# Development and Validation of a Motivation Scale for English Listening

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**Abstract**
Motivation is crucial in the pace and success of language learning, and the effect of motivation on language learning has been extensively studied. Many scales have been developed to measure the motivation levels of the students. However, there are a limited number of studies conducted to specifically measure the motivation towards English language listening in the EFL context. Motivation has become an important factor that increases success in listening in terms of metacognitive control of listening processes and comprehension outcomes. This study aims to develop a motivation scale specifically for assessing English listening skills among secondary school students. A 25-item questionnaire with five sub-factors has been developed as a result of an exploratory factor analysis of the responses provided by a sample of 294 Turkish secondary school students. Sub-factors have been named as "effort," "self-confidence," "travel and friendship," "unwillingness," and "lack of interest." These factors explain 56.938% of the total variance. Cronbach Alpha value of the scale is 0.898. The values of item-total and item-remaining correlation are significant ($p < 0.01$). Moreover, the item discrimination value obtained from the difference between mean points of 27% of the lower and upper groups is significant. Confirmatory factor analysis shows that the goodness of fit indexes is acceptable (RMSEA=0.047; AGFI=0.86; SRMR=0.060; CFI=0.91; NNFI=0.89, $\chi^2$/sd 1.55). The data also revealed evidence of the reliability and validity of the instrument. The potential uses of the questionnaire and implications for further research are discussed.

**Keywords:** Construct validity, Listening, Motivation, Scale development

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## Introduction

Listening in a foreign language has always been a neglected skill (Flood et al., 2003), as it is considered a skill that can be developed without assistance (Osada, 2004). However, the researchers have proven that listening skills could also be developed through using effective listening tactics, strategies, etc. (Pourhosein Gilakjani & Ahmadi, 2011; Zhang, 2007; Nga Thi, 2015; Nowrouzi et al., 2014; Kassem, 2015), and foreign language acquisition can be improved and accelerated through increasing the motivation levels of the students (Goctu, 2016; Kamaeva et al., 2022). Therefore, teachers should help their students improve and implement listening strategies according to their needs, lacks, and aims. Motivation towards language learning can be increased through appropriate teaching methods and techniques.

Through the students' eyes, listening is still one of the most challenging skills to master (Alzamil, 2021; Vandergrift & Goh, 2012). If teachers want their students to be successful in foreign language learning and help them in the listening process, they need to identify what kind of problems students have and offer solutions to these problems to eliminate those (Bagheri & Karami, 2014). Likewise, it is crucial to determine the levels of motivation towards English language listening.

Although there are many factors underlying the success of language learners, motivation is likely one of the variables for second language listening proficiency. The importance of motivation for successful L2 learning cannot be overestimated (Gardner, 1985; Anjomshoa & Sadighi, 2015; Mitu, 2019; Norris-Holt, 2020). Even those with the greatest abilities cannot achieve long-term objectives without enough motivation. In the same vein, effective instruction and suitable curricula alone are insufficient to guarantee student success (Guilloteaux & Dörnyei, 2008). It is believed that listening involves complex cognitive processes, affective processes (such as the motivation to pay attention to those messages), and behavioral activities (Bodie, 2013). Hence, it is significant to understand the motivational behaviors of language learners.

For this reason, teachers should know the students' motivation levels and then shape the listening activities accordingly. As of this writing, no valid and reliable instrument exists that measures secondary school students' motivation for English listening. Such an instrument is crucial to be developed since motivation is one of the important affective factors directly related to language learning. Therefore, this study aims to develop a scale that measures secondary school students' motivation levels for English listening.

### Background Literature

Particularly in the classroom, motivation is crucial to the success and speed of learning a second or foreign language. Motivation is defined as a reason for taking a specific action. It is the effort one is prepared to put in to accomplish a specific goal. It also depends on how long someone can continue to do a particular task (Dörnyei & Ushioda, 2011). According to Dörnyei (1998), the main driving force behind starting a second language is motivation and then continues to be the impetus to continue the protracted and frequently frustrating learning process. The role of motivation in second language learning has been extensively studied, but few studies have been carried out with regard to the relationship between language learning motivation and second language listening. However, motivation is a complex and multifaceted construct. Students' motivation depends on a variety of elements, including the importance they place on a task, how successful they expect to be, whether they believe they have what it takes to succeed, and what they attribute to their success or failure on the assignment (Vandergrift, 2005). In addition, motivation, a dynamic concept, is affected by factors such as teacher, assignments, curriculum, students, exams, classroom environment, and social experiences. Social and personal experiences such as meeting people from different countries, going abroad, and studying abroad can effectively motivate students. Teachers' encouraging behaviors, personalities, interest in the lesson and students, skills, and teaching methods can also influence students' motivation (Lai & Ting, 2013). In most cases, more than one factor affects the source of the motivation level.

Motivation was primarily viewed as a relatively consistent learner feature throughout the first three decades of research on motivation and foreign language learning. Initially, motivation was based on beliefs about the target language community and a desire to learn a foreign language, according to Gardner's socio-educational model (which was created to explain foreign language learning in the classroom). Two orientations (reasons for learning a foreign language) were proposed by this model: an integrative orientation for communicating with the target language group and an instrumental orientation with the aim of more practical advantages such as career advancement in learning a new language (Vandergrift, 2005). From the 1990s onwards, motivation began to be seen as a more dynamic and cognitive-based factor. This understanding sees motivation as a constantly evolving structure, subject to various internal and external influences that the student encounters (Dörnyei, 2001). This new

understanding of motivation has made it possible to explore the connections between motivation and other characteristics of language acquisition behavior typically seen in classroom settings (Crookes & Schmidt, 1991). Beyond the classroom, within the framework of self-determination theory, motivation is explained under three types of orientations: amotivation, extrinsic motivation, and intrinsic motivation, ranging from weak to more powerful.

