Revista Românească pentru Educație Multidimensională
ISSN: 2066-7329 | e-ISSN: 2067-9270
Covered in: Web of Sciences (WOS); EBSCO; ERIH+; Google Scholar; Index Copernicus; Ideas RePeC; Econpapers; Socionet; CEEOL; Ulrich ProQuest; Cabell, Journalseek; Scipio; Philpapers; SHERPA/RoMEO repositories; KVK; WorldCat; CrossRef; CrossCheck

2019, Volume 11, Issue 4, pages: 193-220 | doi:10.18662/rrem/166

Students' L2 Psychological and Phonological Listening Comprehension Difficulties Diagnostics

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Abstract: Listening is an integral part of communicative process and one of the most difficult skills to develop. The complexity of this concept leads to difficulties in defining it. Listening is viewed by scientists as a process, as a multidimensional construct, as a competency. It has the inner form and does not emerge in the outer plan. Such mechanisms of listening as mechanisms of perception, mechanisms of inner speaking, mechanisms of memory, mechanisms of speech segmentation, mechanisms of interpretation, anticipation mechanisms have been described in the article. To develop students' listening skills it is necessary to find out difficulties that they face while listening to a text in a foreign language. Listening comprehension difficulties have three sources: those connected with the listener, connected with the speaker and connected with outer factors. The following students' L2 listening comprehension difficulties have been found out: difficulties connected with a lack of students' knowledge about the world; insufficient communicative competence that consists of phonetic, lexical, grammatical, textual, sociocultural and functional aspects; psychological factors (inability to focus attention, listener's impatience to the interlocutor, not enough developed listening memory, low motivation); individual features of a student (individual cognitive features, age and personal interests, negative experience gained earlier while doing listening comprehension tasks); difficulties connected with incompetent text selection (mismatch between text complexity and level of students' listening comprehension development: high tempo, a lot of new words, new grammar structures, too saturated information content, difficult structure of the text, a lot of implications in the text for listening); outer factors (bad quality of the record, low or too high volume of sound, noise interference). A questionnaire for finding out individual students' psychological and phonological L2 listening comprehension difficulties has been created and recommendations on diminishing these difficulties have been offered.

Keywords: *listening comprehension difficulties; students' attention; listeners' patience; short-term memory; phonological competence.*

How to cite: Kharzhevska, O., Oleksandrenko, K., Peshkova, T., Pilishek, S., Rudoman, O., & Yakymchuk, Y. (2019). Students' L2 Psychological and Phonological Listening Comprehension Difficulties Diagnostics. *Revista Romaneasca pentru Educatie Multidimensionala, 11*(4), 193-220. doi:10.18662/rrem/166

Introduction

Listening is an essential part of communicative process. Scientists claim that listening takes up from 42% to 45% of communication time (Batsevych, 2004; Baskakova & Glukhov, 2008). Speaking comprises 32%, reading 15%, and writing 11% of communicative time (Batsevych, 2004). This means people usually listen more than speak. Listening can be either a part of a dialogue (one of the participants speaks and the second one listens to him/her, then they change their roles, or a separate kind of communicative activity (listening to radio and TV programs, lectures, audiobooks, concerts, etc). Students' learning activities, their effective communication, and their future professional activities are impossible without oral speech understanding. Listening is a difficult language skill for L2 (second language) learners (Graham, 2003; Kurita, 2012). L2 students' listening comprehension depends on lots of factors: foreign language competence, background knowledge, development of students' memory and attention, their cognition peculiarities, their motivation to listen, form of presentation, presence or absence of communicative barriers (distracting noise, indistinct speech, wrong intonation or linguistic mistakes).

The problem of listening skills development is challenging nowadays because, on the one hand, listening comprehension skills are an integral part of L2 communicative competence, and, on the other hand, L2 listening comprehension is a rather difficult language skill. The inner form of the listening process aggravates detecting the causes of some students' poor results in listening comprehension. It does not emerge in the outer plan.

The purpose of the article is to present a method of listening comprehension difficulties diagnostics and give recommendations on diminishing these difficulties.

The objectives of this article are (1) to analyze listening mechanisms, (2) to find out students' listening comprehension difficulties, (3) to work out a method that gives possibility to diagnose students' difficulties in understanding L2 oral texts, (4) to outline recommendations to diminish these difficulties.

Since listening is a complex concept that can be viewed from a lot of perspectives, scholars define it as a process, multidimensional construct, and competency. Defining it as a process, scientists centre on its stages and/or features. "Listening is the active process of receiving, constructing meaning from, and responding to spoken and/or nonverbal messages" (International Listening Association [ILA], 1995). Bostrom (2011) names cognitive

processes underlying listening (acquisition, processing and retention of information) and also pays attention to its interpersonal context.

The followers of Leontiev (1969) describe listening as a kind of speech activity (according to this theory, other 3 speech activities are speaking, reading, writing). "Listening is a kind of speech activity, active process of sound signals selection in communication" (Batsevych, 2004, p. 100). Nikolaieva (2002) defines listening as a perceptive, intellectual, mnemic activity. Since during listening process people deal with sound, listening and speaking are two sides of oral speech (Nikolaieva, 2002; Panova et al., 2010). In contrast with initial kinds of speech activities (speaking and writing), listening, as well as reading, is a reactive kind of it (Nikolaieva, 2002; Panova et al., 2010). The result of listening is understanding or misunderstanding of message content and verbal or nonverbal behavioral reaction (Panova et al., 2010). Kharchenko (2017) considers listening as a comlex receptive and active kind of speech activity.

