in addition to the previous native raters, some more native participants from different parts of the world (from Canada, the UK, Midwest and the Pacific northwest of the USA, South Africa) were also included in the study. All the things mentioned by the raters were recorded and transcribed, and some components of comprehensibility were defined for both native and non-native raters. On comparing the native and non-native raters' ideas, some commonalities and differences arose; accordingly, the components which should be included in the new comprehensibility scale became clearer. They were as the following:

- Fluency
- Pronunciation
- Vocabulary
- Listeners' Effect
- Task Effect
- Grammar

After the third time of revisions and modifications, they were included in the new comprehensibility scale.

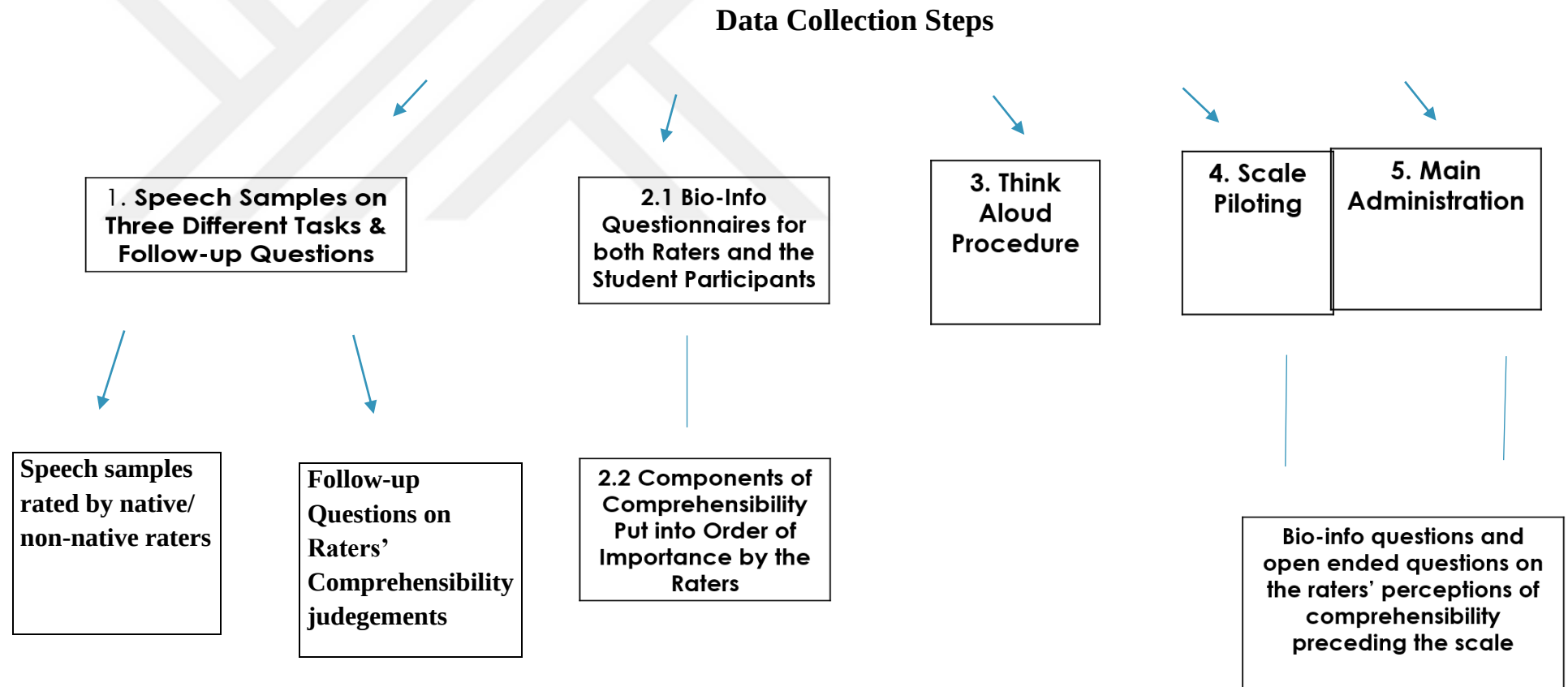


Figure 8. Data Collection Steps

Table 1. *Research Design*

<u>STEP 1:</u>	<u>STEP 2:</u>	<u>STEP 3:</u>	<u>STEP 4:</u>
1a) Collecting Speech Samples and Making Them Rated by Native/Non-Native Raters	Bio-Info Questionnaires both for Student Participants and the Raters (**Extra task for the raters: putting the component of comprehensibility appeared in the earlier literature into the order of importance)	Further Research: Think Aloud Procedure	Piloting
1b) Follow-up Questions on Raters' Comprehensibility Judgments	2a) Results for Student Participants 2b) Results for the Raters	3a) Native Raters 3b) Non-native Raters	4a) Bio-info questions preceding the comprehensibility scale 4b) Piloting of the Comprehensibility Scale

Table 2. *Summary of the Findings***Step 1:****What has been found:**

***There was** a meaningful difference between native/non-native raters' comprehensibility scores and the reasons behind their judgments.

* ***Also**, the scores for different tasks were meaningfully different (*task effect)

***The results have shown that the priority of native and non-native speakers was different because native speakers mostly depended on pronunciation**

Step 2:**What has been found:**

*The results have shown that, **languages spoken in the family, early exposure to foreign languages, students' attempts/willingness to use their own extra methods to improve language skills, and the good practices they experienced** while they were learning the language were the important factors which helped comprehensibility.

For Raters:

*Experience in a foreign language or being exposed to bi/multi-lingual environments in any part of life may make someone more tolerant towards non-native speech.

Step 3:**What has been found:**

*On comparing the native and non-native raters' ideas, some commonalities and differences arose; accordingly, the components which should be included in the new comprehensibility scale became clearer. They were as the following:

- **Fluency**
- **Pronunciation**
- **Vocabulary**
- **Listeners' Effect**

Step 4:**What has been found:**

* they think that language learning is fun and a native-like proficiency is possible **but it is hard, challenging, or needs a lot of practice or exposure, and age** was another factor to be mentioned. Besides, they claimed that **“accent”, “pronunciation” “word form/choice” “grammar” and “use of idioms”** were the most important factors which helped them to understand whether a person is a native or non-

while the non-native ones find grammar more important.	***** (listeners' effect)	• Task Effect	native speaker
	* Furthermore, according to the results, top three components of comprehensibility defined by the native speakers would be as the following:	• Grammar	*Idiosyncratic features of Raters (Listeners' effect)
*Task effect			*Idiosyncratic features of the task (Task effect)
*Listeners' effect			*Fluency
*Pronunciation	*Pronunciation * Vocabulary * Fluency		*Pronunciation
*Grammar	*Grammar		*Vocabulary
	* Listeners Familiarity with the context		*Grammar
			*Understanding the overall message

3.4. The Results of the Data Analysis Steps

As this study had a varied data collection process, the results gathered after each step needed to be analyzed and explained separately. In this part, all the findings gathered from each data collection step were explained.

3.4.1. The results of the speech samples

For the analysis of data, thirty different speech samples collected from 10 participants for three different tasks were rated by both native and non-native raters. Subsequently, the results were analyzed by using Statistical Package for the Social Sciences (SPSS). According to the results, there was a meaningful difference between the participants' comprehensibility scores for different tasks. In general, the second task "**story inventing**" obtained the highest scores. Further, the results of the Mann Whitney-U tests indicated that the difference between the native and non-native raters' comprehensibility perceptions was statistically meaningful.

Both the results of task type effect (see Table 2 and 3) and native non-native difference (see Table 4) were explained in the related tables below.

Table 3. Comparison of Means for Speech Sample Ratings: Native/Non-native Raters

Comparison of Means: Native/Non Native																
Nativeness		Umut Task1	Umut Task 2	Umut Task 3	Begm Task1	Begm Task 2	Begm Task 3	Berk Task1	Berk Task2	Berk Task3	Esra Task1	Esra Task2	Esra Task3	Tarık task 1	Tarık task 2	Tarık task 3
Native	Mean	3,2	2,8	2,6	2,0	2,4	1,8	2,6	2,8	2,8	3,8	3,8	4,0	2,8	2,4	2,4
	Std. Dev	,44	,83	,54	,70	,54	,44	,54	,44	,44	,44	,44	,70	,44	,89	,54
Non-native	Mean	4,8	3,8	4,4	3,6	3,6	3,4	3,2	3,6	3,0	4,8	5,0	5,0	4,0	3,8	2,8
	Std. Dev	,44	,83	,54	,89	,89	,54	1,0	,54	1,0	,44	,00	,00	,70	1,3	,83
Nativeness		Burak Task 1	Burak Task 2	Burak Task 3	Tuna task 1	Tuna task 2	Tuna Task3	Uğur task 1	Uğur task 2	Uğur task 3	Aybrk task 1	Aybrk task 2	Aybrk task 3	İrem task 1	İrem task 2	İrem task 3
Nativ	Mean	2,4	2,8	2,2	2,8	2,8	2,0	2,0	2,6	2,6	2,4	3,4	3,0	2,0	2,6	2,2
	N	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
	Std. Dev.	,54	,83	,44	,44	,44	,70	,70	,54	,89	,54	,54	,00	,70	,89	,83
Non. Nat.	Mean	3,2	2,6	3,0	4,2	4,2	4,2	4,2	3,8	4,2	3,8	4,2	3,4	3,4	4,0	3,0
	N	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
	Std. D	1,0	,54	1,2	,83	,83	,83	,83	,83	,83	,44	,83	,89	,54	1,0	1,2

3.4.2 The Results of the Follow-up Questions

In order to see the difference between native and non-native raters' comprehensibility ratings, the Mann-Whitney U test was conducted. As the results indicated there was a significant difference between the native and non-native rater groups. (table 7)

The results also showed that the priority of native and non-native speakers was mostly different because native speakers mostly depended on the **pronunciation** while the non-native ones find **grammar** more important. They mostly mentioned the effects of grammar mistakes on their understanding. On the other hand, native raters did not focus on mistakes that much in general.

As a result, it is possible to say that after the first step of the data collection it was clear that;

- 1) there was a meaningful difference between native/non-native raters' comprehensibility scores and the reasons behind their judgments
- 2) Also, the scores for different tasks were meaningfully different and the task which had the highest scores from both groups was the "story inventing" task which allocated some planning time to the participants before they started performing.

Table 4. Mann-Whitney U Test Results

MANN-WHITNEY U TEST RESULTS															
NATIVENESS	Umu t1	Umut 2	Umut 3	Begm 1	Begm 2	Begm 3	Berkay 1	Berkay 2	Berkay 3	Esra 1	Esra 2	Esra 3	Tarık 1	Tarık 2	Tarık 3
Mann-Whitney U	,50	5,0	,00	1,5	3,0	,00	8,0	4,0	11,	2,0	,00	2,5	2,0	5,0	9,0
Asymp. Sig. (2-tailed)	,00	,10	,00	,01	,03	,00	,31	,04	,73	,01	,00	,01	,01	,10	,41
Exact Sig. [2*(1-tailed Sig.)]	,00 ^b	,15 ^b	,00 ^b	,01 ^b	,05 ^b	,00 ^b	,42 ^b	,09 ^b	,84 ^b	,03 ^b	,00 ^b	,03 ^b	,03 ^b	,15 ^b	,54 ^b
	Burak1	Burak2	Burak3	Tuna1	Tuna2	Tuna3	Uğur1	Uğur2	Uğur3	Aybrk1	Aybrk2	Aybrk3	İrem1	İrem2	İrem3
Mann-Whitney U	7,0	11,	6,0	2,0	2,0	,50	,50	3,0	2,5	1,0	5,5	7,5	1,5	3,5	6,5
Asymp. Sig. (2-tailed)	,21	,72	,15	,01	,01	,01	,01	,03	,03	,01	,11	,23	,01	,05	,19
Exact Sig. [2*(1-tailed Sig.)]	,31 ^b	,84 ^b	,22 ^b	,03 ^b	,03 ^b	,00 ^b	,00 ^b	,05 ^b	,03 ^b	,01 ^b	,15 ^b	,31 ^b	,01 ^b	,05 ^b	,22 ^b

a. Grouping Variable: nativeness

b. Not corrected for ties.

3.4.3. The results of the bio-info questionnaires and the component ordering

During the second step of data collection, two different bio-info questionnaires were prepared both for the student participants (Appendix G) and the raters (Appendix E) with the purpose of learning more on the participants' language learning background, and attitudes towards languages. While students' questionnaire had just bio-info questions, the raters' scale had an extra task: putting the given components of comprehensibility into their order of importance. The results of the second step of data collection will be explained as follows.

3.4.3.1. Student participants' bio-info results

Table 5. *Self-Perceived Language Proficiency*

		Frequency	Percent
Valid	Intermediate	5	50,0
	Upper-Int	4	40,0
	Advanced	1	10,0
	Total	10	100,0

According to the results, the majority of the participants (50 %) define their level of English as Intermediate, following that 40% of them perceive their level of English as Upper-Intermediate, and finally, only one participant considers herself as an Advanced speaker of English. Interestingly though, this participant was the one who got the lowest grades from both native and non-native raters. Although all of the student participants were in the same proficiency level and in the same class, this question about their proficiency level was included in the bio-info questionnaire to see how the participants perceive their proficiency level.

Table 6. *Years of Learning English*

		Frequency	Percent
Valid	6-10 years	7	70,0
	11-15 years	3	30,0
	Total	10	100,0

As can be seen in the above table, most of the participants (70 %) reported that they have been learning English for 6-10 years; however, 30% of them said that they have been learning English for 11-15 years. This change seems to result from the difference in their ages.

Table 7. *Previous Prep-class Experience*

		Frequency	Percent
Valid	1,00	2	20,0
	2,00	8	80,0
	Total	10	100,0

It is clear from the results of the 6th question that, most of the participants (80%) hadn't attended a prep-class previously. There were only two students (Umut and Burak) who reported that they had a prep-class education earlier. These participants' comprehensibility rates were relatively higher. However, it is not possible to say that attending a prep-class previously has made a significant difference in these students' ratings because there were some more students who got higher ratings even if they had not attended prep class earlier. (Esra, Tuna)

Table 8. *Foreign Languages Spoken*

		Frequency	Percent
Valid	1,00	9	90,0
	2,00	1	10,0
	Total	10	100,0

As is clear from the above table, there is not a big difference in the number of foreign languages that the participants speak, so bilingualism and multilingualism do not have to say much about the participants' comprehensibility scores. Besides, the 10th question was also investigating students' language learning experiences other than English. All of the participants answered this question by saying yes, which meant that all of them tried to learn any other languages except for English.