Students who don't see a connection between their acts and the results of their efforts exhibit a lack of motivation. Unmotivated language learners believe that their time spent learning a foreign language is being wasted. They don't value learning languages, don't believe they can do it, and don't expect to succeed (Ryan & Deci, 2000). The symptoms of a lack of motivation, which include disconnection, passive acceptance, and indifference, are frequently related to "learned helplessness" (Vandergrift, 2005). The strongest type of motivation that can promote learning and accomplishment, according to the majority of research, is intrinsic motivation. According to Ryan and Deci (2000), there are various sorts of motivation depending on various causes or goals that motivate behavior. The most fundamental distinction is between extrinsic and intrinsic motivation, which relates to doing something because it results in a separate outcome as opposed to doing something because it is intrinsically fascinating or enjoyable.

The term "intrinsic motivation" refers to internal elements like enjoyment and self-satisfaction. Intrinsic motivation arises for an individual only for activities that arouse intrinsic interest (Ryan & Deci, 2000). Deci and Ryan (1985) claim that intrinsic motivation is founded on natural desires for self-awareness and competence. Vallerand (1997) expanded the autonomy dimension by dividing intrinsic motivation into three sub-dimensions. First, intrinsic motivation is the motivation to perform an action because it makes one feel good about learning, discovering new information, and expanding one's knowledge. Taking pleasure in learning about French-speaking individuals and their way of life can be an example. Second, in intrinsic motivation, achievement refers to the sensation of attempting to undertake a task or achieve a goal. For example, the emotions experienced when understanding a difficult idea in French. The third is motivation based on feelings experienced during task completion, such as enjoyment, excitement, and aesthetic appreciation (e.g., the enjoyment of hearing French spoken by French speakers, for instance) (Vandergrift, 2005). Extrinsic motivation, contrasting with intrinsic motivation, refers to engaging in an activity purely for its own sake rather than its practical benefits (Ryan & Deci, 2000). Extrinsically motivated activities differ from intrinsically motivated behaviors in that they are carried out in order to attain a specific goal, such as receiving a reward or avoiding punishment (Noels et al., 2000).

Motivation for listening English can be expressed as the feeling of willingness to listen or listening activity. It motivates the person to listen and creates a driving force in listening comprehension (Dölek & Yıldırım, 2021). Listening is often one of the areas where students have difficulty in the process of learning a foreign language. For example, according to Zeng's (2007) study, most of the students stated that they could not cope with speaking speed while listening, could not recognize the words they knew before, and could not understand the words one by one. As a result, they failed because they could not make sense of the text harmoniously (Santos & Graham, 2018, p. 38). The difficulties experienced by the listeners can be influenced by more than one factor. In China, Wang and Renandya (2012) asked 301 students and 30 teachers with a 38-item scale about the reasons for the difficulties experienced in listening. They classified these difficulties into five basic categories. These are text-related factors (speech speed, word load, etc.), process-related factors (immediate forgetting of what was heard, etc.), listener-related factors (anxiety, motivation, etc.), activity-related factors (type of post-listening activities, etc.), and environmental factors (inability to obtain listening materials, etc.) (Santos & Graham, 2018, p. 38). Motivation levels of the students can hinder or accelerate the success of listening English. High awareness in listening processes is related to high motivation intensity. There is an increasing correlation between three different levels of motivation (from amotivation to extrinsic motivation and from extrinsic motivation to intrinsic motivation) and listening strategies and metacognitive awareness. Students with low motivation may have low self-confidence and self-efficacy levels towards foreign language listening. Students with high motivation are likely to engage in metacognitive listening behaviors (Noels et al., 2000).

According to Clément & Kruidenier's research (1983), all learner groups were found to share the following four orientations: (1) travel; (2) friendship; (3) knowledge; and (4) instrumental orientations. The desire to interact with and identify with members of the L2 group was formerly thought to be crucial for L2 acquisition, but it now seems that this desire is only relevant in certain sociocultural circumstances and is not essential to the motivational process (Noels et al., 2000). However, further research on listening and the motivation towards listening English is necessary to understand the common factors behind the motivation of secondary school students. It is needed to have a scale to determine the motivation level of students towards English listening. In this regard, the goal of this

study is to create a scale that measures how motivated secondary school students are to listen to English. It is thought that this scale will contribute to the teachers arranging the learning environments and listening activities according to the level of students' motivation towards listening.

*Listening Instruments*

Various listening scales were developed for several aims. Some of the aims can be listed as developing a construct for listening, measuring perceived listening ability, and identifying the effects of listening ability on something else (Fontana et al., 2015). Current listening scales concentrate on active listening, listening styles, listening competency, and listening strategies. Mishima et al. (2000) developed an active listening attitude scale for health workers, whereas an active empathic listening measure was developed by Drollinger et al. (2006) for salespeople, as well as by Bodie (2011). Active listening means repeating a paraphrase of the speaker's message, engaging in moderate-to-active nonverbal dialogue, and asking questions as necessary (Weger et al., 2014). Listening styles questionnaires/inventories have also been developed by Watson et al. (1995); Pearce et al. (2003); and Bodie et al. (2013). Moreover, there are also some other scales that measure listening competency, such as Mickelson and Welch (2013) and Ford et al. (2000). The scale developed by Vandergrift and her friends (2006) is the most well-known for assessing the L2 listeners' metacognitive awareness. Although existing scales are related to assessing the listening traits of teachers (e.g., Gilson et al., 2022; Ellis, 2000) and students (e.g., Tsang, 2022; Mahmoud & Taha, 2022), this scale focuses on the motivation levels of the secondary school students specifically for listening English.