Listening is also viewed as a multidimensional construct that consists of (a) complex affective processes; (b) behavioral processes; and (c) cognitive processes. The example of the affective processes is called being motivated to attend to other people. Behavioral processes embrace responding with verbal and nonverbal feedback, and cognitive processes consist in attending to, understanding, receiving, and interpreting content and relational messages. (Halone, Cunconan, Coakley, & Wolvin, 1998).

Listening as a competency involves a number of elements. You need to master a lot of skills to be a competent listener. A competent listener should be proficient in two areas – literal comprehension and critical comprehension (The National Communication Association [NCA], 1998).

Panova et al. (2010) emphasize that listening is based on mechanisms of perception and listening comprehension mechanisms.

1. Mechanisms of listening

Considering listening mechanisms is important in order to find out difficulties that students can face during the process of listening in a foreign language. Zaitseva (2017) distinguishes such listening mechanisms as mechanisms of perception, mechanisms of inner speaking, mechanisms of memory, mechanisms of speech segmentation, mechanisms of interpretation, anticipation mechanisms.

Mechanisms of perception. With the help of these mechanisms the listener hears sounds, differentiates them, s/he recognizes words, word combinations, phrases (Solovova, 2002). The more often the listener hears a

word, the easier and more quickly s/he recognizes it and builds higher language units with it. Speech perception development takes place due to enlargement of operative information chunks. Listening success depends on this unit. The larger chunk of information is perceived, the more quickly and qualitatively information processing proceeds (Passov, 1989). At first L2 speech is perceived by words, then by phrases.

Mechanisms of inner speaking. These mechanisms are necessary for speech analysis, its understanding and memorizing. Listening comprehension is impossible without participation of speech-motor organs. Inner speaking during listening is of intermissive character. If a listener has developed listening skills, inner speaking is cut down. If listening skills are not developed enough, inner speaking is extended Sokolov, 1978). This means that qualitative and quantitative features of inner speaking depend on development of listening skills. At the beginning of listening skills training inner speaking is of intensive character. This factor ought to be taken into consideration while choosing texts for listening comprehension. It means that speech tempo of the texts for listening at the initial stages of listening skills development should be slower than at the intermediate or advanced stages because beginners spend some time on inner imitation of speech. Then reduction of motor activity is observed. The tempo of speech should be gradually increased till natural at the process of learning. The average tempo of native English language speakers is approximately 140 – 150 words per minute. The mechanisms of inner speaking facilitate perception and understanding of information presented in oral form. The peculiarities of these mechanisms should be taken into consideration in the process of listening skills teaching.

Mechanisms of memory. To understand oral speech one must keep in memory language units for performing further operations with them. Two kinds of memory are differentiated in psychology: short-term and long-term. With the help of short-term memory people understand communication, remember previous lines, arguments, figures, facts, etc. With the help of short-term memory one keeps in memory perceived language units for the time necessary to perform some operations with them. During this time, the processes of mapping of perceived language units on already existing representations and combination of language units into propositions takes place.

Proposition is an objective thought content. Propositions exist in all types of clauses. Each proposition consists of two parts: arguments, or names, and predicates. Arguments reflect subjects, creatures, phenomena, in other words entities. Predicates reflect entity qualities and relations between

entities. Predicates play the main role in propositions because they indicate definite kind of relations between arguments. A proposition is a constant part of a clause. It does not change even in spite of changes in such things as the voice or illocutionary force of the clause. A proposition is a basic unit of consciousness, semantic invariant of a sentence. It can be identical in sentences with different communicative intention (Kuranova, 2012). A proposition is usually analyzed as consisting of a single predicate with an appropriate number of arguments (Crystal, 2008). "Proposition is a specific form of knowledge representation, basic cognitive unit of information that plays the main role in discourse production and interpretation" (Kuranova, 2012, p.74). To perform operation of mapping it is necessary to apply to long-term memory that is storage for representations. These representations enable mapping perceived language units on them and combining these units into propositions. Success of audio text understanding depends on capability of keeping in memory perceived text fragments. Short-term memory can simultaneously keep 5–7 units of information. Well-developed short-term memory can keep 8–12 units of information. That is why exercises on short-term memory development are indispensable for listening skills development. Information reaches short-term memory only due to attention directed to this information. This means that in order to develop listening comprehension skills one should train attention. Each person perceives all sounds selectively.

The components of attentiveness are the following: a minimal perception threshold (everything a person can perceive physically), the level of interest and motivation. Everything beyond the minimal perception threshold is neither perceived nor interpreted. It has been scientifically proved that the lower the level of individual interest the people have, the smaller their attention to the communication process is and the less amount of information they perceive (Batsevych, 2004).

Long-term memory stores all material cumulated by a person during the whole life. This kind of memory is characterized by long-term material storage after its frequent repetition and retrieval. Long-term memory effectiveness is assessed by ratio of the number of symbols retained in memory after memorizing (more than 30 minutes) to the number of their repetitions in order to memorize them. Better memory for verbal material correlates with stronger activation in cortex of left frontal lobe and in left hippocampal area (Anderson, 2002). People usually remember information better if it is interesting for them or it has some reference to them or their friends. Memory is improved by training by power function (Anderson, 2002). It means that at the first stages training quickly increases effectiveness

of memory but the rate of memory improvement slows down with further training. More complicated processing of stimuli leads to their better memorizing (Anderson, 2002). The more efforts students make to memorize, the better they remember the information. Instead of simple repetition of words for memorizing the students should make up collocations or sentences with these words. Complicated processing that includes detachment of stimulus for memorizing with the help of additional information leads to memory improvement. In order to remember verbal material the students should not just repeat words or sentences for many times but, for example, make up sentences, dialogues, stories with them, pick up synonyms, antonyms, think of associations. On the level of sentences, the students may extend them, fill in the gaps, ask questions to them. On the level of the text, the students may be asked to answer or ask questions to it, fill in the gaps, find logical relations between its parts.