Table 9. *Exposure to Languages*

		Frequency	Percent
Valid	Yes	3	30,0
	N	7	70,0
	Total	10	100,0

One of the most striking findings of this piloting was the results of this question. This question investigated whether or not the participants were exposed to any foreign languages during their childhood. According to the analysis, 30 % of the participants answered the 8th question positively. Not surprisingly, these students were the ones whose comprehensibility scores were the highest. Therefore, it is possible to say that being exposed to foreign languages at an early age may improve language skills, and as a result, it may make the person more comprehensible.

Table 10. *Languages Spoken in Family*

	Frequency	Percent
Valid Yes	3	30,0
N	7	70,0
Total	10	100,0

In parallel with the previous question, the 9th question also tried to delve into the participants' earlier life. This question directly asked if there was a bilingual or multilingual environment among their family members or relatives. Again, 30% of the participants answered this question positively, and two of them were the same people who answered the 8th question positively, too. These participants were the ones who got the highest comprehensibility scores. However, one of them was a different participant who did not answer the 8th question positively, or had not got the highest comprehensibility score. This question supports the previous idea that ***being exposed to different languages during childhood may improve language learning and being more comprehensible.***

Table 11. *Experience in a Foreign Country*

	Frequency	Percent
Valid 1,00	2	20,0
2,00	8	80,0
Total	10	100,0

This question was about the participants' travels to any foreign countries. 2 of them answered this question positively. The interesting finding of this question was that the participants who had been abroad before, received significantly lower scores from native speakers than they did from non-native speakers, which may be another sign of native speakers' stricter attitudes towards comprehensibility.

Table 12. *Experience in Real-life Language Use*

	Frequency	Percent
Valid Yes	7	70,0
No	3	30,0
Total	10	100,0

This question tested if the participants ever had to use English in a real-life situation. In other words, if they ever had to communicate in English. For this question, most of the participants said yes. Only three of them said that they never had to communicate in English. These results did not make a significant contribution to the comprehensibility scores.

Table 13. *Using Extra Methods to Improve Language Skills*

	Frequency	Percent
Valid Yes	4	40,0
N	6	60,0
Total	10	100,0

For this question, all of the participants gave positive answers; that's to say, they confirmed that they use some extra methods depending on their interests in order to improve their language skills. The only difference was that some students used many more methods than the others, but some of them chose only one method. ***Generally, those students who use more methods got higher comprehensibility scores.*** Therefore, it is possible to conclude that using some extra methods; such as watching movies, or playing online games while learning the language can make a person sound more comprehensible.

Table 14. *Attitudes towards Language Learning*

		Frequency	Percent
Valid	Yes	7	70,0
	N	3	30,0
	Total	10	100,0

For the last question, only three participants said - NO. This question was about finding out the participants' attitudes towards learning English. They were asked about their early learning experiences and if they had any good experiences while learning English. ***The findings showed that the participants who had the chance of experiencing good practices had higher comprehensibility scores.*** In other words, the participants who had more positive attitudes during language learning were better at being more comprehensible.

Table 15. *Factors that Contributed to Student Participants' Comprehensibility*

Languages in family			Exposure		Extra Methods		Good Practices	
Frequency		Percent	Frequency Percent		Frequency Percent		Frequency Percent	
Valid								
	Yes	7 70%	7 70%		6 60 %		7 70%	
	No	3 30%	3 30%		4 40 %		3 30%	

All in all, the results showed that languages ***spoken in the family, early exposure to foreign languages, students' attempts/willingness to use their extra methods to improve their language skills, and the good practices they experienced while they were learning the language*** were the important factors which helped comprehensibility. As seen in the above table, only 3 or 4 students answered the

related questions positively, and those were the ones who got the highest scores from the native speakers' comprehensibility ratings.

It was understood by the results that *being exposed to different languages during childhood* might improve language learning and being more comprehensible. That's to say, *early exposure to the target language* was found to be effective on language learners' performance. Another important result of this analysis was that, if the participants had some kinds of *positive feelings towards the language*, they tended to be better at using that language, and in turn, to be more comprehensible.

Furthermore, all the student participants in this study admitted that they were using some *extra methods* (apart from school studies) to improve their language skills. However, some of them had many more extra methods than the others. In general, those who use more methods got higher comprehensibility scores. As a result, it can be said that making students experience learning a language at an early age would be the first step to be taken if we want them to become more fluent and comprehensible speakers of the target language. Besides, if students develop positive attitudes towards learning a language and use their strategies to improve themselves by taking responsibility for their own learning, it would be more enjoyable for them, which would result in success. Taking all these results into account, it is possible to say that when comprehensibility is considered, except for just sticking to "*pronunciation*", there is much more to say on the side of speakers and listeners'.

3.4.3.2. Rater participants' bio-info results

Except for these results, native raters' bio-info analyses were also interesting. They were given a bio-info questionnaire, too. The purpose of the questionnaire was to find out the reasons behind their comprehensibility ratings.

Table 16. *Native Raters' Bio-Info Results*

		<i>Native Raters' Bio Info Results</i>		
1st rater (90 out of 150)	2nd rater (83 out of 150)	2nd rater (joint 2nd) (83 out of 150)	3rd rater (76 out of 150)	4th rater (74 out of 150)
Male, Nurse	Male, Analytics Consultant	Male, Teacher	Female, Nurse	Male, Lawyer
Pronunciation	Listener's familiarity with the context	Pronunciation	Pronunciation	Fluency
Vocabulary	Speaking Volume	Vocabulary	Vocabulary	Pronunciation
Listeners' familiarity with the context	Listeners' Background	Grammar	Grammar	Vocabulary
Fluency	Grammar Task type	Fluency	Fluency	Grammar
Listeners' Background	Vocabulary	Listener's familiarity with the context	Prosodic Features	Speech Rate
Grammar	Fluency	Speech Rate	Speaking Volume	Speaking Volume

Task type	Pronunciation	Speaking Volume	Speech Rate	Listeners' Familiarity with the context
Speech Rate	Prosodic features	Listeners' Background	Listener's familiarity with the context	Prosodic Features
Speaking Volume	XXXXXXXXXX x	Task Type	Listeners' Background	Task Type
Prosodic Features	Speech Rate	Prosodic Features	Task Type	Listeners' Background

While analyzing the results, at first the rater with the highest comprehensibility score was taken. His overall comprehensibility score for non-native student participants' speech samples was **90 out of 150**. Therefore, with the questionnaire which had some questions about the raters' background, important data were gathered. The most striking feature of that participant was that he was **a bilingual person** who had to communicate in that foreign language at work from time to time. Furthermore, he said that he tried to learn a foreign language once and thinks that language learning is fun. Besides, the other two raters with the highest second score (83 out of 150) were also familiar with language learning and bi/multi-lingual environments. They both experienced learning a foreign language and both think that language learning is fun.

On the other hand, the rater with the lowest grade was a **monolingual** who has once experienced learning a foreign language but thinks that it was not great fun. Furthermore, he added that he has never had to communicate in a foreign language. Surprisingly though, he still believes that attaining a native-like proficiency in a

foreign language is possible, but for him '**pronunciation**' seems to be the biggest obstacle for non-native speakers.

Like the rater mentioned above, another one with a score of 76 (second lowest) also claimed that she does not speak any languages except for her native one. She also added that she has never had to communicate in another language except for English. She once tried to learn a foreign language but was not very successful as she claimed. For her, the most difficult part of learning a foreign language is '**speaking**'. As she suggests; '**pronunciation**', '**vocabulary**' and '**grammar**' are the most important features of speech which help comprehensibility.

With these results in mind, it is possible to say that experience in a foreign language or being exposed to bi/multi-lingual environments in any part of life may make someone more tolerant towards non-native speech. Although these raters think that pronunciation is one of the most difficult and important part of foreign language learning, they may still have more positive attitudes towards foreign speakers. These results showed that listeners' background has much to say on comprehensibility. That's to say, if the listener has a more positive attitude towards language learning and bi/multilingual environments, then s/he has more positive feelings towards the non-native speech. Furthermore, listeners' own experiences with foreign languages are also important while they are rating the non-native speech. In short, according to the results, the most important three components of comprehensibility defined by the native speakers would be as the following: ***pronunciation, grammar, vocabulary, fluency, listeners' background, listeners' familiarity with the context and speaking volume.*** (See Table below) Although there seemed to be a difference between the overall judgments of the raters with higher or lower scores, they had some common ideas about the importance of *grammar, vocabulary and pronunciation*. On the other

hand, the features related to listeners or the context were mostly placed in the top rows by the raters with the highest comprehensibility scores while the raters with the lower scores mostly put them in the 8th, 9th, or 10th order.

By the help of follow-up questions, some more details were caught on the native raters' comprehensibility rating process. According to the results, the most important components of comprehensibility defined by the native speakers would be the following: *pronunciation, grammar, vocabulary, fluency, listeners' background, listeners' familiarity with the context and speaking volume. Besides, bilingualism, positive attitudes towards language learning, early exposure to languages and positive experiences in languages* were the contextual components on the side of native raters.

As these results suggested, being a monolingual or bi/multilingual or being exposed to different languages except for the one's native language had something to say on their comprehensibility ratings. Bi/multilingual raters were generally more tolerant of the non-native speech. Being exposed to different languages or having experienced learning a foreign language, they all had some positive effects on the ones' ideas for non-native speech. Besides, the components thought to be affecting speech comprehensibility were also different for these raters. To illustrate, for monolingual raters, it was pronunciation which affected their comprehensibility ratings most. On the other hand, for bi/multi-lingual native speakers, pronunciation was not the very first thing to consider while deciding on comprehensibility. As a result, some more detailed analyses were needed for the cross-validation of the previous data. Hence, semi-structured interviews were conducted with both native and non-native raters to have some more in-depth data.

3.4.4 The Results of the Think Aloud Procedures

During the interviews, the raters were asked to listen to some speech samples and following that they rated the speech and told the reasons behind their decisions. Like a think-aloud procedure, the researcher tried to get any ideas behind their comprehensibility ratings. During that phase, in addition to the previous native raters, some more native participants from different parts of the world (from Canada, the UK, Midwest and the Pacific northwest of the USA, South Africa) were also included in the study. All the things mentioned by the raters were recorded and transcribed, and some components of comprehensibility were defined for both native and non-native raters. On comparing the native and non-native raters' ideas, some commonalities and differences arose, accordingly the components which should be included in the new comprehensibility model became clearer.

As discussed previously, during the analysis of the interview results, some differences and commonalities between native and non-native raters were identified. Although most of the components were similar for native and non-native raters, their priority was different for both groups. While the most important factor affecting comprehensibility seemed to be fluency for the native speakers, it was mainly pronunciation and grammar for the non-native ones. Furthermore, grammar wasn't mentioned by the native raters as a factor affecting comprehensibility at all, indeed it wasn't taken as seriously as the non-native raters did. However, it was one of the most important factors for the non-native speakers.

The components mostly mentioned by both rater groups were listed as follows:

1) fluency; it was the most important and mostly mentioned factor during the interviews. The participants touched upon the fluency matters a lot by using the terms: *'speech rate, pacing, gaps and pauses, hesitations, unprepared speech, excitement,*

slow speech, much self-correction, time spent to translate their ideas, sentences not flowing etc..’ According to the results, the second most important component of comprehensibility was **2) pronunciation**, both rater groups highlighted the importance of pronunciation with the following expressions; *‘accent, heavy accent, mispronounced words, word stress, pitch and tone, monotonous speech, speech inflections, intonation, being used to different dialects and variation in pronunciation, being exposed to a vast amount of accents, some words are not recognizable as English, switch of ‘w’ sound to ‘v’, accent interfering with the pronunciation..’* **3) Vocabulary** was another component which was vastly accepted to be important for comprehensibility. *‘Word choice, limited lexical choice, misused words, readily identifiable word choice, misplaced word stress, small missing words- not important’* were the expressions that the raters used while talking about the importance of vocabulary. Following those, **4) raters’ effect** and **5) task effect** were the other factors mentioned by both groups. Raters’ expressions that showed the importance of **raters’ effect** were as the following; *‘...speech takes little effort to understand, it takes a lot of effort to kind of detangle the message, I live in the Pacific Northwest of the US, where there’s no other accents that are frequently encountered....., it is understandable, if one puts a little more focus on what is being said....., very closely related to me....., vocabulary is a personal criterion for my own foreign-language fluency.....,some sound substitutions were familiar to me, her speech inflections were very familiar to me....., easy to understand for this North American English speaker....., There are so many dialects in the UK that we are used to variation in vocabulary....., ...so many words that I can make sense, it also help that I have an eight year old, when children are developing those speech patterns they say so many wrong things but we are able to figure out what they are saying, you*

have to kind of fill in the blanks for them.... Apart from those, there were a few more expressions which indicated the importance of the **task type** on the raters' ideas: *'....we use that a lot in the UK when we describe things, In Britain, with descriptive speaking we do tend to use that a lot, ...even in relation to the context of the diatribe)* All in all, the above mentioned factors were the most probable components of comprehensibility for both rater groups.

As mentioned earlier, for the native raters, **grammar** was the only component which was not considered to be as important as the others while deciding on comprehensibility. For native speakers, even if there were a lot of grammar mistakes, the speech would be comprehensible as long as it was fluent and not heavily accented. During the interviews, they often mentioned that they were pretty forgiving with the grammar mistakes because they did not affect their overall understanding. However, for the non-native raters, grammar meant a lot. They were less tolerant of grammar mistakes. Besides, they advocated that grammar mistakes made some speech samples incomprehensible for them. Native raters also showed that they were aware of the grammar mistakes, especially on the usage of prepositions, verb tenses etc.; however, they did not think that they were that effective in their comprehensibility ratings. The following expressions reflect how they feel about the grammar mistakes: “

.....small missing words such as "talk (to) each other did not take away from the message of the speaker, ...grammar is a bit awkward, such as "does not have to be like this, the meetings", and there are run-on sentences. But overall, the fluency is good, and it gets his point across to me, ... Little things like grammar mistakes/preposition needs more practice with a native speaker, ... As a native English speaker I can identify the message getting across, although there were many misuses of verb tenses and use of auxiliary verbs, such as "they are don't looking" --

this is easily identified as "they are not looking". As a result, the scale items were written in accordance with the results, and grammar was also included in the scale.