**Method**

A multilevel mixed design, one of the mixed techniques, was chosen since the study's aim is to develop a scale to assess secondary school students' motivation for English listening. There are two types of multilevel mixed designs: parallel and sequential. These designs involve mixing through many layers of analysis, whereby quantitative or qualitative data are processed and blended to address pertinent elements of the same research issue or concerns related to it (Teddlie & Tashakkori, 2009, p. 136). Prior to developing the scale items for this study, interviews and literature research were carried out. In this regard, a sequential design was employed when gathering information from the literature and interviews.

**Participants**

The study group comprised 140 male (47.6%) and 154 female (52.4%) secondary school students studying in Afyonkarahisar. In this study, the sample size was appropriate for factor analysis (n=294). The number of items is 54. According to Gorsuch (1983), the minimum number of subjects for each variable in a factor analysis is five (Thompson, 2004, p. 24). 72.8% of the students stated that they were at a moderate level in listening comprehension. 33% of them had private English lessons before. 76.9% of them stated that learning English was important for them. 73.8% of them stated that their family supported them in learning English. Table 1 lists the sampling strategy and characteristics of the samples that were used.

Table 1. Data collection tools, sampling method, and samples

| Data Collection Tool | Sampling Method | Samples |
|---|---|---|
| Interview Form | Convenience Sampling | 41 secondary school students |
| Literature research | Convenience Sampling | Articles and books |
| Pre-test application (for item comprehensibility) | Convenience Sampling | 7 secondary school students |
| Pilot test application (for item analysis) | Convenience Sampling | 294 secondary school students |

Open-ended questions were asked to secondary school students about their motives and attitudes towards learning English to generate the items. Open-ended questions were asked to 41 secondary school students. Secondly, the literature on motivation for learning a foreign language and other related scales were examined to form the items. Key concepts were defined according to the literature. After the item pool was created, seven secondary school students shared their opinions on the items' readability. After making the appropriate adjustments, the 54-item scale was applied to 294 secondary school students in Afyonkarahisar in the first term of 2021-2022.

**Ethical Approval**
Ethical permission was obtained from Afyonkarahisar Governorship, Provincial Directorate of National Education, with the letter dated 21/01/2020 and numbered 81576613-10.06.02-E.1563890.

## Findings

To create a motivation scale for English listening (MSEL), a literature analysis (Vandergrift, 2005; Navarroza, 2013; Papi & Teimouri, 2014; Asmali, 2017; Chon & Shin, 2019) was conducted to decide on the items to be included in the item pool. Interviews were held with the students to develop the scale for secondary school students. Qualitative data were collected from 41 secondary school students. These data have guided the creation of keywords. The following questions were asked to the students during the interviews:

In English lessons:
- What are your reasons for learning English?
- What do you do to be successful in listening?
- What qualities do you need to have to be successful in listening activities?
- What are your weaknesses when listening to English?
- What is your attitude towards learning English? (Being positive, eager, not interested, etc.)
- What motivates you to speak English with foreign people?

In light of the data obtained from these interview questions and the literature, the items included in the measurement tool were created to determine students' motivation levels for listening to English. The item pool consists of a total of 62 items. This item pool was presented for expert opinion, and opinions were received from five experts. This measurement tool was finalized in line with their opinions. Twenty-six items were amended because of lack of clarity; seven items were deleted since they were similar to others; one was deleted since it was not related to listening skills; and six were deleted since they were not related to motivation at all.

### Pre-test Application

Before the pilot application of the scale, a pre-application was carried out with seven students to determine the intelligence of the items. After the pre-application, twelve items were corrected regarding language and expression problems.

### Exploratory Factor Analysis

In factor analysis, the distribution of the data should be normal. The Barlett test is used to verify if the data come from a multivariate normal distribution (Tavşancıl, 2010, p. 51). The best method for determining whether the variances are equal is the Bartlett test. It analyzes whether the variances are homogeneous (Singh, 2007, p. 102). To evaluate if the data were appropriate for factor analysis, the Kaiser-Meyer-Olkin (KMO) coefficient and Barlett sphericity test were utilized (Büyüköztürk, 2012, p. 126). For factor analysis, the data were appropriate, as shown by the KMO result of the items, which was 0.927, and the Barlett test value, which was 0.00 (x2: 7.59; sd: 1431). For each factor, there are enough samples if the KMO is greater than.70 (Leech, Barrett & Morgan, 2005, p. 80). Since the results of the study's KMO and Barlett tests were appropriate, factor analysis was performed.

Factor loads below 0.30 are regarded as low, whereas factor loads of 0.40 or higher are considered high (Leech et al., 2005, p. 83). In this study, subtraction of factors through factor loadings less than 0.40 was considered. For this reason, eight items (No 36, No 38, No 33, No 16, No 35, No 53, No 9, and No 30) were removed from the scale. Items need to be heavily loaded on one factor, whereas being lightly loaded on the other. It is expected that there will be a minimum difference of 0.10 between two high load values (Büyüköztürk, 2012, p. 124). This rule was also considered to determine the factors. Accordingly, 15 items (No 54, No 37, No 49, No 31, No 52, No 6, No 11, No 13, No 34, No 12, No 8, art. 4, No 7, No 32, and No 42) were excluded from the scale. The Varimax method was used for rotation. After the items in the last dimension, which consisted of two items, were removed, the scale took the form of a 5-factor and 29-item scale. As in Table 4, 5 factors explain 56.938% of the total variance, and items with an eigenvalue (initial eigenvalue) greater than 1.00 were included in the scale. Table 2 shows that the variance is explained by the first factor by 29.052%, the second factor by 12.558%, the third factor by 6.168%, the fourth factor by 5.227%, and the fifth factor by 3.933%.