Mechanisms of speech segmentation. To understand the message it is necessary to single out phonemes, morphemes, lexemes, syntagmas. This occurs with the help of mechanisms of speech segmentation. Simultaneously with singling out phonemes, morphemes, lexemes, syntagmas, the process of identification of discreet acoustic signs with images of these signs takes place. If earlier built images of acoustic signs coincide with signs articulated by the addresser, recognition of morpheme or lexeme meaning takes place. Meaning recognition may be complicated by the phenomenon of acoustic sign polysemy. Mechanism of identification helps students distinguish which of semantic variants of polysemous word is actualized in this context. For phoneme identification the students should develop phonetic language competence. To recognize the meaning of the words the students should develop lexical language competence. To identify semantic meaning they should learn to explain the lexical meaning of the words in context. In cognitive psychology models of segmentation are usually divided into two types: pre-lexical and lexical. Per-lexical models rely on features of speech stream to mark a word boundary. In lexical models, segmentation is determined by knowledge how the word sounds. In the first model some characteristics or cues of the speech waveform are used as possible indicators of word boundaries. These cues can be silence periods or rhythm of speech. Though pre-lexical cues are valuable for identifying word boundaries, none of them are considered completely accurate as word boundary indicators. This means that while using these models the cases will occur when some boundaries are mistaken and real ones can be skipped. Lexical segmentation model relies on the knowledge how the word sounds (Braisby & Gellatly, 2012).

Fernandes, Kolinsky and Ventura (2010) identify two major mechanisms of speech segmentation: lexical (when multiple word candidates are activated by the input and compete with each other) and sublexical. Sublexical cues are divided into subsegmental information (e.g. degree of coarticulation), segmental information such as transitional probabilities (TPs) between adjacent syllables, where dips in TPs are treated as word boundaries, and suprasegmental information (e.g. lexical stress).

Mechanisms of interpretation. Semantic triangle was first described by Ogden and Richards (1989). There is a symbol (or a word) that is an expression of a language on one of its tops, on the other top there is a referent, or a thing called by this word, and on the third top there is a thought, or a reference. Words and thoughts are mutually related. Thoughts are constantly verbalized and transfer into words, and words generate new thoughts in the process of communication. This interaction is permanent and continuous. Symbols (words) and their lexical meanings are general for all speakers of this or that language, but thoughts (references) have structural and conceptual differences for different people. That is why different people understand speech addressed to them in different ways. In the process of listening people find out meaningful connections between the parts of information, separate main things from subsidiary ones, find the subject of the text and its implications.

Text comprehension is understanding of relations of objects and phenomena that are described in the text to the ones of reality; the attitude of a speaker to them; causative and votive information of a message.

Verbal message comprehension happens on four levels. The first level of comprehension is characterized by apprehension of what is being spoken about. It signifies shallow understanding of a verbal message. A listener has only general idea what is being spoken about. The second level is characterized by apprehension of not only what is being spoken about, but also what has been told. The listener determines logical relations between main plans of thought development, makes sense of main and subsidiary narrative lines. The listener can recollect composition structure of the message. A person compares, analyzes data, finds more sense relations between what s/he knows and what s/he hears at the moment, decides what new things have been informed. The third level refers to a greatly experienced and wide-minded person with profound professional knowledge in the field of the message. A listener understands not only what has been told, but also knows what language means have been used for it. The forth level is characterized by not only what the speaker says and how s/he says it, but also by comprehension of the main sense of the utterance, its main idea,

either stated or hidden in the context. The understanding of implied meaning of an utterance, its aim determines the highest level of comprehension (Kuranova, 2012).

To develop students' skills of text comprehension the teacher should speak with them about the author's main idea, about the purpose of the text and about the language means used for reaching this purpose. While choosing the text for listening the teacher should take into consideration that the text should not be too overwhelmed with information and too difficult for understanding (especially at the first levels of listening skills development). In other way some problems with text understanding and listening attentively to the end of the text may occur. Logical organization of the text also influences its comprehension. The text is easier for understanding if the main thoughts are presented on the top of the passages than the text where the main ideas are given at the bottoms of the passages.

Anticipation mechanisms. With the help of these mechanisms prediction of lexical and grammatical meaning of the utterance takes place on the basis of speech situation, discourse and lexical context, students' linguistic knowledge and their background knowledge, age, personal and gender features. The anticipation mechanism of verbal message means that a listener hearing the first word of a phrase is mostly likely to predict the following word. Such anticipation predetermines the speed of comprehension. Listeners often can continue the speakers' utterances before they do that. This often happens if the speaker and listener have a lot of background knowledge in common and if they know each other's education, outlook, manner to speak quite well. It happens that listeners can predict what speakers are going to say and help them to express their thoughts in linguistic forms.

Linguistic context strongly influences language prediction. The rate of word prediction is influenced by the fact if this word is preceded by a related word. A related preceding word facilitates prediction process and makes it faster, while an unrelated word slows down this process (Ferretti, McRae & Hatherell, 2001; Hutchison et al., 2013). Sentence context also affects word prediction. Highly constrained sentence context makes the predicting process faster (Staub, Grant, Astheimer & Cohen, 2015).