Table 17. *Components of Comprehensibility*

Components of Comprehensibility Extracted from the Literature	Components of Comprehensibility Stated by the Raters	Components of Comprehensibility Extracted from Think Aloud Procedure
-Segmental-Suprasegmental features of Pronunciation (Zielinski, 2008; Saito and Saito, 2017)) - Nativelikeness, accentedness (Van Maastricht, Krahmer and Swerts, 2016, **Moyer, 2013) -Listeners' L1 effect (speech processing techniques) (Zielinski 2008) Swan and	1-Languages spoken in the family, 2-Early exposure to foreign languages, 3-One's willingness to use extra methods to improve his/her language skills 4-Experiencing good practices while learning the language 5-Positive attitudes towards language learning and bi/multilingual	Fluency ‘speech rate, pacing, gaps and pauses, hesitations, excitement, slow speech, much self-correction, time spent to translate their ideas, sentences not flowing etc..’ Pronunciation ‘accent, heavy accent, mispronounced words, word stress, pitch and tone, monotonous speech, speech

Smith, 2001; Derwing & Munro, 2008; Major et al., 2002) (Carey, Mannell, & Dunn, 2011), Derwing, Rossiter, and Munro (2002) Saito, Trofimovich and Isaacs (2015) -Grammar (Major et al., 2002; Isaacs & Trofimovich, 2012; Saito, Trofimovich, & Isaacs, 2016) -Task/context effect *** (Turner, 2000) Crowther, Trofimovich, Isaacs, and Saito (2015a)	environments, 6-Experience in a foreign language 7- Being exposed to bi/multi-lingual environments in any part of life 8-Listeners’ own experiences about foreign languages 9-Pronunciation, 10-Grammar 11- Vocabulary, 12-Fluency 13-Listeners’ Background 14- Listeners’ familiarity with the	inflections, intonation, being used to different dialects and variation in pronunciation, being exposed to vast amount of accents, some words are not recognizable as English, misplaced word stress, switch of ‘w’ sound to ‘v’, accent interfering with the pronunciation..’ Vocabulary ‘Word choice, limited lexical choice, misused words, readily identifiable word choice, small missing words- not important’ Grammar (especially misuse of function words) Idiosyncratic Features of Listeners ‘...speech takes little effort to understand, it takes a
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-Fluency -Vocabulary (Isaacs & Trofimovich, 2012; Saito et al., 2016). -Discourse (Isaacs and Trafimovich,)	context/task 15-Speaking volume, Speech Rate, voice quality 16- Understanding the Overall Message	lot of effort to kind of detangle the message, I live in the Pacific Northwest of the US, where there's no other accents that are frequently encountered...., it is understandable, if one puts a little more focus on what is being said....., very closely related to me., vocabulary is a personal criterion for my own foreign-language fluency.....,some sound substitutions were familiar to me, her speech inflections were very familiar to me....., easy to understand for this North American English speaker....., There are so many dialects in the UK that we are used to variation in vocabulary....., ...so many words that I can make sense, it also help that I have an eight year old, when children are developing those speech patterns they say so many wrong things but we are able to figure out what they
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		are saying, you have to kind of fill in the blanks for them.... Task Effect Unprepared speech, ‘....we use that a lot in the UK when we describe things, In Britain with descriptive speaking we do tend to use that a lot, ...even in relation to the context of the diatribe) Understanding the overall message
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3.5. The New comprehensibility scale

During the think aloud procedures, the raters were asked “why they did what they did.”

In other words, the reasons behind their comprehensibility judgments were investigated. The interviews were recorded and transcribed by the researcher and all the data was coded carefully. Finally, the components defined by both rater groups were identified and compared. Accordingly, by starting with the components which are the same for both groups, the scale items were started to be written. At first, hypotheses for each component were written and then it was time to have some expert reviews. By the help of expert review, some overlapping items were excluded and some of them were rearranged. At first, there were 29 items, and after the reviewing, process there were 22 items in the questionnaire. As the final step, a uniform syntactic stem was also provided for the scale items and it was ready for the piloting. During the questionnaire development, six common components (***fluency, pronunciation, vocabulary, raters’ effect, task effect and grammar***) arose out of research were taken as the starting point. For each component, different hypotheses were formed, and possible questionnaire items were written accordingly.

3.5.1. Hypotheses and possible questionnaire items

Possible Questionnaire items for Component 1: FLUENCY

Hypothesis 1: If the speaker is not fluent enough, it is difficult for the listener to understand the overall message.

Possible questionnaire item 1: **I understand the overall message easily if the speech is fluent enough.**

Hypothesis 2: If the speech is interrupted repeatedly, it becomes difficult to follow.

Possible questionnaire item 2: **It is difficult to follow the speech for me if there are too many breakdowns.**

Hypothesis 3: If there are so many gaps and spaces within the speech it gives the feeling of translation or inefficiency.

Possible questionnaire item 3: **So many pauses and hesitations in non-native speech can affect my understanding.**

Hypothesis 4: The speech should meet the expected pacing criteria, or else it may affect understanding.

Possible questionnaire item 4: **Speech with pacing problems cannot be followed easily, which makes it incomprehensible.**

Possible Questionnaire items for Component 2: PRONUNCIATION

Hypothesis 5: When the words are mispronounced, it may affect the overall understanding.

Possible questionnaire item 5: **If the words are mispronounced in a speech, it becomes difficult to detangle the message.**

Hypothesis 6: Some listeners are not used to hearing variations in accent due to their physical environment.

Possible questionnaire item 6: **It is not possible for me to understand easily any variations in accent except for my own.**

Hypothesis 7: Accent is not responsible for the comprehensibility of the speech on its own.

Possible questionnaire item 7: **Even if the accent may sound different to me, I can still understand the overall message of the speech by the help of other components.**

Hypothesis 8: Listeners may be affected negatively by an accented speech.

Possible questionnaire item 8: **If the speech is heavily accented, I can't go on listening to it for long.**

Hypothesis 9: If prosodic features are not used effectively, it is not possible to understand what is being said.

Possible questionnaire item 9: **I cannot understand a speech well without proper usage of prosodic features.**

Hypothesis 10: When the speech is accented, it gets difficult to be understood.

Possible questionnaire item 10: **It is difficult for me to understand an accented speech.**

Possible Questionnaire items for Component 3: VOCABULARY

Hypothesis 11: Using the words appropriately makes the speech meaningful and understandable.

Possible questionnaire item 11: **I think word choice is an important factor which affects comprehensibility.**

Hypothesis 12: If the words are not chosen properly, the speech may be incomprehensible.

Possible questionnaire item 12: **Improper word choice during non-native speech makes it difficult for me to understand the message.**

Hypothesis 13: If the speaker cannot choose the appropriate words during her/his speech, it shows that s/he has got a limited lexical choice.

Possible questionnaire item 13: **Improper word choice is a sign of limited lexical choice for me, so I find this kind of speakers inadequate.**

Hypothesis 14: Even if some function words are forgotten, it does not affect the overall meaning of the speech.

Possible questionnaire item 14: **Even if some small words are missing in a speech, it does not hinder my understanding.**

Possible Questionnaire items for Component 4: LISTENERS' (RATERS') EFFECT

Hypothesis 15: If the listeners put some extra effort, they can understand the speech even if there are missing words, misused structures etc.

Possible questionnaire item 15: **If I put some extra effort, I can understand the non-native speech even if there are missing words, misused structures etc.**

Hypothesis 16: Depending on the listeners' conversational habits, some problems with the speech may be tolerated.

Possible questionnaire item 16: **As a listener, I usually focus on the overall message of the speech rather than any grammar or pronunciation mistakes.**

Hypothesis 17: Some listeners may be much more familiar with the variations in accent than the others.

Possible questionnaire item 17: **It is possible for me to understand any kind of speech as I am used to different accents.**

Possible questionnaire item 17a: **It may be difficult for me to detangle the message of an accented speech as I am not used to hearing different accents.**

Hypothesis 18: Depending on the listeners' personal choices, determiners of comprehensibility may change.

Possible questionnaire item 18: **Personally, I find (fluency/ pronunciation/ vocabulary/ grammar) as the determiner of comprehensibility, so I usually focus on (pronunciation/vocabulary/grammar) while listening to anyone, which may sometimes affect my understanding.**

Possible questionnaire item 18a: **As I have too many international connections, I am used to hearing different speech variations.**

Possible Questionnaire items for Component 15: TASK EFFECT

Hypothesis 19: Each task type has its own features which make them more comprehensible for some listeners.

Possible questionnaire item 19: **When I am listening to a descriptive speech, it is easier for me to understand it thanks to the variations in pitch and tone.**

Possible questionnaire item 19a: **Instead of monologues, following conversations is easier, funnier, and more understandable for me.**

Possible questionnaire item 19b: **While listening to a dialogue, it is usually more possible to decode the overall message from the context.**

Possible Questionnaire items for Component 6: GRAMMAR

Hypothesis 20: Although the speech is full of grammar mistakes, it may still be comprehensible.

Possible questionnaire item 20: **I think grammar mistakes are not important if the speech is fluent enough.**

Hypothesis 21: Little grammar mistakes are usually ignored during a conversation because they do not interfere with the meaning.

Possible questionnaire item 21: **I do not usually focus on little grammar mistakes if I understand the overall message of a speech.**

Possible questionnaire item 21 a: **I think I am pretty forgiving with the grammar mistakes in a speech as long as I get the message.**

Hypothesis 22: Grammar mistakes are so important that they can even ruin the overall message of the speech.

Possible questionnaire item 22: **If there are too many grammar mistakes in a speech, it is usually difficult for me to understand it.**

Hypothesis 23: Grammar may be so important for some listeners (especially for non-native ones) that it may be an indicator of speech quality for them.

Possible questionnaire item 23: **I think bad grammar is a sign of low quality speech, so it is usually incomprehensible.**

After writing all the possible hypotheses and the items for each component, it was time to have some expert reviews. By the help of expert review, some redundant, overlapping or mismatching items were excluded and some of them were rearranged. At first, there were 29 items, and after the reviewing process there were 22 items in the questionnaire. As the final step, a uniform syntactic stem was also provided for the scale items and it was ready for the piloting.

3.5.2. The results of the scale piloting

The comprehensibility scale developed for this study was piloted with 31 participants from different parts of the world. The questionnaire was sent to the participants through Google Forms. In order to obtain further information about the participants, there were some bio-info questions preceding the comprehensibility scale.

Table 18. *Reliability Statistics for the Scale Piloting*

Reliability Statistics	
Cronbach's Alpha	N of Items
,763	22

Before the piloting phase, the scale reliability test for the scale was conducted. The results showed that, Cronbach's Alpha value was **,763** for the scale, which showed that it had a good level of internal consistency and was ready to be used.

On the analysis of the bio-info questions part of the scale, the answers were transcribed at first and then the common codes arose from these results were defined. Following that, the results for the comprehensibility scale were also analyzed.

The results of the bio-info part showed that most of the participants had a bi/multilingual working environment or they had some foreign friends and once they experienced learning a foreign language or living in a foreign country for a while. Furthermore, they thought that language learning was fun and a native-like proficiency was possible *but it **was hard, challenging, or needed a lot of practice or exposure, and age*** was another factor to be mentioned. Besides, they claimed that **“accent”, “pronunciation” “word from/choice” “grammar” and “use of idioms”** were the most important factors which helped them to understand whether a person was a native or non-native speaker of English. The results of the bio-info part of the scale can be seen in the table below. (see Table 19)

Table 19. *Results of the Raters' Bio-Info part for the piloting*

QUESTIONS	FREQUENCY	OPTIONS	CODES
Q1 AGE	18,8 %	18-23 60-65	X
Q2 NATIONALITY	65 % 19% 16%	AMERICAN BRITISH CANADIAN	X
Q3 GENDER	71,9% 28,1%	FEMALE MALE	X
Q3 HIGHEST ACADEMIC DEGREE	40,6 % (HIGHEST) 9,4 % (LOWEST)	MA OTHER	X
Q4 FIELD OF STUDY	44% 28% 16% 12% 9,6%	LANGUAGES EDUCATION NONE PSYCHOLOGY MUSIC	X
Q5 PROFESSION	41,6 %	TEACHING (Instructor, Lecturer, Academic..)	X
Q6 Do you speak any other languages except for your native tongue	56,3 %	YES	X

(English)?	43,7 %	NO	
Q7 Did you experience a bi/multi-lingual environment during your childhood?	78,1 % 21,9 %	NO YES	X
Q8 Have you ever experienced a bi/multi-lingual working environment?	90,6% 9,4 %	YES NO	X
Q9 Have you ever lived in a foreign country where other language/s are spoken except for your mother tongue?	65,6 % 34,4 %	YES NO	X
Q10 Do you have any foreign friends? If yes, in which language/s do you communicate?	100 %	YES	ENGLISH
Q11 Have you ever tried to learn a foreign language?	100 %	YES	X
Q 12 Do you think language learning is fun?	84,4 % 15,6 %	YES NO	
Q13			Among the people who said “yes” for this question, 40%

the next step, the final format of the comprehensibility scale was conducted, and according to the analyses the necessary arrangements/changes were made, and the study was finalized by suggesting a new comprehensibility model arose out of research. The results of the factor analysis and the revisions made on the scale were explained as follows.