Table 2. Explanation of the total variance of the motivation scale for English listening (MSEL)

| Items | Initial Eigen values | | | Subtraction of the Sum of Squared Loads | | | Rotation of the Sum of the Squared Loads | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| | Total | Explained Variance % | Total Variance % | Total | Explained Variance % | Total Variance % | Total | Explained Variance % | Total Variance % |
| 1 | 8,425 | 29,052 | 29,052 | 8,425 | 29,052 | 29,052 | 5,133 | 17,700 | 17,700 |
| 2 | 3,642 | 12,558 | 41,609 | 3,642 | 12,558 | 41,609 | 3,100 | 10,691 | 28,391 |
| 3 | 1,789 | 6,168 | 47,777 | 1,789 | 6,168 | 47,777 | 3,051 | 10,522 | 38,913 |
| 4 | 1,516 | 5,227 | 53,005 | 1,516 | 5,227 | 53,005 | 2,756 | 9,504 | 48,417 |
| 5 | 1,141 | 3,933 | 56,938 | 1,141 | 3,933 | 56,938 | 2,471 | 8,520 | 56,938 |
| 6 | ,988 | 3,409 | 60,346 | | | | | | |
| 7 | ,866 | 2,985 | 63,331 | | | | | | |
| 8 | ,756 | 2,608 | 65,939 | | | | | | |
| 9 | ,732 | 2,524 | 68,463 | | | | | | |
| 10 | ,683 | 2,356 | 70,819 | | | | | | |
| 11 | ,674 | 2,323 | 73,142 | | | | | | |
| 12 | ,637 | 2,196 | 75,338 | | | | | | |
| 13 | ,636 | 2,194 | 77,532 | | | | | | |
| 14 | ,607 | 2,093 | 79,626 | | | | | | |
| 15 | ,551 | 1,900 | 81,526 | | | | | | |
| 16 | ,522 | 1,801 | 83,326 | | | | | | |
| 17 | ,509 | 1,755 | 85,082 | | | | | | |
| 18 | ,461 | 1,588 | 86,669 | | | | | | |
| 19 | ,444 | 1,532 | 88,202 | | | | | | |
| 20 | ,437 | 1,507 | 89,709 | | | | | | |
| 21 | ,425 | 1,464 | 91,173 | | | | | | |
| 22 | ,398 | 1,374 | 92,547 | | | | | | |
| 23 | ,363 | 1,252 | 93,799 | | | | | | |
| 24 | ,355 | 1,225 | 95,024 | | | | | | |
| 25 | ,336 | 1,160 | 96,184 | | | | | | |
| 26 | ,320 | 1,105 | 97,289 | | | | | | |
| 27 | ,284 | ,980 | 98,269 | | | | | | |
| 28 | ,270 | ,932 | 99,202 | | | | | | |
| 29 | ,232 | ,798 | 100,000 | | | | | | |

Table 3 shows the components of each item with the value of factor loading. According to Table 3, the factor loads of 29 items in the scale range from 0.50 to 0.75. The Cronbach Alpha value of the 29-item scale was found to be α=0.898. The reliability of the test results is demonstrated by the fact that this number must be 0.70 or above (Büyüköztürk, 2012, p. 171).

Table 3. Rotated component values of the motivation scale for English listening (MSEL)

| Items | Components | | | | |
|-------|-----|-----|-----|-----|-----|
|       | 1   | 2   | 3   | 4   | 5   |
| No 19 | ,753 |     |     |     |     |
| No 18 | ,737 |     |     |     |     |
| No 5  | ,715 |     |     |     |     |
| No 2  | ,669 |     |     |     |     |
| No 20 | ,646 |     |     |     |     |
| No 21 | ,633 |     |     |     |     |
| No 22 | ,601 |     |     |     |     |
| No 1  | ,566 |     |     |     |     |
| No 24 | ,550 |     |     |     |     |
| No 23 | ,507 |     |     |     |     |
| No 44 |     | ,793 |     |     |     |
| No 43 |     | ,740 |     |     |     |
| No 46 |     | ,721 |     |     |     |
| No 47 |     | ,634 |     |     |     |
| No 45 |     | ,611 |     |     |     |
| No 51 |     |     | ,739 |     |     |
| No 14 |     |     | ,729 |     |     |
| No 15 |     |     | ,684 |     |     |
| No 50 |     |     | ,621 |     |     |
| No 17 |     |     | ,582 |     |     |
| No 25 |     |     |     | ,733 |     |
| No 29 |     |     |     | ,709 |     |
| No 27 |     |     |     | ,706 |     |
| No 26 |     |     |     | ,706 |     |
| No 28 |     |     |     | ,634 |     |
| No 39 |     |     |     |     | ,778 |
| No 40 |     |     |     |     | ,772 |
| No 41 |     |     |     |     | ,660 |
| No 48 |     |     |     |     | ,610 |

Table 4 presents the results of the t-test for the 27% lower and upper groups, the total correlation values, and the remaining correlation values of the items. According to Table 4, No 25, No 29, No 41, and No 48, whose item-total correlation values are below 0.33, have been omitted from the scale. The item-total correlation shows the consistency between each item and the sum of the remaining items. The 0.33 criterion can be used when deciding on which item to save or remove. A value of 0.33 indicates that approximately 10% of the variance in the scale is explained by the item (Ho, 2006, p. 243). A different use of item analysis is the comparison of the mean scores given to each item by the extreme groups (upper group-lower group), when the group is sorted from the highest score to the lowest score in accordance with the total scores acquired from the scale (Tavşancıl, 2010, p. 55). The differences between the item mean scores of the lower 27% and upper 27% groups based on the total scores of the test are significant ($p < 0.01$). This shows the test's internal consistency (Büyüköztürk, 2012, p. 171).