Anticipatory process in language processing has its advantages and disadvantages. One of the most significant advantages of anticipation is the possibility to give the cognitive system assistance in preparing for the future. In result some cognitive capacity frees up and can be used by cognitive system to deal with succeeding events. Nevertheless, in some cases

anticipation can hinder text understanding. If a prediction is incorrect, extra costs are required for repairing the incorrect commitment (Kamide, 2008).

The process of utterance comprehension involves mapping of incoming items onto mental representations. Anticipation goes in advance of this process because it allows to handle incoming items immediately, builds representations for the following items, and integrates them into existing representations. A language processor with an anticipatory function handles incoming items without a delay, builds a representation for upcoming items, and incorporates them into the existing representation. So, anticipation can be considered as an extension of incremental sentence processing (Kamide, 2008).

Priming is the research paradigm that has been most associated with anticipation. The scientists of this paradigm try to show a priming effect of the prime on the target in two sequential linguistic stimuli (Stanovich & West, 1981). Scientists distinguish syntagmatic and paradigmatic priming. Syntagmatic priming concerns word anticipation that arises from grammar rules. Paradigmatic priming involves words from the same class of words (Bock & Griffin, 2000).

In recent studies, the functions of anticipation mechanisms are explained in light of predictive coding paradigm. According to these studies language anticipation is based on neural predictions, arising from continuous comparison of context or prior knowledge against input during this input processing (Bonlage, Mueller, Friederici & Fiebach, 2015).

To sum up, listening is a complex kind of speech activity that includes a set of thinking processes that go on in parallel and consecutively. Listening skills are based on inborn dispositions and abilities and develop in the process of socialization and learning activity. Important factors of listening skills are cognitive conditions (perceptive and speech-motor dispositions, language competences, general knowledge, the level of attention and memory development, motivation, skills in text anticipation and text interpretation, psychological and individual features of a student.

2. Methods of research

The method of studying psychological, pedagogical and methodological scientific literature, method of analysis and method of psychodiagnostics have been used in this research. The method of analysis has been applied while studying separate listening mechanisms for distinguishing students' possible L2 listening comprehension difficulties. The method of psychodiagnostics has been used for working out a questionnaire

for diagnostics students' psychological and phonological L2 listening comprehension difficulties. To define contest validity of the questionnaire the experts from Department of Foreign Languages of Khmelnytskyi National University pointed out aspects that should be covered by the questionnaire and after making up the questionnaire the experts assessed if the questions really accord with these aspects. To confirm reliability of the questionnaire we used the method of retesting. First we gave the questionnaire to the students of the first and second year of Faculty of International Relations of Khmelnytskyi National University (31 students) and asked them to answer its questions. After 3 weeks we gave the same questionnaire to the same group of students. After having the answers we calculated the coefficients of all aspects (attention, listeners' patience, listening memory, phonological competence) reliability. The coefficient for attention aspect reliability is 0.97, for patience aspect this coefficient is 0.96, for listening memory aspect reliability it is 0.92, and for phonology aspect reliability the coefficient is 0.95. So, all four aspects of the questionnaire are reliable. The coefficient of questionnaire parts reliability was calculated according to Spearman's correlation method.

3. Research

3.1. Students' listening comprehension difficulties

To develop students' listening skills it is necessary to identify difficulties that they may come across while listening to a text in a foreign language. Vyspinska (2019) researches difficulties the students encounter during listening that can be classified as those connected with the manner of presentation (the rate of text presentation, lack of visual support), individual cognitive characteristics (connected with memory, peculiarities of information processing), students' knowledge and skills (lexical and phonological competence), teacher's skills to work out adequate tasks, outer factors (background noise).

Vandergrift (2007) pays attention to interaction of top-down and bottom-up processing during listening comprehension. That means the use background knowledge (top-down processing) and the use of incoming input (bottom-up processing) for the text understanding. Usually different combinations of top-down processing and bottom-up information processing are used for understanding the meaning of a message. In other words, knowledge about the world interacts with language knowledge while listeners are making up a mental representation of what they hear. Kurita (2012) stresses that metacognitive knowledge is indispensable for the top-

down process, and lexical knowledge and prosodic cues including stress and intonation play a leading role in the bottom-up process. The author also emphasizes negative influence of anxiety on learners' performance.

Goh (2000) looks at comprehension difficulties of L2 learners from a cognitive perspective. The author differentiates perception problems (the students do not recognize already known words, do not process the next part when thinking about meaning, are unable to chunk streams of speech, neglect the beginning of texts, have problems with concentration), parsing problems (have difficulties in keeping in memory what they hear; cannot build a mental representation from words heard; do not understand the following parts of input because of earlier problems), utilization problems (the listeners understand words but cannot comprehend the intended message; get confused about the main ideas of the message).

On the basis of mentioned above, we can divide difficulties connected with listening comprehension into several types: (1) difficulties connected with a lack of students' knowledge about the world; (2) insufficient communicative competence that consists of phonetic, lexical, grammatical, textual, sociocultural and functional aspects; (3) psychological factors (inability to focus attention, listener's impatience to the interlocutor, not enough developed listening memory, low motivation); (4) individual features of a student (individual cognitive features, age and personal interests, negative experience gained earlier while doing listening comprehension tasks); due to previous negative experience subjective prognosis – negative anticipatory reality reflection may occur; (5) difficulties connected with incompetent text selection (mismatch between text complexity and level of students' listening comprehension development: high tempo, a lot of new words, new grammar structures, too saturated information content, difficult structure of the text, a lot of implications in the text for listening); (6) outer factors (bad quality of record, low or too high volume of sound, noise interference).