Table 20. *Factor Analysis Results of the Piloting*

Rotated Factor Matrix	Factors						
	1	2	3	4	5	6	7
Q21. It is easy for me not to focus on little grammar mistakes if I understand the overall message of the speech.	,862						
Q18 It is easy for me to follow communicative tasks rather than monologues.	,810						
Q19. It is easy for me to understand the overall message of the speech by the help of contextual clues.	,772					,399	
Q17 It is easy for me to understand a descriptive speech thanks to the variations in pitch and tone.	,649				,585		
Q11. It is easy for me to focus on the overall message of the speech rather than any kind of mistakes	,626	,433					-
Q1. It is difficult for me to follow the speech if there are too many gaps, hesitations, and breakdowns.		,759					
Q22. It is difficult for me to understand a speech if it is full of grammar mistakes.		,742		,334			
Q3. It is difficult for me to understand any variations in accent except for my own	-,436	,728	,351				
Q10. It is easy for me to understand a speech with grammatical, phonetical or fluency problems because I am used to this kind of speech.		,636					
Q13. It is difficult for me to understand the message of an accented speech as I am not used to hearing different accents.		,572	,558			,495	
Q12. It is easy for me to understand variations in pronunciation as I am used to different accents			,870				
Q6. It is difficult for me to understand the overall message even if there are mispronunciations in a speech.	-,386		-				
Q7. It is difficult for me to understand an accented speech		,473	,591	,512			
Q8. It is difficult for me to understand the message if improper words are used.				,806			
Q9. It is easy for me to understand a speech even if some small words are missing.				-			
Q5. It is difficult for me to understand a speech well without proper usage of speech inflections.				,697			
Q4. It is easy for me to understand the overall message of the speech by the help of other components even if the accent may sound different to me.						,918	

Q15. It is difficult for me to understand the overall message of a speech since I usually focus on individual components such as grammar, pronunciation, fluency or vocabulary	,454		.626
Q14. It is easy for me to understand any kind of variations in speech as I usually experience such situations.			.773
Q20. It is not difficult for me to understand a speech with grammar mistakes if it is fluent enough.	,309	,347	.761
Q2. It is easy for me to understand the overall message if the speech is fluent enough.			.885
Q16. It is easy for me to ignore the mistakes in a speech as long as I understand the message.	,432		.800

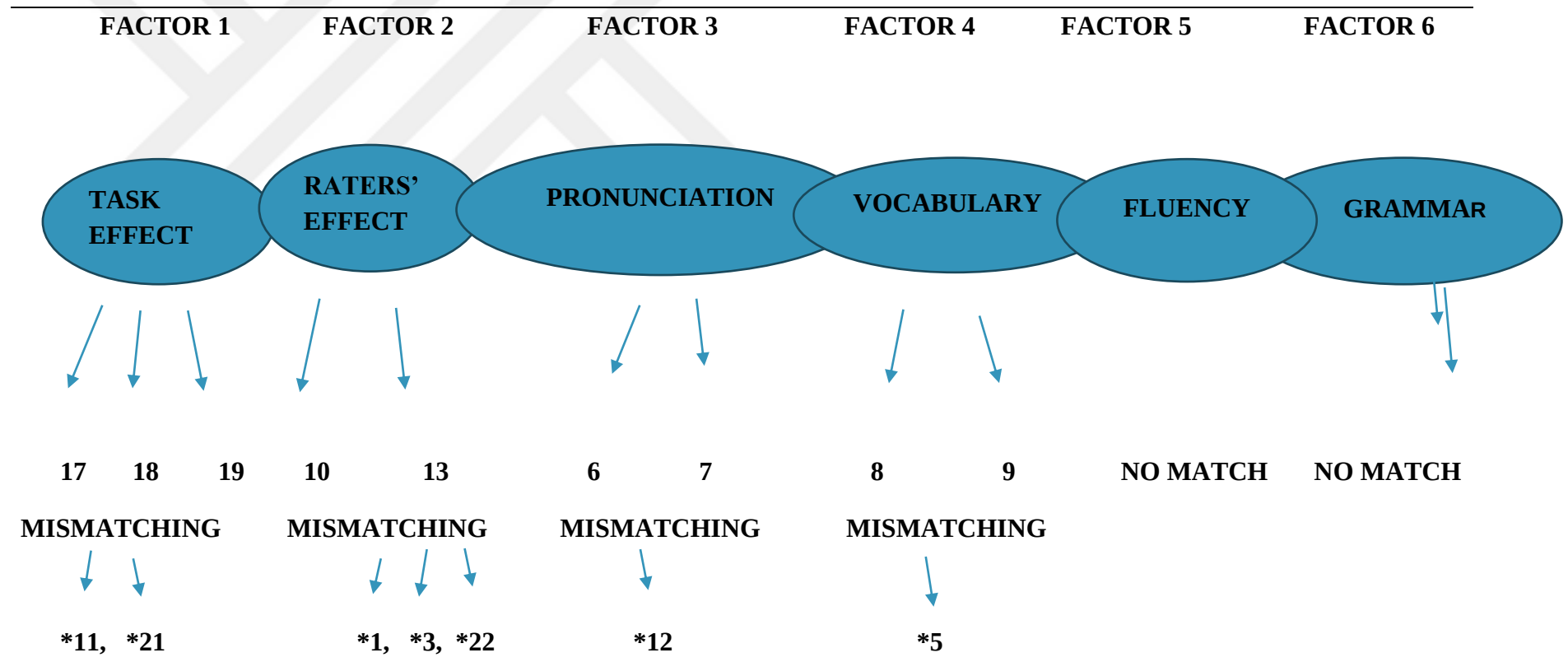


Figure 9. Matching and Mismatching Items after the Piloting

3.5.3 Mismatching items after the piloting

3.5.3.1 Mismatching items for the task effect component (Factor 1): 11,21

Table 21. *Mismatching items for the task effect component*

11. It is easy for me to focus on the overall message of the speech rather than any kind of mistakes.
21. It is easy for me not to focus on little grammar mistakes if I understand the overall message of the speech.

For years, scientists thought that language teaching should be focused on grammar. However, recently it has been clear from many research studies that grammar is not enough itself for an acceptable competence in the target language. Most language teaching systems in classrooms were mainly based on grammatical rules and conceived language as a system which included a set of rules. However, within years it was clear that language should be a means of “communication.” Having been inspired by his son’s language acquisition process, Halliday suggested that language learning is mainly depended on learning how to mean. While language learners are trying to master their language skills, they are in fact struggling to learn. (Halliday,1975)

In other words, they do not have to use the structures in the order that they were taught. Rather than that they decide where, when and how to use them. Therefore, conveying and understanding the message of a speech in the target language seems to be really important. For that reason, the task-based approach which

gives the learners the chance to use the real-life language in classes has become popular. In the current study, to see the effects of these tasks, some different pieces of data were collected and it showed that the task had something to say about comprehensibility.

Apart from these, as Ellis (2003) defined there are four important parts of a task which are;

1. A primary focus on meaning
2. information ‘gap’.
3. The participants’ self-decisions on the linguistic resources needed and
4. a clearly defined, non-linguistic outcome

For these reasons, items **11 and 21** seem to be closely related with the idea of “task” which means focusing on the meaning or the message, or fulfilling a goal rather than any kind of linguistic mistakes. In this manner, these items were placed under this factor for the main administration.

3.5.3.2. Mismatching items for the raters’ effect component (Factor 2): 1, 3, 22

Table 22. *Mismatching items for the raters’ effect component*

1. It is difficult for me to follow the speech if there are too many gaps, hesitations, and breakdowns.
3. It is difficult for me to understand any variations in accent except for my own.
22. It is difficult for me to understand a speech if it is full of grammar mistakes.

Even if these three items (1,3,22) loaded on the listeners' effect factor, they did not take place in this group in the theoretical framework. However, on a closer look at them, one can easily make the conclusion that the wording of these items makes the participants think that, rather than the speaker, it is mostly his/her responsibility to understand the message of a speech; in other words; the wording of these items implicitly made them think that it is difficult for them to understand the message of a speech if there are any kind of problems or any kind of variations in speech. Due to their characteristics as a listener, they may find a speech different or difficult to understand. As it was explained in the theoretical framework previously, in real-life conversations, people generally exchange their ideas, explain their opinions and as a listener or speaker try to do their best to make an interaction meaningful. As Long (1996) suggested even if there are some breakdowns or misunderstandings, speakers of a conversation can enhance the interaction by using some strategies. Therefore, understanding, in other words, comprehensibility is not only the responsibility of the speaker, it is also listener oriented. Therefore, with these items; any mistakes, variations, or problems with the speech were thought to be related to the listeners' ability or effort to understand the message. In that sense, those items can be considered under the second factor: **raters' effect**.

3.5.3.3. Mismatching item for the pronunciation component: 12

Table 23. *Mismatching item for the pronunciation component*

12. It is easy for me to understand variations in pronunciation as I am used to different accents.
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This item was put under the listeners' effect component in the theoretical framework because in the second part of the item the idiosyncratic features of the

participant were questioned. It also deals with the terms “pronunciation” and “accent”; therefore, it is strongly probable that the participants thought it was related to the pronunciation component. As a result, this item will be revised and it will be in the third factor (pronunciation) from now on.

3.5.3.4. Mismatching item for the vocabulary component: 5

Table 24. *Mismatching item for the vocabulary component*

5. It is difficult for me to understand a speech well without proper usage of speech inflections.

It is strongly possible that the participants misevaluated the main purpose of item 5. Although this item focused on speech inflections, due to the wording problems, it was probably considered as “word inflection”. Therefore, the item will be revised by writing “voice inflection”, rather than just saying speech inflections which may cause confusion. After the revision, it will be placed into the pronunciation factor. (Factor 3

3.5.3.5. Items that loaded on the 5th factor: 4, 15

Table 25. *Items That Loaded on the 5th Factor*

4. It is easy for me to understand the overall message of the speech by the help of other components even if the accent may sound different to me. Factor 5
15. It is difficult for me to understand the overall message of a speech since I usually focus on individual components such as grammar, pronunciation, fluency, or vocabulary. Factor 5

This factor brought two items together in the way that both focus on the importance of individual components of a speech. This is a new component which was not planned while designing the theoretical framework. In that way, it may be tentatively said that these items focus on grammar, fluency, accent and vocabulary together. Instead of putting them apart, all the individual components of a speech were thought to be as effective as the other one. As a result, this factor will be covering the “fluency” and “grammar” factors together; therefore, they will not be considered as different components from now on, but with this factor, all of the components of a speech will be considered.

3.5.3.6. Items that loaded on the 6th factor: 14, 20

Table 26. *Items that Loaded on the 6th Factor:*

14. It is easy for me to understand any kind of variations in speech as I usually experience such situations. FACTOR 6
20. It is not difficult for me to understand a speech with grammar mistakes if it is fluent enough. FACTOR 6

As item 14 intends to evaluate the participants’ familiarity with such situations; this item normally belongs to the listeners’ effect factor. However, most probably the phrase “any kind of variations in speech” was not clear and did not make sense to the participants. Besides, the other factors in “the listeners’ effect component” started with the phrase “*it is difficult for me....*” Which refers to the listeners’ idiosyncratic features in a way, therefore this item will also be reworded in that way. Therefore, this phrase is going to be revised and clarified, and this item will be put under the listeners’ effect group.

For item 20, a revising in wording was needed because normally it evaluates the same thing with the questions in the sixth factor; however, all the items in factor 6 start in the same way, but the 20th item starts with the phrase “it is not difficult for me” which normally means “it is easy for me” as in the other items in factor 6. Therefore, this part of the item will be revised and also the term “overall message” is going to be added to make it keep up with the other items in that factor.

3.5.3.7. Items that loaded on the 7th factor: 2, 16

Table 27. *Items that loaded on the 7th factor*

2. It is easy for me to understand the overall message if the speech is fluent enough. FACTOR 7
16. It is easy for me to ignore the mistakes in a speech as long as I understand the message. FACTOR 7

These items normally belonged to “fluency” and “listeners’ effect” factors in the theoretical framework, but the data showed that they were together. It seems to be strongly possible that they may be together because both of them focus on “understanding the overall message” rather than dealing with the mistakes. Item number 2 tried to see the relationship between “fluency” and understanding the message, and item 16 intended to evaluate the importance of understanding the message in a speech rather than dealing with the mistakes. Therefore, this factor is going to stay as it is and will be named as “understanding the overall message”. This is going to be a new component which arose out of the research.

All in all, in the theoretical framework process there were 6 components and 4 of them stayed as they were after the factor analysis. Nevertheless, names of the two components were changed with the new ones. While forming the theoretical

framework related literature and the results of piloting were used. Accordingly, both “Grammar” and “Fluency” were thought to be separate factors affecting comprehensibility. However, during the think-aloud procedure, native participants usually said that they ignored the little mistakes (especially grammar mistakes) in a speech if they understood the overall message; so grammar was not a big deal for them. On the other hand, non-native participants usually touched upon the importance of grammar on comprehensibility. As a result, grammar was accepted to be a separate component in the theoretical framework, but the data indicated that it was not that important to become a separate component itself. Rather than that, **both fluency and grammar** components were put together under factor 5 which is *linguistic/paralinguistic structures*. Besides, another important point mentioned a lot by the native speakers was “understanding the overall message rather than focusing on little mistakes”, it was clear after the think-aloud procedure and the factor analysis that native speakers depended on the overall message rather than dealing with any other things. Therefore, “**understanding the overall message**” was the 6th factor that was put into the scale.

4. RESULTS

In this part of the study, the results of the scale main administration will be explained. During the piloting phase, the factor analysis indicated that there might be 7 components; however, with an in-depth analysis of the items, the researcher put some items under the same component and suggested 6 different components at the last step. Therefore, the component numbers suggested after the main administration showed that the improvements and changes made on the scale after the piloting phase were meaningful and served the purpose. Besides the **Cronbach's Alpha** value was **.882** for the scale, which meant that the scale had a good internal consistency.

Table 28. *Reliability Statistics before the Main Administration*

Cronbach's Alpha	N of Items
,882	22

4.1 Results of the Factor Analysis

After the main administration of the scale with 61 native and 61 non-native participants, the factor analyses were conducted for each. For most of the components, there was not a very big change between the piloting and the main administration processes. There were just a few changes for some components, which were explained in detail below.