Table 4. The MSEL's item analysis (validity-reliability results)

| Items | Item-total Correlation | Item-remaining Correlation | t-test Results of 27 % of Lower and Upper Groups | p value |
|---|---|---|---|---|
| No 19 | ,556 | ,593 | 10,452 | 0,000 |
| No 18 | ,562 | ,603 | 10,359 | 0,000 |
| No 5 | ,454 | ,501 | 8,840 | 0,000 |
| No 2 | ,610 | ,644 | 12,233 | 0,000 |
| No 20 | ,474 | ,519 | 7,646 | 0,000 |
| No 21 | ,565 | ,607 | 10,452 | 0,000 |
| No 22 | ,583 | ,623 | 11,424 | 0,000 |
| No 1 | ,543 | ,579 | 10,231 | 0,000 |
| No 24 | ,556 | ,596 | 10,688 | 0,000 |
| No 23 | ,490 | ,540 | 10,301 | 0,000 |
| No 44 | ,400 | ,459 | 8,339 | 0,000 |
| No 43 | ,437 | ,489 | 9,302 | 0,000 |
| No 46 | ,512 | ,561 | 10,885 | 0,000 |
| No 47 | ,534 | ,580 | 11,977 | 0,000 |
| No 45 | ,523 | ,570 | 10,225 | 0,000 |
| No 51 | ,512 | ,561 | 11,063 | 0,000 |
| No 14 | ,457 | ,517 | 9,492 | 0,000 |
| No 15 | ,631 | ,671 | 14,782 | 0,000 |
| No 50 | ,428 | ,490 | 8,500 | 0,000 |
| No 17 | ,648 | ,686 | 15,446 | 0,000 |
| No 25 | ,186 | ,253 | 3,413 | 0,001 |
| No 29 | ,297 | ,363 | 6,183 | 0,000 |
| No 27 | ,449 | ,509 | 9,931 | 0,000 |
| No 26 | ,367 | ,433 | 7,269 | 0,000 |
| No 28 | ,426 | ,483 | 9,459 | 0,000 |
| No 39 | ,358 | ,420 | 8,889 | 0,000 |
| No 40 | ,382 | ,444 | 11,351 | 0,000 |
| No 41 | ,314 | ,386 | 7,739 | 0,000 |
| No 48 | ,280 | ,351 | 6,155 | 0,000 |

The names of the factors are determined by the literature and the content of the items. The 1st factor is named "effort,"; the 2nd factor is named "self-confidence,"; the 3rd factor is named "travel and friendship," the 4th factor is named "unwillingness," and the 5th factor is named "lack of interest." In Table 5, the items of the MSEL are given together with its sub-dimensions.

Table 5. Motivation scale for English listening (MSEL)

| Items | Varimax Factor Load |
|---|---|
| 1st Factor: Effort | |
| No19  I listen carefully to answer questions correctly, like my friends. | ,753 |
| No18  I listen carefully to answer the questions in the listening exercises correctly. | ,737 |
| No5   I feel happy when I comprehend what I am listening to. | ,715 |
| No2   I try to understand all the English words I hear. | ,669 |
| No20  I want to be the most successful among my friends in listening exercises. | ,646 |
| No21  I think that my success in English listening will increase thanks to listening exercises. | ,633 |
| No22  I practice the pronunciation of words for better listening. | ,601 |
| No1   I make an effort to comprehend what I am listening to. | ,566 |
| No24  Knowing grammar rules is not enough to be successful in English; I must also be good at listening. | ,550 |
| No23  I am more successful in listening when I put myself in the speaker's shoes while doing listening exercises. | ,507 |
| 2nd Factor: Self-Confidence | |
| No44  I am confident that I can understand difficult-listening texts. | ,793 |
| No43  I feel confident while answering questions about listening. | ,740 |
| No46  I am confident in understanding the main idea of the text I am listening to. | ,721 |
| No47  I feel comfortable during listening exercises. | ,634 |
| No45  I feel confident in understanding the other person when communicating in English. | ,611 |
| 3rd Factor: Travel and Friendship | |
| No51  I attach importance to listening to English to travel to different countries. | ,739 |
| No14  I attach importance to listening to English to study abroad in the future. | ,729 |
| No15  I attach importance to listening to English to speak English with people from different countries. | ,684 |
| No50  I attach importance to listening to English so that I can play games with children from different countries. | ,621 |
| No17  I attach importance to listening to English if I need it one day. | ,582 |
| 4th Factor: Unwillingness | |
| No27  I don't want to listen because listening exercises are difficult for me. | ,706 |
| No26  While listening to an English text, when I do not understand the first sentence, I do not listen to the next one. | ,706 |
| No28  No matter how hard I try, I fail to listen. | ,634 |
| 5th Factor: Lack of Interest | |
| No39  I think listening exercises are unnecessary. | ,778 |
| No40  I am not interested in listening exercises. | ,772 |

The means, standard deviations, and correlation coefficients for the MSEL's sub-factors are shown in Table 6.