Speaking about difficulties of listening comprehension, one may claim that they have three sources: connected with the listener, connected with the speaker and connected with outer factors.

Listening is an inner process, so it is sometimes difficult to define what particular difficulty is the reason of students' low listening comprehension.

To help students to get rid of the listening comprehension problems the teacher should discuss with them the level of their listening skills development, the factors that interfere with text for listening comprehension and explain to them importance of effective listening for learning and future

professional activity. If the students are aware of mechanisms of listening process, they can adequately assess the level of their listening skills and more scrupulously and actively take part in learning activities directed to these skills development. It is necessary to work at the creation in students' minds an image of effective listener. This image has the following characteristics: (1) effective listeners want to understand the speaker and try actively to find meanings that correspond to verbal and nonverbal signs; (2) effective listeners appreciate listening as a means of learning; (3) effective listeners can define purposes of listening; (4) effective listeners are aware of responsibility before a speaker, they do not distract attention, do not interfere, come to conclusions only after having listened to the text to the end; (5) effective listeners can define purpose of the text for listening, its subject and idea; (6) effective listeners can differentiate facts from judgements and (7) can recognize main and subsidiary things; (8) effective listeners can asses an utterance adequately and show that they are interested in the subject of the text; (9) effective listeners are ready to respond to an utterance and if it is needed they are able to ask for additional information or ask to explain some details.

It is also necessary to build students' communication culture. It is of great importance for the group and the teacher to discuss the rules of behavior during listening. There are some of them: avoid conversation subjects that are unpleasant for interlocutors and can lead to misunderstanding and conflicts; give possibility to express opinion to all members of the group; respect other people's opinions; listen to the speaker to the end; do not interfere with the speaker; avoid conflicts; speak politely about your disagreement with the speaker; do not ask questions that are not related to the subject of the conversation; do not repeat the same idea for several times; try not to humiliate the interlocutor; do not distract your attention, do not be engaged in other business during conversation; show that you are interested in the subject of the conversation and respect all participants of the talk; do not get nervous when somebody asks to speak louder or softer, a bit slower; try to explain some facts or your opinion, the meaning of a word or a phrase; speak distinctly and clear. You should remind the students that these rules are obligatory for following not only in the classroom, but during any conversation.

3.2. Method of finding out students' listening comprehension difficulties

Based on theory of listening mechanisms and listening comprehension difficulties we worked out a method of listening

comprehension difficulties diagnostics. Before making up this questionnaire we studied existing methods of measuring patience, for example Bass–Darki questionnaire of aggression (Hreben, 2007), methods of measuring listening memory, for example 'Listening memory method', 'Short-memory method' (Shapar, Tymchenko & Shvydchenko, 2007), methods of measuring attention level, for example 'Twisted-up lines', 'Correction trial', 'Red and black table', 'Arrangement of numbers', Mustenberg method, 'Square of numbers method' (Shapar, Tymchenko & Shvydchenko, 2007).

After making up the questionnaire we discussed its questions and the assessment scale with the staff of Department of Foreign Languages of Khmelnytskyi National University. The benefits of the questionnaire are that it embraces 4 aspects of listening comprehension difficulties (three psychological and a phonological one), it does not take up a lot of time to answer the questions, and it is easy to be processed. The method is based on students' answers to 15 questions.

List of questions to the listener:

1. Do you think about anything else while listening?
2. Do you listen to some people only because of politeness?
3. Are you easily distracted while listening?
4. Do you pretend that you are listening?
5. Do you stop listening when you feel bored?
6. Do you listen if you are not interested in the problem?
7. Is it difficult for you to concentrate on the conversation?
8. Do you have a ready answer or attitude without listening to the end?
9. Do you interrupt the interlocutor?
10. Do you feel antagonistic to the speaker?
11. Can you keep in memory key words of the text for listening?
12. Do you remember the key points of the conversation?
13. Do you remember events in chronological order?
14. Is a L2 oral text a flow of indistinct speech for you?
15. Do you know the words, but do not recognize them in oral speech?

The students answer each question according to the scale from - 3 to +3.

-3 – It never happens to me.
-2 – It does not usually occur.
-1 – It does not happen to me in most cases.
0 – I do not know.
+1 – It sometimes occurs.

+2 – It often happens to me.

+3 – It is characteristic of me.

The profile of the ideal listener: 1. -3; 2. -3; 3. -3; 4. -3; 5. -3; 6. +3; 7. -3; 8. -3; 9. -3; 10. -3; 11. +3; 12. +3; 13. +3; 14. -3; 15. -3.

If the listener's profile differs from the ideal, it needs correcting.

Questions 1–7 concern such listener's features as attention and determination to listen. With the help of questions 8–10 we try to find out if the difficulties in listening comprehension are connected with the listener's impatience, desire to show that they know more than the speaker. Questions 11–13 deal with listener's memory development. Questions 14–15 find out listener's phonological competence.

With the help of this questionnaire we try to find out psychological and/or phonological factors that hinder students' L2 listening comprehension.

34 first and second year students of Faculty of International Relations of Khmelnytskyi National University, Ukraine took part in the experiment. The experiment was conducted in April - May 2019. During these two months the students were regularly given texts of different complexity for listening. The texts covered various subjects and were of different styles (scientific texts, lectures, dialogues devoted to different spheres of social life, interviews, life-stories, humorous stories, etc.). Some of the texts were short and the others were rather long. Some of the texts were interesting for the students and others seemed boring for them. The tempo of text presentation varied from medium to high. We provided such wide range of texts to help students in defining their listening comprehension difficulties.