Table 29. *Native Speakers' Factor Analysis Results*

Native Speakers' Factor Analysis Table- Main Administration						
		Overall	Raters'	Linguistic /Paralinguistic Structures	Task	Vocabulary
	Pronunciation	Understanding	Effect		Effect	
VAR00013	,803					
VAR00007	,771	,362				
VAR00009	,765	,330				
VAR00018	,584			,554		
VAR00014	,564			-,349		
VAR00015	,548		,343			
VAR00005		,811				
VAR00004		,761				,343
VAR00022	,314	,618		,468		
VAR00006		,617	,418	,311		
VAR00011			,762			
VAR00008			,709			
VAR00010	,416			,633		
VAR00020		,414	,594	,333		
VAR00012	,460		,464			
VAR00021				,753		
VAR00019	,459			,565		
VAR00003					,805	
VAR00002					,769	
VAR00001	,317				,462	
VAR00016			,339			,621
VAR00017		,318	,330			-,471

Table 30. *Item by Item Analysis for the Native Raters*

	Main Factor it belonged to	Factor it Partially Belonged to	3rd factor it belonged to	
13. It is difficult for me to understand an accented speech.	<i>PRONUNCIATION</i> ,803	-----	-----	✓
7. It is difficult for me to understand the message of an accented speech as I am not used to hearing different accents.	<i>PRONUNCIATION</i> ,771	<i>UNDERSTANDING THE OVERALL MESSAGE</i> ,362	-----	<i>This item is two sided, it talks about accent and also understanding the message of a speech, so it partially belongs to both factors.</i>
9. It is difficult for me to understand any variations in accent except for my own	<i>PRONUNCIATION</i> ,765	<i>UNDERSTANDING THE OVERALL MESSAGE</i> ,330	-----	<i>This item is two sided, it talks about accent and also partially understanding the message of a speech, so it belongs to both factors.</i>
18. It is easy for me to understand the overall message of the speech by the help of other components even if the accent may sound different to me.	<i>PRONUNCIATION</i> ,584	<i>LINGUISTIC PARALINGUISTIC STRUCTURES</i> ,554	-----	<i>This item is two sided, it talks about accent and also the importance of other components of a speech, so it may partially belong to both factors.</i>

14. It is easy for me to understand variations in pronunciation/ accent.	<i>PRONUNCIATION</i> ,568	<i>LINGUISTIC PARALINGUISTIC STRUCTURES</i> ,349		<i>Accent and pronunciation may also be included in individual linguistic factors.</i>
15. It is difficult for me to understand a speech well without proper usage of voice inflections.	<i>PRONUNCIATION</i> ,548	<i>RATERS' EFFECT</i> ,343	-----	<i>This item partially is two-sided, it partially belongs to raters' effect factor, too.</i>
5. It is easy for me not to focus on little grammar mistakes if I understand the overall message.	<i>UNDERSTANDING THE OVERALL MESSAGE</i> ,811	-----	-----	✓
4. It is easy for me to focus on the overall message rather than any kind of mistakes.	<i>UNDERSTANDING THE OVERALL MESSAGE</i> ,761	<i>VOCABULARY</i> ,343	-----	<i>This item is two-sided, it partially belongs to vocabulary.</i>
22. It is easy for me to ignore the mistakes in a speech as long as I understand the message.	<i>UNDERSTANDING THE OVERALL MESSAGE</i> ,618	<i>LINGUISTIC PARALINGUISTIC STRUCTURES</i> ,468	<i>PRONUNCIATION</i> ,314	<i>This item partially belongs to two other factors except for its main factor as it is a comprehensive one.</i>

6. It is easy for me to understand a speech with grammatical, phonetical or fluency problems because I am used to this kind of speech.	<i>UNDERSTANDING THE OVERALL MESSAGE</i> ,617	<i>RATERS' EFFECT</i> ,418	<i>LINGUISTIC PARALINGUISTIC STRUCTURES</i> ,311	<i>This item partially belongs to two other factors except for its main factor as it is a comprehensive one.</i>
11. It is difficult for me to understand any kind of mistakes in a speech as I dont usually experience such situations.	<i>RATERS' EFFECT</i> ,762	-----		✓
8. It is difficult for me to follow the speech if there are too many gaps, hesitations, and breakdowns.	<i>RATERS' EFFECT</i> ,709	-----		✓
10. It is difficult for me to understand a speech if it is full of grammar mistakes.	<i>RATERS' EFFECT</i> ,633	<i>GRAMMAR</i> ,416		<i>This item partially belongs to grammar factor.</i>
20. It is easy for me to follow a speech with grammar mistakes if I understand the overall message.	<i>RATERS' EFFECT</i> ,594	<i>UNDERSTANDING THE OVERALL MESSAGE</i> ,414	<i>LINGUISTIC PARALINGUISTIC STRUCTURES</i> ,333	<i>This item partially belongs to two other factors except for its main factor as it is a comprehensive one.</i>
12. It is difficult for me to understand the overall message if there are mispronunciations in a speech.	<i>RATERS' EFFECT</i>	<i>PRONUNCIATION</i>		<i>This item is two sided, it talks about accent and also listeners' role in a speech,</i>

	,464	,460		so it may partially belong to both factors.
21. It is easy for me to understand the overall message if the speech is fluent enough.	LINGUISTIC PARALINGUISTIC STRUCTURES ,753			✓
19. It is difficult for me to understand the overall message of a speech since I usually focus on individual components such as grammar, pronunciation, fluency or vocabulary.	LINGUISTIC PARALINGUISTIC STRUCTURES ,565	PRONUNCIATION ,459		This item is two sided, it talks about linguistic/paralinguistic factors which includes pronunciation, so it may partially belong to both factors.
3. It is easy for me to understand the overall message of the speech by the help of contextual clues.	TASK EFFECT , 805			✓
2. It is easy for me to follow communicative tasks rather than monologues	TASK EFFECT , 769			✓
1.It is easy for me to understand a descriptive speech thanks to the variations in pitch and tone.	TASK EFFECT ,462	PRONUNCIATION ,317		This item is two sided, it talks about task effect and also understanding, so it may partially belong to both factors.

16. It is easy for me to understand a speech even if some small words are missing.	VOCABULARY ,621	RATERS' EFFECT ,339		✓
17. It is difficult for me to understand the message if improper words are used.	VOCABULARY -471	UNDERSTANDING THE OVERALL MESSAGE	RATERS' EFFECT	<i>This item is loaded on two different factors, too.</i>

4.1.1. Native Raters' Factor Analysis Results

4.1.1.1. Factor 1: Pronunciation

7. It is difficult for me to understand the message of an accented speech as I am not used to hearing different accents

9. It is difficult for me to understand any variations in accent except for my own.

13. It is difficult for me to understand an accented speech.

15. It is difficult for me to understand a speech well without proper usage of voice inflections.

14. It is easy for me to understand variations in pronunciation/ accent.

18. It is easy for me to understand the overall message of the speech by the help of other components even if the accent may sound different to me.

The results of the factor analysis conducted after the main administration showed that the first factor had 5 items that belonged to “*pronunciation*”. Due to the content of some items, they partially belonged to different factors. For the 1st factor (pronunciation) as can be seen in the above table, items 7 and 9 partially belonged to the 2nd factor because these items also dealt with the importance of understanding the overall message. In other words, the terms such as; *accented speech*, *variations in accent* were the very first things the participants read when they were answering these items, therefore, these questions firstly belonged to the pronunciation factor as it was supposed to. Therefore, they took part in this factor with higher loadings (,771 and ,765 respectively). Item 15 partially belonged to the third factor with a lower loading. (,343) The first factor it belonged to was pronunciation with the loading of ,548

however, as it also mentioned the difficulty of understanding depending on improper usage of voice inflections, the participants may have thought it as a factor related to raters. Therefore, this item partially belonged to the raters' attitudes factor, too. Furthermore, the last item 18 partially belonged to the *linguistic/paralinguistic factors*, which was meaningful as it had the phrase "*by the help of other components*" which referred to all kinds of para/linguistic features specific to speech.

4.1.1.2. Factor 2: Understanding the overall message

4. It is easy for me to focus on the overall message rather than any kind of mistakes.

5. It is easy for me not to focus on little grammar mistakes if I understand the overall message.

6. It is easy for me to understand a speech with grammatical, phonetical or fluency problems because I am used to this kind of speech.

22. It is easy for me to ignore the mistakes in a speech as long as I understand the message.

The second component arose after the factor analysis put the members of two different components together. On a closer look at the items which came together under this component it is possible to say that all of them refer to the importance of understanding the overall message of a speech rather than dealing with the mistakes. Although these items were placed under different components after the piloting, originally most of them were suggested to be together. Therefore, it is possible to say that the results of the factor analysis conducted after the main administration of the scale were highly consistent with the original version of the scale developed. For this factor, the items which partially belonged to other factors were **4**, **22** and **6**. For the

4th item the phrase “any kind of mistakes” can include vocabulary mistakes, too. Therefore, this item may partially belong to the vocabulary factor. However, as its loading is lower on the vocabulary factor, it was accepted as the member of the 2nd factor in the first place. For item 6, each component mentioned in the item was covered in the 4th factor, linguistic/paralinguistic structures, too. Therefore, it is completely normal for this item to partially appear in the 4th factor, too. Furthermore, in the second part of the item, the phrase “because I am used to this kind of speech” assesses the effects of raters’ idiosyncratic features on comprehensibility. For this reason, item 6 partially belonged to factor 3; raters’ effect, too. The loadings of item 22 showed that this item belonged to three different factors. As the first factor, it belonged to the “understanding the overall message” factor. However, as it *mentions ignoring the mistakes in a speech*, these mistakes may be associated with pronunciation or some other linguistic factors; therefore, this item partially belonged to pronunciation and linguistic/paralinguistic factors, too.

4.1.1.3. Factor 3: Raters’ effect

8. It is difficult for me to follow the speech if there are too many gaps, hesitations, and breakdowns.

10. It is difficult for me to understand a speech if it is full of grammar mistakes.

11. It is difficult for me to understand any kind of mistakes in a speech as I don’t usually experience such situations.

12. It is difficult for me to understand the overall message if there are mispronunciations in a speech.

20. It is easy for me to follow a speech with grammar mistakes if I understand the overall message of the speech.

All of the items in the third factor belonged to the raters' effect. These items aimed at understanding the raters' attitudes towards mistakes. In some of the items, the idiosyncratic features of listeners were emphasized by adding some phrases (*I am used to this kind of speech, I don't usually experience such situations etc.*) as they were mentioned during the think-aloud procedure. In this way, the effects of different situations which may be specific to some raters were tried to be evaluated. In general, all of the items that came together under this component referred to the idea any kind of mistake in a speech would make it difficult to be understood. Accordingly, with these results, the idea that listeners also had something to say on comprehensibility was confirmed one more time. The items which partially loaded on other factors were **10, 12 and 20**. For all of these items, there was no problem as their content included the other factors, too. For example, for item 12 it is clear that this item deals with pronunciation, too. Besides, item 20 mentions grammar mistakes and overall understanding; therefore, it is normal for that item to be loaded on these factors, too. Finally, item 10 clearly includes the term grammar in it, so it seems to be normal to be loaded on this factor, too.

4.1.1.4. Factor 4: Linguistic / paralinguistic structures

19. It is difficult for me to understand the overall message of a speech since I usually focus on individual components such as grammar, pronunciation, fluency or vocabulary.

21. It is easy for me to understand the overall message if the speech is fluent enough.

During the data collection steps, there were different components mentioned both by the participants of the study and in the related literature. Accordingly, the components of the comprehensibility scale depended on those components. However, some components such as grammar and fluency did not turn out to be as separate components after the piloting of the scale. Rather than that, they were dealt with together under the same component whose main message was focusing on some individual constructs of comprehensibility instead of focusing on understanding the overall message as a whole. In this way, the 4th factor emphasizes the importance of individual factors such as grammar and fluency during meaning making. In that way, these components do not appear as separate ones anymore, but they were mentioned under this component together. In this factor, item 19 partially belonged to the pronunciation factor, too. It was something expected as it mentioned individual factors one by one.

4.1.1.5. Factor 5: Task effect

1. It is easy for me to understand **a descriptive speech** thanks to the variations in pitch and tone.

2. It is easy for me to follow **communicative tasks** rather than monologues.
3. It is easy for me to understand the overall message of the speech by the help of **contextual clues**.

This factor showed that the task effect was another component which would affect comprehensibility. During data collection, student participants were given three different tasks and their performance for each of them was assessed, and the results showed that there was a statistically significant difference among the scores of different tasks. Among them, *story inventing* had the highest scores from the raters. Accordingly, the idea that task type may have something to say about comprehensibility was supported by data, accordingly, *task effect* as a component was included in the scale development process. After the main administration step, it arose as a separate component again, so it can be said that the task effect has something to say about language learners' performance and their comprehensibility, so it should be considered as a component of comprehensibility. In this factor, item **1** partially belonged to pronunciation as it talks about pitch and tone.

4.1.1.6. Factor 6: Vocabulary

16. It is easy for me to understand a speech even if some small words are missing.
17. It is difficult for me to understand the message if improper words are used.

Vocabulary as a component took place in all steps of data collection and piloting processes. Moreover, the results of the factor analysis after the main administration confirmed that, vocabulary was another component of

comprehensibility for the native speakers. However, the results of the regression analysis showed that this was the least contributing factor, and it did not appear as a separate factor for the nonnative raters. According to the native raters' factor analysis results, vocabulary was a separate factor, and items 16 and 17 belonged to this factor as it was planned during the scale development. Item 16 also loaded on the raters' effect factor, which deals with the raters' reactions towards mistakes. Item 17 also loaded on two other factors except for its main factor. This is due to the wording of the item because it includes understanding the message, and raters' effect factors, too.



Table 31. *Non-Native Raters' Factor Analysis Results*

Non-Native Raters' Factor Analysis Results-Main Administration						
	Overall		Attitudes		Linguistic	
	Understanding	Pronunciation	towards	Raters'	Paralinguistic	Task
			Errors	Effect	Structures	effect
VAR5	,822					
VAR4	,806					
VAR22	,699				,312	
VAR12	,383	,372	,362			
VAR15	,373	,312				
VAR7		,855				
VAR13		,755				
VAR9		,746				
VAR14		,557			,513	
VAR18			,803			
VAR16			,786			
VAR11		,332	,747			
VAR17				,800		
VAR10	,332			,743		
VAR8		,492		,518		
VAR6	,391	,378	,312	-,453		
VAR19					,855	
VAR21					,847	
VAR20	,475				,579	
VAR02						,821
VAR03						,493
VAR01					,448	,451

Table 32. *Item by Item Analysis for Non-native Raters*

	Main factor it belonged to	Factor it partially belonged to	Third factor it partially belonged to	
5. It is easy for me not to focus on little grammar mistakes if I understand the overall message.	UNDERSTANDING THE OVERALL MESSAGE ,822	_____	_____ _____	✓
4. It is easy for me to focus on the overall message rather than any kind of mistakes.	UNDERSTANDING THE OVERALL MESSAGE ,806	_____	_____ _____	✓
22. It is easy for me to ignore the mistakes in a speech as long as I understand the message.	UNDERSTANDING THE OVERALL MESSAGE ,699	LINGUISTIC / PARALINGUISTIC STRUCTURES ,312	_____ _____	<i>This item is two sided, it talks about mistakes which may be related to para/linguistic factors, so it partially belongs</i>

				<i>to that factor, too.</i>
12. It is difficult for me to understand the overall message if there are mispronunciations in a speech.	UNDERSTANDING THE OVERALL MESSAGE ,383	PRONUNCIATION ,372	ATTITUDES TOWARDS ERRORS ,362	<i>This item partially belongs to two other factors except for its main factor as it is a comprehensive one.</i>
15. It is difficult for me to understand a speech well without proper usage of voice inflections.	UNDERSTANDING THE OVERALL MESSAGE ,373	PRONUNCIATION ,312		<i>This item is two-sided as it also talks about pronunciation.</i>
7. It is difficult for me to understand the message of an accented speech as I am not used to hearing different accents.	PRONUNCIATION ,855	_____		✓
13. It is difficult for me to understand an accented speech.	PRONUNCIATION , 755	_____		✓
9. It is difficult for me to understand any variations in accent except for my own	PRONUNCIATION			✓

	,746	_____		
14. It is easy for me to understand variations in pronunciation/ accent.	PRONUNCIATION ,557	LINGUISTIC / PARALINGUISTIC STRUCTURES ,513		<i>This item is two sided as accent can be taken as a paralinguistic factor, too.</i>
18. It is easy for me to understand the overall message of the speech by the help of other components even if the accent may sound different to me.	ATTITUDES TOWARDS ERRORS ,803	_____ —		✓
16. It is easy for me to understand a speech even if some small words are missing.	ATTITUDES TOWARDS ERRORS ,786	_____ —		✓
11. It is difficult for me to understand any kind of mistakes in a speech as I dont usually experience such situations.	ATTITUDES TOWARDS ERRORS ,747	PRONUNCIATION ,332		<i>This item is two sided as speech mistakes can be thought as pronunciation mistakes.</i>
17. It is difficult for me to understand the message if improper words are used.	RATERS' EFFECT ,800			✓