Table 6. Means, standard deviations, correlation coefficients for the sub-factors of MSEL

| Factor | N | X | SD | 1st Factor | 2nd Factor | 3rd Factor | 4th Factor | 5th Factor |
|---|---|---|---|---|---|---|---|---|
| 1st Factor (Effort) | 294 | 40.52 | 7.54 | 1 | .554 | .648 | .269 | .197 |
| 2nd Factor (Self-confidence) | 294 | 17.17 | 4.65 | .554 | 1 | .515 | .173 | .077 |
| 3rd Factor (Travel Friendship) | 294 | 18.44 | 4.98 | .648 | .515 | 1 | .156 | .165 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 4<sup>th</sup>Factor (Unwillingness) | 294 | 10.44 | 3.31 | .269 | .173 | .156 | 1 | .505 |
| 5<sup>th</sup>Factor (Lack of Interest) | 294 | 7.59 | 2.37 | .197 | .077 | .165 | .505 | 1 |

Table 6 shows that there is a significant and moderate relationship between the first, second, and third factors. A correlation coefficient between 0.70 and 1.00 implies a high level; a value between 0.70-0.30 implies a moderate level, and a value between 0.30-0.00 implies a low level of relationship (Büyüköztürk, 2012, p. 32). However, since the fourth and fifth factors are composed of negative items, the relations between the other factors are low. Finally, MSEL consists of twenty-five items, including five negative items. Participants answered each Likert-type statement on a 5-point scale (i.e., 1-never do, 2-rarely do, 3-occasionally do, 4-often do, 5-always do).

**Confirmatory Factor Analysis**

Confirmatory factor analysis (CFA) verifies theories based on previously accepted factors or examines hypotheses (Urbina, 2004, p. 174). Items in the factor "effort" were presented as items a1–a10; items in the factor "self-confidence" were presented as items b1–b5; items in the factor "travel and friendship" were presented as items c1–c5; items in the factor "unwillingness" were presented as items d1–d3; and items in the factor "lack of interest" were presented as items e1–e2. CFA was performed by taking into account the answers of 250 samples. According to Harrington (2009, p. 46), a sample size greater than 200 is a likely acceptable figure for many models. This model's subscale and combined scale reliability coefficients were determined and tested using CFA.



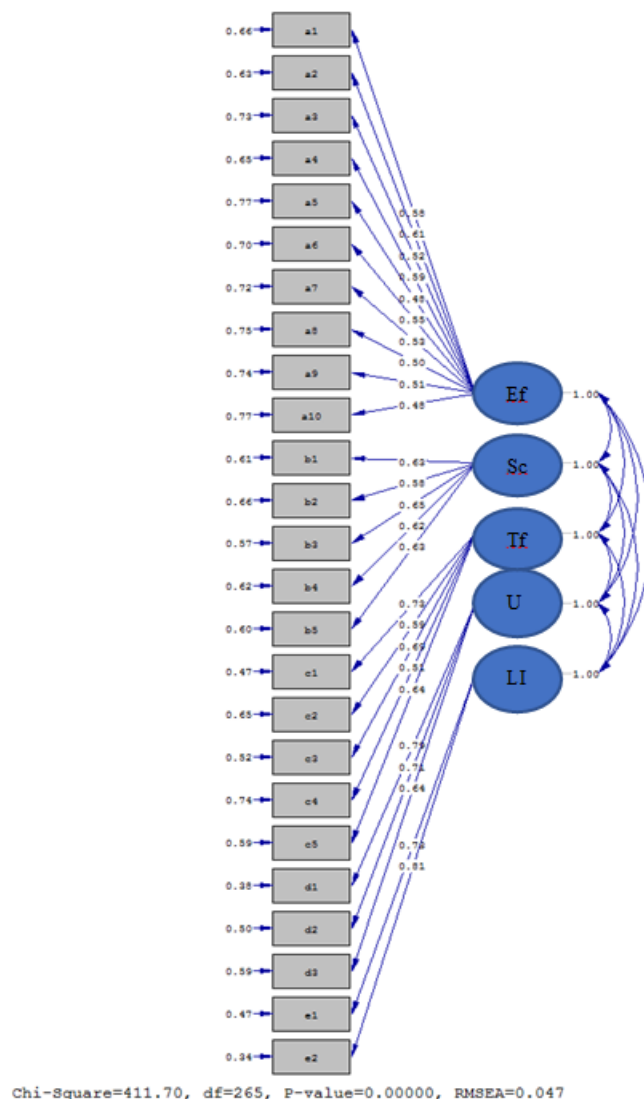Chi-Square=411.70, df=265, P-value=0.00000, RMSEA=0.047

Figure 1. Error variances in the path diagram of the MSEL (1st Level)

The t values of the latent variables that explain the observed variables are given on the arrows in Figure 1 along with the path diagram of the MSEL. Schermelleh-Engel et al. (2003) state that t values greater than 2.58 are significant at the.01 level, given in Table 7. At the.01 level, the parameter estimations of the MSEL are significant. The SD value is 265 and the chi-square value is 411.70. Therefore, $\chi^2/sd$ is 1.55. In large samples, a ratio of less than 3 indicates a high goodness of fit index (Çokluk et al., 2016). The RMSEA value is 0.047. A good fit is defined as RMSEA values below 0.07 (Stieger, 2007).

The error variances for the variables shown in Figure 1 were investigated, and it was found that they were within acceptable bounds (Çapık, 2014). According to Table 7, the $\chi^2/df$ ratio is 1.55. This value shows that there is a good goodness of fit value. The value of RMSEA is .047. According to Brown (2015), the RMSEA value should be near to or below 0.06. If this number is higher than.90, the model has a satisfactory goodness of fit value (Kline, 2011). The SRMR value is .060, and the AGFI value is .86.