4. Results

We processed the students' answers to the questions of the questionnaire and found out problem zones of each student's listening skills. First, we analyzed students' answers to questions 1–7 that deal with attention factors. To define each student's attention development we added the points that they chose while answering these questions. While doing the sums, we changed the sign of the answer to question 6 into an opposite one. Those students whose result is from -21 to -17 have a very high level of attention development. They are very attentive listeners, who never get distracted even if they are bored or are not interested in the subject of the text. Those who gain from -16 to -12 points have a high attention level. They are attentive listeners who control their attention very well and usually do not stop

listening even if they are tired or if the text is not interesting for them. The students' attention level is defined as upper average if their score is between -11 and -1 points. They practically never have difficulties in concentration on the talk and they practically never think of something else when somebody is speaking to them. If the student has from 0 to +11 points, s/he has an average level of attention. That means that s/he sometimes gets distracted especially when s/he is bored or is not interested. S/he also sometimes thinks about something else while listening. The student whose sum varies from +12 to +16 has a lower average level of attention. S/he is often distracted, thinks of something else while listening. Such students often listen to interlocutors only because of politeness. Sum from +17 to +21 suggests that the student has low level of attention development. It is usually very difficult for her/him to concentrate on the text, s/he is easily distracted, it is characteristic of her/him to pretend that s/he is listening. If the student answers 'I do not know' to all first 7 questions, we acknowledge that s/he cannot assess her/his attention difficulties. Table 1 shows the students' distribution according to the level of their attention development.

Table 1. Attention levels

Very high	High	Upper average	Average	Lower average	Low	A student cannot assess his/her attention problems
0 (0%)	1 (3%)	20 (59%)	12 (35%)	1 (3%)	0 (0%)	0 (0%)

The results of diagnostics show that 0% students have a very high attention level. 35% students have a lower average attention level and 3% - a low attention level. That means that lack of attention is an acute problem that hinders students' listening comprehension. This means that serious steps ought to be taken to improve the situation.

At the following stage of the experiment, we analyzed students' answers to questions 8–10. They deal with students' patience and tolerance during listening. We added points of questions 8–10. Students have a very high level of patience during listening if their score is from -9 to -8 points. These students always listen to the end and only then infer something, they

never interrupt people. The sum of points from -7 to -5 suggests that students have a high level of patience to the interlocutor. They usually listen to the end and only after that come to conclusions, their attitude to what people say usually is not influenced by their attitude to these people. Those students whose sum varies from -4 to -1 have an upper average patience level. They practically never feel antagonistic to people, such students usually try to listen to the end before pronouncing their judgements, they try not to interrupt their interlocutors. The score from 0 to +4 means that the students have average patience while listening. They sometimes have ready judgements before listening to the end. Sometimes they feel antagonistic to the speakers, may time from time interrupt their interlocutors. The score from +5 to +7 suggests a lower average patience level. These students often interrupt their interlocutors, these students' attitude to the utterance often depends on their attitude to the person who said that. Those with the score from +8 to +9 have low level of patience. They very often interrupt other people, do not listen to them to the end. If the students answer 'I do not know' to all questions from 8 to 10, it means that they cannot assess if they are patient or impatient listeners.

Table 2. Listeners' patience level

Very high	High	Upper average	Average	Lower average	Low	A student cannot assess if s/he is a patient or impatient listener
2 (6%)	4 (12%)	14 (41%)	14 (41%)	0	0	0

It can be seen from Table 2 that the results of listeners' patience level diagnostics are better than attention level. 6% have a very high level of patience while listening and 12% have a high level. At the same time 41% have an average level of listeners' patience. That means that the teachers ought to educate in their students patience, tolerance, politeness, benevolence to their interlocutors. To be a patient listener does not mean

not to be a critical one. On the contrary, being a patient, level-headed, non-biased listener usually helps draw correct conclusions.

The aim of questions 11–13 is to find out if difficulties with listening comprehension are connected with students' listening memory. We added students' points for questions 11–13. If the students get from +8 to +9 points, they have a very high memory level. They remember key words, key phrases, events. It is easy for them to connect propositions into a meaningful text even if there are many events that should be compared. The score from +5 to +7 means a high memory development level. They usually keep in memory facts of the text and key words to understand the text profoundly. The sum from +1 to +4 implies an upper average memory level. They usually remember the events to understand the subject and the messages of the text. Those who gain from -4 to 0 have an average memory level. They sometimes are not able to keep in memory the words or facts that are important to comprehend the text deeply. The score from -7 to -5 suggests a lower average memory level. These students often do not understand the text because of listening memory problems. Those whose sum is from -9 to -8 have a low memory development level. That means that problems with listening memory always prevent them from text understanding even in the case if the text is quite easy for interpretation. If students give answer 'I do not know' to all questions 11–13, they cannot assess their memory features.

Table 3. Listening memory development level

Very high	High	Upper average	Average	Lower average	Low	A student cannot assess his/her memory features
5 (15%)	20 (59%)	8 (23%)	1 (3%)	0	0	0

From Table 3 it can be seen that in general the students of the surveyed groups have a listening memory level that does not prevent them from L2 oral text understanding. However, only 15% have a very high level. That means that special exercises should be done to improve students' listening memory.