10. It is difficult for me to understand a speech if it is full of grammar mistakes.	RATERS' EFFECT ,743	UNDERSTANDING THE OVERALL MESSAGE ,332		<i>This item is two sided.</i>
8. It is difficult for me to follow the speech if there are too many gaps, hesitations, and breakdowns.	RATERS' EFFECT ,518	PRONUNCIATION ,492		<i>This item is two sided.</i>
6. It is easy for me to understand a speech with grammatical, phonetical or fluency problems because I am used to this kind of speech.	RATERS' EFFECT -,453	UNDERSTANDING THE OVERALL MESSAGE ,391	PRONUNCIATION ,378	<i>This item partially belongs to two other factors except for its main factor as it is a comprehensive one.</i>
19. It is difficult for me to understand the overall message of a speech since I usually focus on individual components such as grammar, pronunciation, fluency or vocabulary.	LINGUISTIC / PARALINGUISTIC STRUCTURES ,855	UNDERSTANDING THE OVERALL MESSAGE ,623	_____	<i>This item is two-sided.</i>
21. It is easy for me to understand the overall message if the speech is fluent enough.	LINGUISTIC / PARALINGUISTIC			

	STRUCTURES ,847			✓
20. It is easy for me to follow a speech with grammar mistakes if I understand the overall message.	LINGUISTIC / PARALINGUISTIC STRUCTURES ,579	UNDERSTANDING THE OVERALL MESSAGE ,475		<i>This item is two-sided.</i>
2.It is easy for me to follow communicative tasks rather than monologues.	TASK EFFECT ,821			✓
3. It is easy for me to understand the overall message of the speech by the help of contextual clues.	TASK EFFECT ,493			✓
1. It is easy for me to understand a descriptive speech thanks to the variations in pitch and tone.	TASK EFFECT ,451	LINGUISTIC / PARALINGUISTIC STRUCTURES ,448		<i>This item is two sided.</i>

4.1.2. Non-native Raters' Factor Analysis Results

4.1.2.1. Factor 1: Understanding the overall message

5. It is easy for me not to focus on little grammar mistakes if I understand the overall message.

4. It is easy for me to focus on the overall message rather than any kind of mistakes.

22. It is easy for me to ignore the mistakes in a speech as long as I understand the message.

12. It is difficult for me to understand the overall message if there are mispronunciations in a speech.

15. It is difficult for me to understand a speech well without proper usage of **voice** inflections.

Three items out of 5 loaded on only this factor: understanding the overall message. However, the rest of the items loaded on some different factors, too. For example, item 22 loaded on “individual linguistic factors”, too because it talks about mistakes in general, so it may be related to any kind of linguistic mistakes. Therefore, this is a two-sided item. Moreover, item 12 loaded on pronunciation and attitudes towards errors factors, too, which meant that this item should belong to three different factors. As a result, for non-native participants, the first factor understanding the overall message had 5 items and 2 of them loaded on different factors, too. However, for both items, also being loaded on different factors was normal.

4.1.2.2. Factor 2: Pronunciation

7. It is difficult for me to understand the message of an accented speech as I am not used to hearing different accents.

13. It is difficult for me to understand an accented speech.

9. It is difficult for me to understand any variations in accent except for my own.

14. It is easy for me to understand variations in pronunciation/ accent.

All three items out of four only loaded on this factor, but item 14 loaded on 2 different factors, too. This item also loaded on *linguistic/ paralinguistic structures*, too. As it also talks about accent and pronunciation belonging to two different factors does not seem to be surprising.

4.1.2.3. Factor 3: Attitudes towards errors (* specific to non-natives)

18. It is easy for me to understand the overall message of the speech by the help of other components even if the accent may sound different to me.

16. It is easy for me to understand a speech even if some small words are missing.

11. It is difficult for me to understand any kind of mistakes in a speech as I don't usually experience such situations.

In native speakers' factor analysis results, all of the items given above belonged to different factors. Therefore, there is no match with the natives' results for this factor. However, as the vocabulary does not exist as a separate factor for the non-native participants, the items related to vocabulary may be considered as "vocabulary mistakes" by the NNs, and evaluated under this factor. According to the factor analysis, items 18 and 16 did not belong to any other factors, but item 11 loaded on

pronunciation factor, too. As it talks about the mistakes in a speech, it may be thought of as phonetical mistakes. Therefore, this item also loaded on the pronunciation factor with a lower score. (.332)

4.1.2.4. Factor 4: Raters' effect

17. It is difficult for me to understand the message if improper words are used.

10. It is difficult for me to understand a speech if it is full of grammar mistakes.

8. It is difficult for me to follow the speech if there are too many gaps, hesitations, and breakdowns.

6. It is easy for me to understand a speech with grammatical, phonetical or fluency problems because I am used to this kind of speech.

Item 6 loaded on three different factors as it contains different components of the speech in it. Item 8 and 10 also loaded on a different factor, too. Item 8 also loaded on pronunciation factor. Besides, item 10 loaded on understanding the overall message factor. As these items also have some related parts for these factors, they may be accepted as two-sided items.

4.1.2.5. Factor 5: Linguistic/paralinguistic structures

19. It is difficult for me to understand the overall message of a speech since I usually focus on individual components such as grammar, pronunciation, fluency or vocabulary.

21. It is easy for me to understand the overall message if the speech is fluent enough.

20. It is easy for me to follow a speech with grammar mistakes if I understand the overall message.

Apart from taking part in this factor, items **19 and 20 also** loaded on the “*understanding the overall message*” factor because both items have this phrase in them. Therefore, there does not seem to be a problem for the items being loaded on this factor, too. Item 19 dealt with individual factors such as grammar, pronunciation, fluency and vocabulary. Besides, item 21 focuses on fluency, and item 20 mentions grammar, too. As a result, some para / linguistic components of comprehensibility were covered in this factor and vocabulary and fluency did not appear as separate factors anymore; rather, they were all covered together under this factor.

4.1.2.6. Factor 6: Task effect

1. It is easy for me to follow **communicative tasks** rather than monologues.
2. It is easy for me to understand the overall message of the speech by the help of **contextual clues**.
3. It is easy for me to understand **a descriptive speech** thanks to the variations in pitch and tone.

For the last factor, *task effect*, two items out of three loaded only one factor. However, **item 1** loaded on individual linguistic factors, too. The phrase “variations in pitch and tone” is related to the pronunciation or accent, which was thought of as an individual linguistic factor. Therefore, this item was two-sided and took place in the linguistic/ paralinguistic structures, too.

In short, the factor analysis results showed that for both participant groups, there were six factors affecting comprehensibility. While these factors and the items related to them were mostly common for both groups, there were some slight changes on a few points. The detailed analysis and the explanations on the differences and

commonalities between native and non-native speakers were given in the following part.

4.1.3 Factor by factor differences between the rater groups

In this part, the differences between the rater groups' factor analysis results were explained. Items which were common for both groups, and which were different were given in the following tables for each factor one by one.

4.1.3.1. Comparisons on *Pronunciation*

Table 33. *Items that Loaded on Pronunciation Factor*

Natives: 7, 9, 13, 15, 18
Non-Natives: 7, 9, 13, 14
* Common items: 7,9, 13

7. It is difficult for me to understand the message of an accented speech as I am not used to hearing different accents.

9. It is difficult for me to understand any variations in accent except for my own

13. It is difficult for me to understand an accented speech.

15. It is difficult for me to understand a speech well without proper usage of voice inflections.

18. It is easy for me to understand the overall message of the speech by the help of other components even if the accent may sound different to me.

14. It is easy for me to understand variations in pronunciation/ accent.

For the first factor, ***pronunciation***, nearly all of the items were the same for both native and non-native rater groups. However, there were two extra items for the native raters group. For the native raters, items *15 and *18 belonged to the ***pronunciation*** factor as their main factor. However, in non-native raters' results item 15 loaded on understanding the overall message as its main factor. It was most probably due to the phrase "***voice inflection***" which referred to the changes in the speakers' voice such as pitch and tone. It is possible to say that the phrase "voice inflections" did not make sense for the non-native speakers, so it wasn't on the pronunciation factor as its main factor. However, the factor analysis results also showed that this item partially belonged to the pronunciation factor, too. As a result, there does not seem to be a big difference at that point. On the other hand, item 18 which belonged to the "***attitudes towards errors***" factor specific to non-native raters, did not appear to be a member of the *pronunciation* factor for the non-natives. However, it is clear in the wording of the item that it talks about pronunciation, too. Therefore, native speakers preferred to evaluate these items in terms of pronunciation, which makes it clear that pronunciation is one of the most important determiners of comprehensibility for them. In the same vein, item 14 also clearly deals with the issue of pronunciation. However, the native speakers did not consider this item in the scope of pronunciation, but for them it partially belonged to the *linguistic/paralinguistic* factors. In that way, this item is common for this factor for both rater groups because it partially belongs to that factor for the non-native speakers, too. Therefore, it does not make a difference for the groups. In short, it is possible to say that ***pronunciation*** arose out of research to be one of the factors to affect comprehensibility for both rater groups.

4.1.3.2. Comparisons on understanding the overall message

Table 34. *Items that Loaded on Understanding the Overall Message Factor*

Natives: 4, 5, 6, 22
Non-natives: 4, 5, 12, 15, 22
Common items: 4, 5, 22

4. It is easy for me to focus on the overall message rather than any kind of mistakes.
5. It is easy for me not to focus on little grammar mistakes if I understand the overall message.
22. It is easy for me to ignore the mistakes in a speech as long as I understand the message.
6. It is easy for me to understand a speech with grammatical, phonetical or fluency problems because I am used to this kind of speech.
12. It is difficult for me to understand the overall message if there are mispronunciations in a speech.
15. It is difficult for me to understand a speech well without proper usage of voice inflections.

For the second factor *understanding the overall message*, in native speakers' factor analysis results, three items out of four were the same as the non-natives. Other items which were different for both groups were **items 6, 12 and 15**, and they weren't loaded on the overall understanding as their main factor, but they partially belonged to this factor, too. In fact, all three items may be thought of as two-sided, they partially belong to the *pronunciation* and partially to the *overall understanding* factors.

Therefore, for the second factor, *overall understanding*, there does not seem to be a big difference between the rater groups' perceptions. For both groups, the same factor "understanding the overall message" existed. However, what makes the difference is that native speakers usually focus on the items which talk about the importance of understanding the overall message, and ignoring the mistakes. On the other hand, the items which the non-native raters preferred additionally for this factor mainly focused on the difficulties stemmed from mistakes in a speech, according to them, these mistakes made overall understanding difficult. In short, the effect of mistakes on understanding seems to be important for the non-native group, which may be due to their profession. As all the non-native raters are English teachers, they may be more alert towards mistakes.

4.1.3.3. Comparisons on raters' effect

Table 35. *Items that Loaded on Raters' Effect Factor*

NATIVES: 8, 10, 11, 12, 20
NON-NATIVES: 6, 8, 10, 17

Common Items: 8, 10

8. It is difficult for me to follow the speech if there are too many gaps, hesitations, and breakdowns.

10. It is difficult for me to understand a speech if it is full of grammar mistakes

6. It is easy for me to understand a speech with grammatical, phonetical or fluency problems because I am used to this kind of speech.

11. It is difficult for me to understand any kind of mistakes in a speech as I don't usually experience such situations.

12. It is difficult for me to understand the overall message if there are mispronunciations in a speech.

17. It is difficult for me to understand the message if improper words are used.

20. It is easy for me to follow a speech with grammar mistakes if I understand the overall message.

For the third factor, raters' effect, there does not seem to be a big difference between the rater groups, which means that the comprehensibility perceptions of both groups match to some degree.

Item 11 (*It is difficult for me to understand any kind of mistakes in a speech as I don't usually experience such situations*) which belonged to two different factors in the non-native speakers' factor analysis results just belonged to the *raters' effect* factor in the native speakers' results. This item, which deals with the mistakes and the listeners' reactions to the mistakes seems to take part in both groups without problems. While the first part of the item talks about the negative effects of mistakes on understanding, the second part focuses on the listeners' idiosyncratic features by saying that as *I don't usually experience such situations*. Accordingly, it is possible to say that this item was perceived from different aspects by both rater groups, that's to say, native speakers focused on the listeners' effect part more while the non-native raters stick to the mistakes more. It was clear in the interviews that, non-native speakers are less tolerant towards mistakes; however, for the native speakers it does not make that much sense most of the time. As a result, the idea that "the native speakers usually tend to ignore mistakes if they don't ruin their understanding" seems to be approved one more time.

Most of the time, these are usually the non-native speakers who chase after mistakes and think that they are big obstacles to understanding.

4.1.3.4. Comparisons on linguistic/paralinguistic structures

Table 36. *Items that Loaded on Linguistic/Paralinguistic Structures*

NATIVES: 19, 21
NON-NATIVES: 19, 20, 21
Common items: 19, 21

19. It is difficult for me to understand the overall message of a speech since I usually focus on individual components such as grammar, pronunciation, fluency or vocabulary.

20. It is easy for me to follow a speech with grammar mistakes if I understand the overall message.

21. It is easy for me to understand the overall message if the speech is fluent enough.

During the data collection and analysis processes, the factor which often mentioned by both rater groups was “fluency”, and accordingly two items that referred to fluency as an independent factor were put into the scale. However, as the factor analysis results showed, fluency was not thought to be something just limited to breakdowns, hesitations and pauses in a speech, but it meant more for both rater groups. As Tavakoli and Wright (2020) described;

Fluency is not only just a question of measuring temporal speed of overt speech or cognitive automatic processes but also relates to the speaker’s linguistic repertoire (in terms of syntactic and lexical accuracy and

complexity), as well as to the semantic/pragmatic demands of different contexts and tasks. (Tavakoli & Wright, 2020; p.14)

Therefore, it would not be fair to consider fluency just as the speed of speech, or automatized speaking skill, but it would be better to consider it as effortless, errorless and fluent speech.

Although *fluency* did not appear to be as a separate factor after the analysis, *fluency* was partially mentioned in some different factors, such as *understanding the overall message, raters' effect, linguistic/paralinguistic structures and attitudes towards errors*.