Table 7. Goodness of fit index values of the structural model of the MSEL

| Goodness of Fit Indices | Values of the Structural Model of MSEL | Good Goodness of Fit Values | Acceptable Goodness of Fit Values |
|---|---|---|---|
| $\chi^2/df$ | 1.55 | $0 \leq \chi^2/df \leq 2$ | $2 < \chi^2/df \leq 3$ |
| RMSEA | .047 | $0 \leq RMSEA \leq .05$ | $.05 < RMSEA \leq .08$ |
| Comparative Fit Index (CFI) | .91 | $.97 \leq CFI \leq 1.00$ | $.95 \leq CFI < .97$ |
| Standardized RMR | .060 | $0 \leq SRMR \leq .05$ | $.05 < SRMR \leq .10$ |
| Goodness of Fit Index (GFI) | .88 | $.95 \leq GFI \leq 1.00$ | $.90 \leq GFI < .95$ |
| Adjusted Goodness of Fit Index (AGFI) | .86 | $.90 \leq AGFI \leq 1.00$ | $.85 \leq AGFI < .90$ |
| NNFI | .89 | $.97 \leq NNFI \leq 1.00$ | $.95 \leq NNFI < .97$ |

According to Table 7, these values are also between the acceptable goodness of fit values. It is seen that the GFI and NNFI values have a poor fit in the goodness of fit index. The goodness of fit value includes the $\chi^2/df$ ratio and RMSEA value, even if not all indices produce ideal results. Therefore, these results support the MSEL's factor structure. The error variances of the MSEL's second level are shown in Figure 2's path diagram.
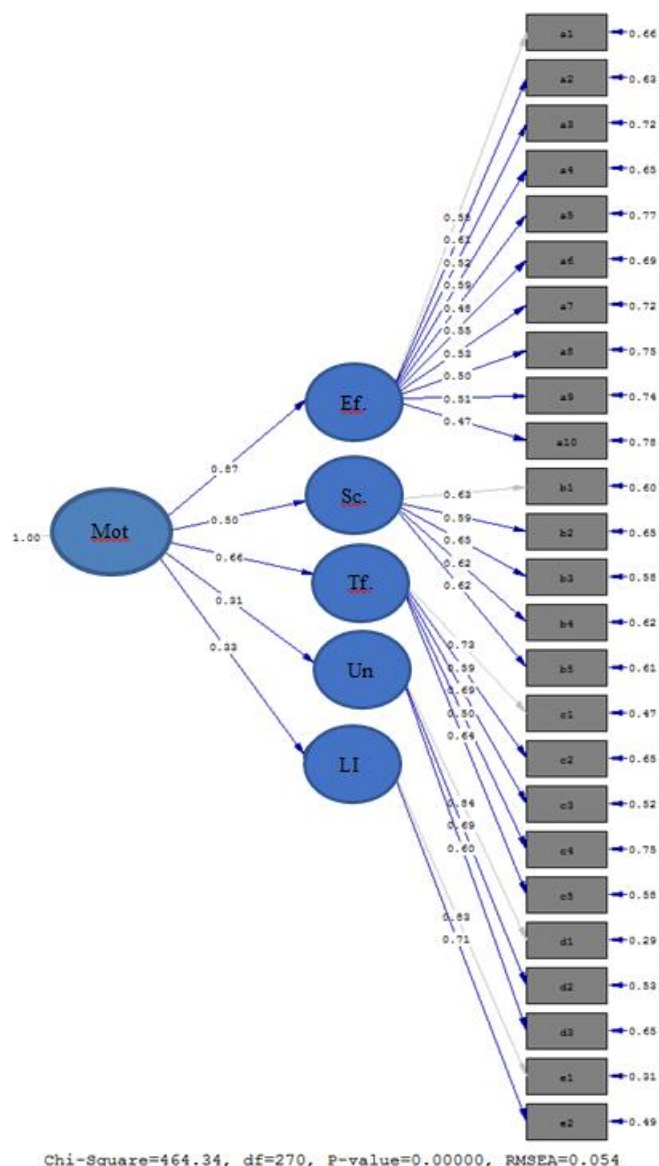
Figure 2. Error variances in the path diagram of the MSEL (2nd Level)

According to Figure 2, it can be seen that error variances at the 2nd level are within acceptable bounds (Çapık, 2014).

**Results and Discussion**

This study aimed to find out which factors explain secondary school students' motivation for English listening. Therefore, the researchers developed an instrument that focuses on the motivation towards English listening. This study is significant as it specifically determines the motivation towards English listening, and there isn't any instrument specifically measuring the listening motivation towards FL. As a result of the exploratory and confirmatory factor analysis, the scale includes five sub-factors. Accordingly, the first factor (effort) consists of 10 items; the second factor (self-confidence) consists of 5 items; the third factor (travel and friendship) consists of 5 items; the fourth factor (unwillingness) consists of 3 items; and the fifth factor (lack of interest) consists of 2 items. Thus, the five factors explain 56.398% of the total variance. Confirmatory factor analysis was used to ensure that the factors identified by the exploratory factor analysis were accurate and the findings of the analysis supported the factor structure. Additionally, items developed after literature research were statistically validated.

According to Gardner (2010), motivation comprises three main parts. First, motivated language learners put forth an effort to accomplish their particular goal. One of the sub-factors of MSEL, also the main one, is "effort." In this

sub-factor, there are items related to careful listening to succeed, tries for understanding, and other actions for better listening. Language learners show great effort in learning the language, so the first sub-factor is named "effort" depending on the items. Second, they are also motivated by the desire to study that particular language. In our study, the sub-factor "unwillingness" represented the negative expression of desire since there were negative items in the scale clustered in this sub-factor. Third, the attitude towards learning a foreign language (FL) has a significant role in learning. Schiller and Dorner (2022) analyzed the most influential factors affecting the motivational behavior of older language learners, and they found that attitudes towards learning English as a FL and the goal specification were the most important predictors. In addition, when they used attitude toward learning a foreign language as the criteria variable, they discovered that the desire to learn English was the strongest predictor. In line with Schiller and Dorner's (2022) study, in our study, one of the sub-factors is related to the desire to listen to English, although stated in negative items such as unwillingness to listen, failure in listening, etc.