Questions 14–15 deal with listening comprehension difficulties connected with students' phonological competence level. We added points that students have for questions 14–15. Result from -6 to -5 implies a very high phonological competence level. These students' listening comprehension difficulties, if there are any, are never connected with their phonological competence. These students recognize all phonemes in different positions in the word, understand intonation patterns correctly. If the sum is from -4 to -3 points, the students have a high level of phonological competence. They differentiate the phonemes, do not mix them up, can transcribe the words they hear, recognize intonation patterns. The score from -2 to -1 is characteristic of students with an upper average phonological competence level. They usually do not confuse words that have only one different sound and usually do not make mistakes while transcribing the words they hear. The score from 0 to +2 means that the student has average phonological competence level. They know the difference between English sounds but sometimes mix up words with similar pronunciation. If the sum is from +3 to +4, the student's phonological competence is of a lower average level. These students recognize only some words from the text though if this text is printed the percentage of known words is higher. If the score is from +5 to +6, the student's phonological competence level is low. For these students English speaking is a flow of indistinct speech. If students give answer 'I do not know' to questions 14–15, they cannot assess if they have any phonological difficulties.

Table 4. Phonological competence level

Very high	High	Upper average	Average	Lower average	Low	A student cannot assess if s/he has problems with her/his phonological competence
0	3 (9%)	3 (9%)	14 (41%)	9 (26%)	5 (15%)	0 (0%)

Table 4 demonstrates that phonological difficulties are a crucial problem of students' listening comprehension. The result of 15% students

with low and 26% with lower average phonological competence level can prove that.

5. Discussion

In order to decrease problems concerning the listener's attention we recommend a series of tasks and activities: listen to the text and find contradictions in it, listen to the text and find an odd word, listen to the text and fill in the gaps (the sentences are given in written form), listen to the text and find common and different features for two people or things, listen to the text and say what statements are true and what are false, listen to the text and try to catch previously assigned words and report how often and in what context you hear these words.

It is important to do pre-listening tasks to catch the students' interest and to activate their attention. Warm-up activities are used to draw students' attention, to assist them in getting rid of distracting thoughts, and to help them focus on activities that follow (Allwright, 1984). They help the students stop thinking of the things they thought before and refocus their attention on the text for listening. A warming-up activity causes students to become engaged in listening and doing tasks. To draw the students' attention warm-ups ought to be designed to break the routine of learning, to provide students' personal involvement (tasks should concern students' or their relatives' or friends' experience or attitudes), stimulate their interest, direct their attention to those details of the text that will be discussed after listening, stimulate students' anticipation, activate language knowledge necessary for successful comprehension. These activities should be short because it is only preparation to listening activity itself.

Warm-ups should be related to the topic of the text for listening to activate vocabulary and expectations. For example, if the text is about house-hunting, it would be good to ask students who of them have ever moved houses and what dwellings they wanted (new or old; with a garden or without it; with central or individual heating system; in the city, in the suburbs, on the outskirts or in the village; one-, two-, three-storey, or multi-storey; spacious or tiny; detached, semi-detached or in block of flats; close to public transport stops or it does not matter; fully furnished or without furniture). After that the teacher says that they are going to listen to the text about house-hunting and asks the students to pay attention to the home features that are important to the speaker.

Pre-listening task to distribute the words into columns according to their meaning plays the role of vocabulary activation and draws students' attention to the subject of the text for listening.

It is also necessary to give the listening tasks before listening and to give some time to students to read these tasks. This approach directs students' attention to the main facts and details of the text.

Attention can be also developed with the help of exercises not connected with listening. For example, the students may be shown a picture at which they should look attentively for a minute. Then the picture is taken away. After that the students are to answer the questions concerning the things depicted in the picture (how many dogs are in the picture, what color is the door of the house, etc.). Finding out differences in the pictures that have similar content also trains attention.

To get rid of the problems connected with listener's impatience we recommend organizing discussions on the topics that are interesting for the group of students. However, there are the rules of discussion that are rigid. For example, you are not allowed to interrupt other students, you are to connect your point of view with that of other speakers (I agree with Kate; I agree with Dan on the point …, but I don't quite agree with him on the problem of …, I would like to add, etc.). The teacher also should teach the students first to see something in common with the previous speaker and only then to speak about different positions (I agree with you on the point that … , but …). If it is not possible to find something in common with the previous speaker, the student should do his/her best to understand the reasons why the person has such point of view.

For training short-term memory the teacher can call out 8–12 not related words or numbers and then ask the students to repeat them. Then the task can be made more difficult by calling out word groups instead of separate words. Memorizing different combinations of numbers (telephone numbers, history dates), names, addresses, doing sums in head also help train both short term memory and attention.

Phonological competence includes sound system and intonation norms skills. The main unit of language phonological level is a phoneme – a sound in a definite form. Two main functions of a phoneme are considered a constructive function (a phoneme takes part in making up a sound image of a word) and a distinctive one (a phoneme can differentiate meaning and grammar forms). On contrary to units of other language levels that have a plan of expression and a plan of content, a phoneme has only a plan of expression. In other words, unlike morphemes and words a phoneme is not a two sided sign. A phoneme is a unity of phonologically relevant sound

qualities. Sound qualities that are relevant in one language are irrelevant in another. For example, consonant palatalization exists to this or that extend in many languages, but in Ukrainian, for example, this quality acquired functional significance and became relevant, and in English this phenomenon is not of relevant quality.

Positional variant of one phoneme may be a variant of another phoneme. For instance, in German a positional variant of [b] (in a phrase das Buch) is a variant of [p] phoneme. Therefore, phonemes intersect with their variants. This leads to difficulty of phoneme organization of every language. While developing phonological skills it is necessary to train pronunciation of phonemes in all positions that change phoneme features. People are considered to learn the sound system of their native language spontaneously and reinforce their knowledge on the subconscious level. While learning a foreign language its sound system must be learnt consciously and thoroughly because this system is unique for each language. It manifests itself in the quantity of phonemes (it varies from 10 to 80 in different languages), in relevant features of the phonemes, in organization of phoneme oppositions, in the character of these oppositions, in the proportion of vowels and consonants. One also should take into consideration the quantity of phoneme variants and sound patterns where these variants are used.