In the factor, *linguistic/paralinguistic structures*; vocabulary, grammar and fluency were clearly mentioned within the items. Though they did not appear as separate factors, all of them were put together as they were thought to be important elements of comprehensibility. Besides, there is not a difference between the rater groups' preferences for this factor which shows that both groups think that fluency, grammar and vocabulary were important components of comprehensibility.

4.1.3.5. Comparisons on task effect

Table 37. *Items that Loaded on Task Effect Factor*

NATIVES: 1,2,3
NON-NATIVES: 1,2,3
Common Items: 1, 2, 3

1. It is easy for me to understand a descriptive speech thanks to the variations in pitch and tone.

2. It is easy for me to follow communicative tasks rather than monologues.
3. It is easy for me to understand the overall message of the speech by the help of contextual clues.

All of the items for the 5th factor, ***task effect***, were the same for both rater groups. As the tasks have some special roles in communicative language teaching whose goal is to make students communicate accurately and appropriately in real-life settings, the effects of different task types on comprehensibility was another issue to be tested. Therefore, three items that referred to the effects of different task types on comprehensibility were included in the scale. The analyses of the results showed that, type of the tasks had also something to say about comprehensibility, which was consistent with the results of the first data collection step. At this stage, students had the highest comprehensibility scores for the tasks which allowed them some time before they perform, and there was a statistically significant difference among the comprehensibility scores of students on three different tasks.

4.1.3.6. Comparisons on vocabulary (for natives)

Attitudes towards errors (for non-natives)

Table 38. *Items Loaded on Vocabulary Factor (For Natives)*

NATIVES: 16, 17

16. It is easy for me to understand a speech even if some small words are missing.
 17. It is difficult for me to understand the message if improper words are used.
-

For the native speakers, items 16 and 17 were put into the vocabulary factor, together. However, for non-native raters' vocabulary did not emerge as a separate factor. For non-native raters, there was another factor; *attitudes towards errors*.

Table 39. *Items that Loaded on Attitudes towards Errors Factor (For Non-native Raters)*

11. It is difficult for me to understand any kind of mistakes in a speech as I don't usually experience such situations.
16. It is easy for me to understand a speech even if some small words are missing.
18. It is easy for me to understand the overall message of the speech by the help of other components even if the accent may sound different to me.

The last factor was the only one which was completely different for both groups. This factor was **vocabulary** for native speakers while it did not appear as a separate factor for the non-native ones. It was probably due to the different perceptions of rater groups on the use of vocabulary. During the interviews, and in the follow-up questions that were sent to raters, native speakers mentioned the importance of the usage of idioms and proverbs in English, they claimed that they can easily recognize a non-native speech by the limited usage of idioms, proverbs or such phrases. Instead of missing words, or misused words they talked about the limited usage of idiomatic expressions. However, for the non-native speakers, the effect of vocabulary was usually considered as "the effect of vocabulary mistakes", so vocabulary was not a separate factor for them. Rather, it was grouped under the factor "*attitudes towards errors*" together with the items which referred to the mistakes in a speech. Moreover, items referred to **vocabulary** were also placed into the individual

linguistic/paralinguistic structures factor. Therefore, it is possible to say that both groups' perceptions on *vocabulary* seem to be different, which is consistent with the data gathered at the earlier phases of this study. To make a long story short, even if their perceptions of *vocabulary* were different, it was considered as a component of comprehensibility by both groups.

4.2 Regression Analyses

In order to see the contribution of each factor to comprehensibility, multiple regression analyses were conducted. The results of these analyses showed that the factor which contributed most to the whole scale was *the raters' effect*, (71 %) which meant that raters' idiosyncratic features, their attitudes towards errors or their linguistic background had the greatest effect on comprehensibility. Following that, *understanding the overall message* contributed another 15 % to the scale and it was the second factor contributing to comprehensibility. Most of the participants thought that understanding the overall message of a speech was more important than dealing with the mistakes during a conversation. Pronunciation, which was usually believed to have the utmost effect on comprehensibility was the third factor contributing to the scale, task effect and linguistic/paralinguistic structures were the least contributing factors according to the regression analysis for the native raters.

Furthermore, the regression analysis results also showed that, vocabulary as a separate factor did not contribute to the scale, which was in parallel with the non-native participants' results. For the effect of each item on the factors, further regression analyses were conducted, and the results were as the following.

Table 40. *Regression Analyses on the Effects of Factors to the Scale*

Native Raters' Perceptions	R	R Square	Adjusted R Square	Std. Error of the Estimate
Raters' Effect	,844 ^a	,712	,708	3,92
Understanding the Overall Message	,931 ^b	,867	,862	2,69
Pronunciation	,970 ^c	,941	,938	1,81
Task Effect	,982 ^d	,965	,962	1,41
Linguistic/Paralinguistic Structures	,995 ^e	,989	,988	,78
Vocabulary	1,000 ^f	1,000	1,000	,00
Non-native Raters' Perceptions				
Raters' Effect	,543 ^a	,295	,283	3,02629
Understanding the Overall Message	,773 ^b	,597	,583	2,30704
Task Effect	,849 ^c	,721	,707	1,93601
Pronunciation	,929 ^d	,862	,852	1,37329
Linguistic / Paralinguistic Structures	,983 ^e	,967	,964	,67805
Attitudes towards Errors	1,000 ^f	1,000	1,000	,00000

As it is clear from the above table, native and non-native raters' perceptions and priorities on the components of comprehensibility were nearly the same. However, the results showed that for the native raters', the pronunciation factor came in the 3rd order, but it came in the 4th order for the non-native ones. Furthermore, as the last factor **vocabulary** was in the native raters' regression results, but the last factor was **attitudes towards errors** for the non-native raters.

These results were not consistent with the related literature as they usually claimed that pronunciation, fluency, vocabulary and grammar were the most important components of comprehensibility. In contrast, the perceptions of the raters showed that grammar or vocabulary did not serve as separate factors contributing to comprehensibility. Rather, raters' effect which included their idiosyncratic features,

their linguistic background, attitudes were the most important factor for both rater groups. Following that, understanding the overall message was the second important factor contributing to comprehensibility. For both rater groups, instead of dealing with mistakes trying to understand the overall message of the speech had importance.



5. DISCUSSION AND CONCLUSION

5.1. Overview of the Study

As successful communication is one of the ultimate goals of foreign language classes, the factors affecting it have attracted much attention for long. For the sake of successful interactions in the target language, different methods and strategies have been tried throughout the years. Besides, scholars conducted a fair amount of research studies on the factors affecting L2 oral proficiency. (Carey, Mannell, & Dunn, 2011; Moyer, 2013; Van Maastricht, Krahmer & Swerts, 2016; Zielinski, 2008; Saito & Saito, 2017) However, most of the time, speaking tests that highly depended on pronunciation were the main determiners of oral proficiency. Scholars have long believed that pronunciation and sounding like a native speaker had the utmost effect on successful communication. Therefore, in most of the earlier studies, pronunciation, nativelikeness or accentedness were the main determiners of L2 oral proficiency. (Moyer, 2013; Van Maastricht, Krahmer & Swerts, 2016;)

By the help of technology, the world has changed a lot; additionally, the traditional ways of teaching, learning and communicating have also changed. People do not have to be next to each other to have face-to-face communication anymore, rather than that, online communication enables us to be able to contact whoever, wherever and whenever we want. In this way, the borders have disappeared and people started to feel freer to contact the ones from overseas, and the importance of English as a lingua franca has been approved one more time. (Cogo & Dewey, 2012) English has become the language spoken by a lot of people from different nationalities, and the number of non-native speakers has already surpassed the number of natives. (Clarke, 2016; Jenkins, 2007; Seidlhofer, 2011)

In this sense, communicative competence which means the ability to use the language in an appropriate way in any given social context has gained great importance. Instead of sticking to the idea of nativelikeness, focusing on meaning and understanding has attracted much more attention. (Munro & Derwing, 1999) As a result, the factors affecting understanding and being understandable have been vastly discussed. Nevertheless, the construct of comprehensibility was generally related to the nativelikeness and accentedness until the opposite was proven. (Derwing & Rossiter, 2003; Munro & Derwing, 1995; Van Maastricht, Krahmer & Swerts, 2016) In some later studies, the relationship between comprehensibility and accentedness was searched and the results showed that it was possible to sound totally comprehensible even if you had an accented speech. (Derwing & Munro, 1997) Furthermore, it did not seem to be logical to stick to the idea of nativelikeness in a global world where the language is spoken among the non-native speakers more than the native ones. (Seidlhofer, 2011) Today, instead of how you sound in the target language, the meaning of your sentences is much more important. In other words, non-native speakers do not have to speak the language in exactly the same way as the native speakers do because if you understand and if your counterpart understands you, there is no problem and the communication is successful. (Cogo & Dewey, 2012)

From that point forward, identifying the components of comprehensibility rather than just sticking to the importance of pronunciation and nativelikeness seems to be more important. Though there have been different attempts to find out the factors which may be affecting comprehensibility, most of those studies depended on linguistic explanations and few of them were data-driven. Besides, they usually focused on the native speakers' perceptions of comprehensibility, and their scope was

limited to just a few factors at a time instead of including as many factors as possible; as a result, there has not been a comprehensive study which was data-driven.

For this reason, a data-driven study which was not limited to only a few factors mentioned in the literature, but included as many factors as possible depending on the data collection steps and the related literature, was conducted. Furthermore, not only the native speakers' perceptions but also the non-native speakers' perceptions of comprehensibility were considered. Accordingly, a comprehensibility scale was developed, piloted, revised and the main administrations of it were done with both native and non-native raters. Finally, a new comprehensibility model arose out of the research was suggested and the differences between native and non-native raters' comprehensibility perceptions were discussed.

5.2. Discussions

For the data collection, five different steps were followed and after each step the data gathered was used to step forward. As the starting point, speech samples collected on three different tasks from B1 level English prep class students were rated by native and non-native raters by using Isaacs, Trofimovich and Foote's existing comprehensibility scale, (2017). Following that, bio-info questionnaires were sent to the participants to learn more about their background. The results showed that *bilingualism, positive attitudes towards language learning, early exposure to languages and positive experiences during the language learning process* had something to say on comprehensibility. Besides, among three different tasks, "story inventing" got the highest comprehensibility scores, which showed that the effect of the task should also be considered and taken into the scope of comprehensibility research. During the earlier studies, the task effect was already mentioned; however, it

was usually the picture description task which gave participants the opportunity to design their speech before they perform, which was not similar to the way we actually communicate in real life. On the other hand, for this study, we chose three different tasks all of which served for a different purpose. They were picture description, story inventing and discussion tasks, and the students' performances on these tasks were recorded. The speech samples were not shortened or adapted for the study as it was preferred in the earlier studies, we used them in their original version.

In order to find out more on the raters' comprehensibility perceptions, they were given the components that appeared in the literature and asked to rank them, and think aloud procedures were followed. In contrast with the related literature, raters did not take *pronunciation* as the most important determiner of comprehensibility. Rather than that, they mentioned the importance of focusing on *understanding the overall message and ignoring the mistakes which can be called as "attitudes towards errors"*, which provided new evidence for the factors affecting comprehensibility.

The results of this study highlighted that pronunciation may not always be the most important component of comprehensibility as it was usually mentioned in the earlier literature. Instead, the participants claimed that they did not care about the pronunciation mistakes as long as they understood what the speaker meant. Understanding the overall message of a speech was one of the most important steps for them, so they tried to catch the meaning rather than focusing on any kind of linguistic or phonetical mistakes.

Furthermore, this study indicated that the perceptions of native and non-native raters on comprehensibility were somewhat different. Even if they mentioned nearly the same factors as the components of comprehensibility; their priority was different. Native speakers focused on the importance of understanding the overall message;

however, mistakes were important for non-native raters because they perceived them as the obstacles to understanding. They dealt with the importance of grammar, pronunciation and mistakes related to them. Furthermore, vocabulary did not emerge as a separate factor for the non-native speakers, and it was the least contributing factor for the natives. The regression analysis results showed that it had a very little effect (1, 2 %) on the scale. However, it was included in the factor in which different linguistic/paralinguistic structures such as grammar, fluency and pronunciation were put. Therefore, vocabulary was not thought to be that important to act individually, but it was covered anyway.

Fluency and grammar shared the same scenario, too. As these factors were mentioned in the earlier literature (Major et al. 2002; Isaacs & Trofimovich, 2012) and during the data collection steps a lot, they were designed as separate factors in the scale. However, the analyses showed that they did not emerge as separate factors, but they were covered under different factors; such as linguistic factors or pronunciation.

All in all, it is possible to say that all of the factors mentioned in the literature took part in this study, too. However, the perceptions of our participants showed that linguistic factors were not the unique and foremost determiners of comprehensibility. Rather, some contextual and paralinguistic factors; such as, raters' idiosyncratic features, attitudes towards errors, language attitudes, task effect and focusing on the overall message of the speech emerged to be as important as the linguistic ones. These results showed that comprehensibility cannot be explained just in terms of linguistic and phonetical structures. Being able to use these structures correctly and appropriately, and sounding like a native speaker may not be necessary all the time. However, both contextual and paralinguistic structures should be taken into consideration while dealing with comprehensibility. As different research studies

indicated (Derwing & Munro, 1997) even if one has an accented and broken speech, understanding and maintaining the conversation may be possible. It has primary importance in our global world where languages are spoken without borders anymore.

5.3 Implications

As the construct of comprehensibility is a complex issue to be investigated in one single study and with limited variables, earlier studies usually depended on different factors which might affect it. Various studies (Gordon & Darcy, 2016; Kissling, 2018; Munro & Derwing, 1995;; Saito, 2011) were conducted to see the effects of pronunciation in some of which suprasegmentals, in some others segmentals were investigated. Some other studies focused on the effects of vocabulary use, and some others investigated grammar or fluency individually. (Suzuki and Kormos, 2020; Derwing et al, 2004) Further, some other scholars (Field, 2005) believed that listeners had also something to say on comprehensibility because communication is a dual process. However, in those studies, usually, the raters' L1 effect or their familiarity with the rating process was investigated. Listeners' effect was limited to these variables. Nevertheless, in this study; raters' idiosyncratic features and their linguistic background and their attitudes towards languages were also investigated. At the same time, in some other studies (Crowther et al., 2017) different task types were used to see the effects of tasks on comprehensibility. However, most of those studies focused on the linguistic factors which might affect it. There has not been a comprehensive study which tried to investigate both the linguistic and contextual factors affecting comprehensibility together by including all the possible factors in the scope of it at once. Furthermore, there were different studies which yielded different

results, and there has not been a consensus on the linguistic and contextual components of comprehensibility, yet. (Suzuki & Kormos, 2020)

Besides, most of the studies in the earlier research depended on native speakers' perceptions and mostly they were not data-driven. Therefore, this study constituted a data-driven basis with the scale developed and the model suggested. To illustrate, for further research, the scale developed during this study might be the basis, and in this way much more contributions can be made on identifying the components of comprehensibility.