In parallel with the study of Tsang (2022), in foreign language listening, motivation, interest, linguistic self-confidence, and overall proficiency are rather strongly inter-correlated. Using the second language involves emotions of confidence, competence, and command (Rost, 2014). In our study, the scale has a sub-factor named "self-confidence," including the items related to being confident while listening, engaging in listening activities, and during communication in English. According to the study of Schiller and Dorner (2022), traveling abroad was also one of the main factors of instrumental motivation, as indicated in our study as one of the sub-factors called "travel and friendship." This sub-factor consisted of items indicating the reasons why it is important to listen to English in the scope of traveling and having friends from different countries. Studying abroad, practicing the language, and playing games with children are among these reasons.

**Conclusion**

In the scale development, the following steps were followed according to Carpenter's (2018) suggestions, shown in Table 8.

Table 8. Development of the MSEL

| Steps for Scale Development | | |
|---|---|---|
| 1. | Theory and Research | |
| a. | Conceptual definitions | Based on the literature, the most appropriate concepts related to motivation such as effort, enjoyment, individual development, success, interest, self-confidence, and feeling inadequate were determined. |
| b. | Possible dimensions | Potential dimensions and items such as intrinsic motivation, extrinsic motivation, and amotivation were determined according to the conceptual definitions in the light of the literature. Through interviews, open-ended questions were asked to secondary school students to determine their motivation for English listening. |
| c. | Item pool | For this scale, 62 items were used to create an item pool. |
| d. | Interviews and Feedback of the experts | Seven open-ended questions were asked to 41 secondary school students. When creating the scale's items, the researchers were guided by the answers to these questions. 62 items were examined by five experts once the item pool was generated. Afterwards, corrections were made to 25 items, and 8 items were removed from the scale. |
| e. | Application of pre-test | Seven secondary school students were given a pre-test to determine whether they had any language and expression issues. After this pre-test, corrections were made in twelve items. The content validity of the remaining items was checked based on the literature, and the scale was applied to 294 secondary school students (6th, 7th, and 8th graders) in Afyonkarahisar for pilot application. |
| 2. | Sampling Procedure | |
| | In this study, the sample size was appropriate for factor analysis (n=294). The number of items is 54. According to Gorsuch (1983), the minimum number of subjects for each variable in a factor analysis is five (Thompson, 2004, p. 24). | |
| 3. | Quality of the data | |

Missing data were checked and omitted from the scale. Also, the data with the same answer only was deleted.

4. Suitability of Data for Factor Analysis

The data were appropriate for factor analysis because the KMO result for the items was 0.927 and the Barlett test value was 0.00 significant (x2: 7.59; sd: 1431; p 0.01).

5. Explanatory Factor Analysis

The explanatory factor analysis was completed.

6. Factor Subtraction Methods

To make interpretation easier, the factoring technique principal component analysis was applied.

7. The Number of Factors

The factors with eigenvalues higher than one were taken into consideration.

8. Rotating Factors

The varimax method was used to carry out the rotating process.

9. Subtraction of the Items According to the Criterion

8 items with factor loading values below 0.40 were removed from the scale (Tabachnick & Fidell, 2007). It is expected that the difference between two high load values will be at least 0.10 (Büyüköztürk, 2012, p. 124). According to this rule, 15 items were removed from the scale. The 3$^{rd}$ and 10$^{th}$ items were omitted from the scale as it was thought that they weren't able to explain that factor well.

10. Results

The scale's Cronbach Alpha value is $\alpha$=0.898. Item-total correlation coefficient values are between .358 and .648. Four items whose total correlation coefficient values were below 0.33 were removed from the scale. The lower 27% and upper 27% groups, which were determined based on the test's overall scores, had significant differences in their item average scores ($p < 0.01$). According to the features of the items, factors were given names. The scale took its final form as a 25-item scale.

11. Confirmatory Factor Analysis (CFA)

CFA was carried out by taking into account the responses of 250 samples. At the .01 level, parameter estimations of the MSEL are significant. The chi-square value is 411.70 and the SD value is 265. Accordingly, $\chi$2/df is 1.55. The RMSEA value, 0.047, is considered acceptable.

MSEL can be used at the beginning of the FL lessons to measure the readiness levels or the motivation level of the secondary school students and can give a general evaluation of the students' orientations towards English listening. The results of the MSEL of the students can provide quantitative data for the teachers so that they can prepare the listening activities accordingly. Future research can concentrate more on the motivation factors of the students through the reflections of the students or the interviews with them. To investigate the difference in motivation levels by demographic and geographic background, other researchers may want to examine the construct validity and reliability of the MSEL with various subgroups of children from particular grade levels.

**Author (s) Contribution Rate**
NH and GO contributed equally to designing the method of this research. NH conducted the research and collected the data. NH and GO analyzed the data and created the figures. NH carried out the literature review and wrote the manuscript. GO edited the work and offered valuable insights. NH wrote the discussion and conclusion parts of the manuscript. All authors read and approved the final manuscript.

**Conflicts of Interest**
There are no conflicts of interest with the research, writing, or publication of this paper, as disclosed by the authors.

**Ethical Approval**
Ethical permission was obtained from Afyonkarahisar Governorship, Provincial Directorate of National Education, with the letter dated 21/01/2020 and numbered 81576613-10.06.02-E.1563890.

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