Furthermore, compatible with the earlier research; the components; *pronunciation, fluency, grammar, listeners' effect, task effect, vocabulary* were proved to be the factors affecting comprehensibility. Besides, some contextual factors such as; *understanding the overall message, attitudes towards errors, and raters' idiosyncrasy* were also found to be important for comprehensibility. On the side of raters and speakers, *bilingualism, monolingualism, having positive attitudes towards language learning, early exposure to languages and positive experiences during the language learning process* also emerged to be important factors affecting comprehensibility.

Furthermore, this study showed that pronunciation is not always the most important factor of comprehensibility, sometimes understanding the overall message may be enough.

Apart from these, the perceptions of both native and non-native raters were investigated in this study, and the results showed that there were slight differences between these groups. This showed that the scale we developed may function in different contexts with different weightings, which meant that the preferences of the

native and non-native raters may change; so the context in which the scale is used is important while analyzing the results.

5.4 Applications

The results of this study indicated that there are some factors which may enhance comprehensibility. For this reason, if language teachers were aware of these factors and could focus on them more, communicating more successfully would be possible for L2 learners. Therefore, some useful applications for language classes may be listed as follows.

Depending on the results of this study, it can be said that making students experience learning a language at an early age would be the first step to be taken if we want them to become more fluent and comprehensible speakers of the target language.

Besides, if students develop positive attitudes towards learning a language and use their own strategies; such as playing games, watching films etc., to improve themselves by taking responsibility for their own learning, it would be more enjoyable and fruitful for them. For this reason, another strategy would be to encourage the language students for taking the responsibility of their own learning. They should be aware of the need for learning and using that language.

Moreover, instead of focusing on pronunciation studies, or error corrections; focusing on understanding and being able to communicate in the target language emerged to be more important. Therefrom, instead of just putting the pronunciation instruction into the first order, making students more familiar and tolerant to the varieties of English would be a good step to be taken for all the stakeholders of the foreign language teaching. Furthermore, enabling language learners to experience real-life interactions in classrooms would also be priceless.

5.5 Limitations

The results of this study are limited to the comprehensibility perceptions of 61 native (+31 for the piloting) and 61 non-native speakers of English. As larger sample sizes would allow more generalizable results, the results of this study cannot be generalized due to the small sample size.

Furthermore, the level of language proficiency of the student participants from whom the speech samples were collected, was B1. There were not any participants with a higher/lower proficiency level. Although it was preferred on purpose to keep the effect of language proficiency constant, still this may be thought of as a limitation.

Moreover, all of the non-native participants' L1 was Turkish, and this may be accepted as another limitation if one would like to compare the L1 effect on comprehensibility. Besides, their profession was the same, and it was again another limitation for the current study.

5.6 Recommendations for Further Research

By taking the limitations of this study into account, some further studies may be conducted on the subject matter. The very first step would be replicating this study with the participants speaking different L1s. In that way, by comparing native/non-native raters' perceptions, it would be possible to see the effects of different L1s. It would be really helpful to understand the comprehensibility priorities (if any) of the participants with different L1s. If any differences emerged, that would help for foreign language classes because it would mean that depending

on the context, the priority of the learners and their needs would change, so the language teaching should be designed accordingly.

Additionally, to eliminate the profession effect, non-native raters' professions may be chosen different from each other. In this study, all of the non-native participants were English language teachers; therefore, their attitudes towards mistakes would also be affected by their professions, too. For this reason, choosing the participants from different profession groups may contribute understanding whether the differences between the participants' perceptions were due to the profession or non-nativeness effect.

Besides, to see the differences between the different native speaker groups, the scale may be conducted on different native groups. To see the weighting of raters' effect factor (which was found to be the highest contributing factor to the scale) clearer, different rater groups with important commonalities may be chosen as the raters.

In this study, the speech samples were collected from the participants whose language level was B1; however, further research may be done with different proficiency levels. Accordingly, the raters' perceptions of comprehensibility between different proficiency levels may be investigated.

Finally, this study may be replicated with a larger sample size so that it might have more generalizable results, which would be a great help for the field.

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Appendix A: Picture Description Task



Appendix B: Story Inventing Task

TASK 2: STORY INVENTING

Choose one of the Word groups below and make up a meaningful story by using as many of them.

1.

- a university student under constuction surprised her parents
- did not know frightened 10 kilometers the police sleep walker
- on the 13th floor building found at night
- sleeping called hospital away from home on the news

2.

- A rich woman servants very angry lots of dirty dishes |
- thought a lot become famous something practical
- dinner parties a good idea broken plates invented in 1886

TASK 3: DISCUSSION

Please choose one of the topics below and take your side to discuss it with your partner.

- There are lots of benefits of government control on the use of technology
- Women should join the army
- Private schools are better than state schools
- Zoos are good for animals' care
- Foreign languages can be learnt well at any age

Appendix D: Existing Comprehensibility Scale

COMPREHENSIBILITY LEVEL	OVERALL DESCRIPTION OF COMPREHENSIBILITY (Summary Statement)
5	Speech is effortless to understand Errors, are rare and do not interfere with the message **Sounding nativelike or producing hesitation- or error-free speech is <i>not</i> necessary to achieve a level 5 (highest level)
4	Speech requires little effort to understand Errors minimally interfere with the message
3	Speech requires some effort to understand Errors somewhat interfere with the message
2	Speech is effortful to understand Errors are detrimental to the message
1	Speech is painstakingly effortful to understand or indecipherable Errors are debilitating to the message **Not enough <i>comprehensible</i> language is generated for coherent communication, confining the speaker to level 1
UR	Unable to Rate the speech No assessable speech sample is produced (e.g., unresponsive to the task, no articulation of English-like sounds)

Appendix E: Raters' Bio-Info Questionnaire

RATERS' BIO-INFO QUESTIONNAIRE

1. Your Gender:
2. What is the latest school that you graduated from?
3. What is your profession?
4. Do you speak any other languages except for English? **YES / NO**
If yes, please specify.:
5. Did you experience a bi/multi-lingual environment during your childhood?
YES / NO
If yes, please specify:
6. Did your caregiver speak any languages other than your mother tongue during your early childhood? **YES / NO**
7. Have you ever experienced a bi/multi-lingual working environment? **YES / NO**
8. Do you have any foreign friends? If yes, in which language/s do you communicate? **YES / NO**
9. Have you ever lived in a foreign country where other language/s are spoken except for English?
If yes, please specify.
10. Have you ever had to communicate in a foreign language? **YES / NO**
If yes, which language and how long?
11. Have you ever tried to learn a foreign language? **YES / NO**
12. Do you think language learning is fun? **YES / NO**
13. What do you think is the most difficult part of learning a foreign language?
14. Do you think a native-like proficiency (written & spoken) is possible while learning a foreign language? **YES / NO**
15. When you are speaking English with a non-native speaker do you notice that easily? **YES / NO**

If yes, please specify how:

Appendix F: Component Ordering Task

***Component Ordering Task for Raters:**

What do you think are the most important components of the speech that help comprehensibility? Please put them into the order of importance. 1= the least important

Pronunciation

Listener's familiarity with the context

Grammar

Listeners' background

Speaking Volume

Speech rate

Task type

Prosodic features

Vocabulary

Fluency

Appendix G: Student Participants' Bio-Info Questionnaire

Student Participants' Bio-Info Questionnaire

1. Your Gender:
 - a. Female b. Male

2. Your Age:
 - a. 18-20 b. 21-23 c. 24-27

3. Your department:
 - a. Engineering b. Architecture c. Business Adm. d. Genetics
 - e. Other (.....)

4. Your English language level:
 - a. Beginner b) Pre- Int c) Intermediate d) Upper Int. e) Advanced

5. How long have you been learning English?
 - a. 3-5 years B. 6-10 years c. 11-15 years d. More

6. Have you ever completed prep class education earlier?
 - a. yes b. No

7. How many languages do you speak other than your native language?
 - a. 1 b. 2 c. 3 c. More (Please specify)

8. Have you ever been exposed to a bilingual or multilingual environment?
 - a. Yes (Please specify) b. No

9. Have you ever had a bilingual/multilingual environment in your family or relatives?
 - A. Yes (What languages?) B. No

10. Have you ever experienced learning a foreign language except for English?
Yes (_____) B. No
11. Which high school did you graduate from?
a. Anatolian b. Science c. Vocational d. Distance E. Other
12. Have you ever been abroad?
a. Yes b. No
If yes, please specify which countries did you visit? How long did you stay there?
13. Have you ever had to communicate with someone in English for a while?
A. Yes (How long?) b. No
14. Do you use any extra sources or materials to improve your English beside your school courses?
A. I watch films etc..
B. I play games
C. I have some good apps.
D. Other methods (Please Specify)
E. No, I do not do anything special
15. Have you ever had some positive experiences which helped you to improve your English speaking ability? If yes, please specify your experience.
A) Yes B) No

APPENDIX H: Scale Used for the Piloting Step

	Strongly Agree	Agree	Disagree	Strongly Disagree
1. It is difficult for me to follow the speech if there are too many gaps, hesitations, and breakdowns. FLUENCY				
2. It is easy for me to understand the overall message if the speech is fluent enough. FLUENCY				
3. It is difficult for me to understand any variations in accent except for my own. PRONUNCIATION				
4. It is easy for me to understand the overall message of the speech by the help of other components even if the accent may sound different to me. PRONUNCIATION				
5. It is difficult for me to understand a speech well without proper usage of speech inflections. PRONUNCIATION				
6. It is difficult for me to understand the overall message even if there are mispronunciations in a speech. PRONUNCIATION				
7. It is difficult for me to understand an accented speech. PRONUNCIATION				

8. It is difficult for me to understand the message if improper words are used. VOCABULARY				
9. It is easy for me to understand a speech even if some small words are missing. VOCABULARY				
10. It is easy for me to understand a speech with grammatical, phonetical or fluency problems because I am used to this kind of speech. LISTENERS' EFFECT				
11. It is easy for me to focus on the overall message of the speech rather than any kind of mistakes. RATERS' EFFECT				
12. It is easy for me to understand variations in pronunciation as I am used to different accents. RATERS' EFFECT				
13. It is difficult for me to understand the message of an accented speech as I am not used to hearing different accents. RATERS' EFFECT				
14. It is easy for me to understand any kind of variations in speech as I usually experience such situations. RATERS' EFFECT				
15. It is difficult for me to understand the overall message of a speech since I usually focus on				

individual components such as grammar, pronunciation, fluency or vocabulary. RATERS' EFFECT				
16. It is easy for me to ignore the mistakes in a speech as long as I understand the message. RATERS' EFFECT				
17. It is easy for me to understand a descriptive speech thanks to the variations in pitch and tone. TASK EFFECT				
18. It is easy for me to follow communicative tasks rather than monologues. TASK EFFECT				
19. It is easy for me to understand the overall message of the speech by the help of contextual clues. TASK EFFECT				
20. It is not difficult for me to understand a speech with grammar mistakes if it is fluent enough. GRAMMAR				
21. It is easy for me not to focus on little grammar mistakes if I understand the overall message of the speech. GRAMMAR				
22. It is difficult for me to understand a speech if it is full of grammar mistakes. GRAMMAR				

APPENDIX I: Scale after the Main Administration (Native Raters)

1. It is easy for me to understand a descriptive speech thanks to the variations in pitch and tone. TASK EFFECT
2. It is easy for me to follow communicative tasks rather than monologues. TASK EFFECT
3. It is easy for me to understand the overall message of the speech by the help of contextual clues. TASK EFFECT
4. It is easy for me to focus on the overall message rather than any kind of mistakes. UNDERSTANDING THE OVERALL MESSAGE
5. It is easy for me not to focus on little grammar mistakes if I understand the overall message. UNDERSTANDING THE OVERALL MESSAGE
6. It is easy for me to understand a speech with grammatical, phonetical or fluency problems because I am used to this kind of speech. UNDERSTANDING THE OVERALL MESSAGE
7. It is easy for me to ignore the mistakes in a speech as long as I understand the message. UNDERSTANDING THE OVERALL MESSAGE
8. It is difficult for me to understand any kind of mistakes in a speech as I don't usually experience such situations. RATERS' EFFECT
9. It is difficult for me to follow the speech if there are too many gaps, hesitations, and breakdowns. RATERS' EFFECT
10. It is difficult for me to understand a speech if it is full of grammar mistakes. RATERS' EFFECT
11. It is easy for me to follow a speech with grammar mistakes if I understand the overall message. RATERS' EFFECT

12. It is difficult for me to understand the overall message if there are mispronunciations in a speech. RATERS' EFFECT
13. It is difficult for me to understand the message if improper words are used. VOCABULARY
14. It is easy for me to understand a speech even if some small words are missing. VOCABULARY
15. It is easy for me to understand the overall message if the speech is fluent enough. LINGUISTIC PARALINGUISTIC STRUCTURES
16. It is difficult for me to understand the overall message of a speech since I usually focus on individual components such as grammar, pronunciation, fluency or vocabulary. LINGUISTIC PARALINGUISTIC STRUCTURES
17. It is difficult for me to understand an accented speech. PRONUNCIATION
18. It is difficult for me to understand the message of an accented speech as I am not used to hearing different accents. PRONUNCIATION
19. It is difficult for me to understand any variations in accent except for my own. PRONUNCIATION
20. It is easy for me to understand the overall message of the speech by the help of other components even if the accent may sound different to me. PRONUNCIATION
21. It is easy for me to understand variations in pronunciation/ accent. PRONUNCIATION
22. It is difficult for me to understand a speech well without proper usage of voice inflections. PRONUNCIATION

APPENDIX J: Consent Form

DEAR PARTICIPANT

In this study, the linguistic and contextual factors that may affect the comprehensibility of individuals who speak English as a foreign language are going to be investigated. For this reason, speech samples collected from the student participants during these tasks will be recorded and rated by the native and non-native participants. The results of the study will be used for academic purposes only, and the names of the participants will be kept anonymous. You have the right to refuse or stop participating in this research at any time. Please sign this consent form if you agree to the following:

- The purpose and objectives of this study were clearly explained to me.
- I was informed that the interview will be recorded.
- While documenting the results, I was informed that the researcher will use my data by keeping my name anonymous and that I have the right to allow this or not.
- I was informed that I have the right to opt out of participating in the research at any time.

I agree to participate in this study and have my voice recorded.	YES	NO
I consent to the use of my data by keeping my name confidential.	YES	NO
NAME (PARTICIPANT)	SIGNATURE	DATE