Incorrect pronunciation of sounds and sound clusters leads to misunderstanding of the interlocutor. Sound system mastering includes acquaintance with classification of the sounds of the language, knowledge of sound features and practice of pronunciation sounds separately, then in the words and in the sentences until pronunciation skills become of automatic character.

Pronunciation of some sounds by some groups of population may differ from the norms of the language. These differences may be evidence of dialects or social status of the person. That is why while developing phonological competence the teacher should pay students' attention to these differences. Notwithstanding a variety of dialects and modes of speech, each language has standard phonetic system, which is used in education establishments, while presenting radio- and TV programs, etc. Generally accepted standard of pronunciation in the UK is called Received Pronunciation (R.P.). While mastering a phonetic system of the language the student must differentiate between a norm and a dialect.

One more phonetic system unit is a syllable. A phoneme is the smallest unit at the level of phonation, and syllable – at the level of speech flow. Each language has its own rules of syllabification. Incorrect

syllabification leads to incorrect word pronunciation, creates an accent that suggests that a speaker is a foreigner. Therefore, the process of L2 phonological competence development involves learning the rules of syllable formation. These skills are necessary both for speaking and listening. The listener achieves additional information about the speaker with help of this phonological knowledge. Therefore, theory and practice of syllable formation should be an integral part of students' phonological competence development.

Learning intonation patterns of the language are also an important part of phonological competence development. Knowing norms of using intonation patterns of the language the listener may judge if the intonation accords with the communicative situation.

So, to develop students' phonological competence and avoid listening difficulties connected with lack of it we should systematically train pronunciation of sounds and sound clusters in different positions, train the students to divide correctly words into syllables, and work at use of phonetic patterns. This will enable them to understand foreign speech, learn some additional information about the speakers (their social status, the region where people come from, their mood at the moment). This information is very important for achieving pragmatic goals in communication. It is also interesting to learn phonetic mistakes that can tell about psychological state of the speaker.

To train the students' phonological competence we explain the peculiarities of every sound pronunciation, practice tongue twisters with these sounds, ask to differentiate the words that differ only in one sound, ask students to repeat words or sentences after the speaker, ask them to transcribe the words after they listen to them.

For training and checking auditory differential sensitivity, the following exercises can be used. For example, in Exercise 1 we offer pairs of words in the foreign language to establish similarity or differences in pronunciation. After listening to the words the students are to decide whether the same or different words were said. If the same, they put 1 opposite the number of the pair, if different – 2.

Exercise 1.

1) bad – bed (2); 2) flag – flag (1); 3) pan – pen (2); 4) ran – ran (1); 5) mast – must (2). 6) can - can (1); 7) march – much (2); 8) cut – cut (1); 9) not – note (2); 10) pool – pull (2); 11) plan – plan (1); 12) ship – sheep (2); 13) tea – tree (2); 14) slip – sleep (2); 15) play – pray (2); 16) ton – tone (2); 17) slow – slow (1); 18) lazy – lazy (1); 19) ten – tan (2); 20) stay – stray (2).

Exercise 2 is developed for establishing similarity or difference in intonation. In each pair there are two different or identical statements in intonation. The students' task is to determine if these sentences have the same or different intonation. If the intonation in both sentences is the same, they are to put 1 opposite the number of the pair, and, if different, – 2. The words that are additionally stressed by intonation are presented here in italics.

Exercise 2.

1. *Where* have you been? – Where have *you* been? (2). 2. The streets of London were crowded with people. – The streets of London were crowded with people. (1). 3. He will do it. – He will do it. (1). 4. I must go there. – I must go there. (1). 5. Say it again, *will you*? (*Will you* is pronounced with rising tone). – Say it again, *will you*? (*Will you* is pronounced with falling tone). (2). 6.Have *you* ever been there? – Have you ever been *there*? (2). 7. Don't touch it. – Don't touch it. (1). 8. Let's do it together, *will you*? (*Will you* is pronounced with falling tone). – Let's do it together, *will you*? (*Will you* is pronounces with rising tone) (2). 9. I'm not going there. – I'm not going there. (1). 10. Will he be there *on time*? – Will *he* be there on time? (2).

Besides these factors listening comprehension difficulties may be caused by lack of lexical, grammatical, textual, sociolinguistic competences. We assess the level of these competences with the help of linguistic tests.

To develop lexical competence we do with our students lexical tests, organize games that enrich their vocabulary.

Grammar competence is trained with the help of grammar exercises.

To teach the students to understand the implications of the text we offer them to find logical connections of the text (what is main and what is subsidiary, what is the purpose of the text, how the speaker achieves it). We also offer the students to find contradictions in the texts, to prove that the speaker lies or that s/he tells the truth.

To train students' text interpretation skills and critical thinking we can give them to read several paragraphs where the recorded text is presented with this or that measure of accuracy and ask them to choose the paragraph that best relates to the recording. Then the students listen to the text and do the task. The students are also encouraged to prove their option by stating proper arguments.

The teacher may offer the following exercises to develop the skills in further information anticipation: look at the picture describing the text and give the title of the text, read the title of the text and try to guess what the text is about, listen to the beginning of the story and try to guess what is its end, complete the sentences, extend the sentences.

A lot of listening comprehension exercises train several aspects simultaneously. For example, with the help of the task to fill in the gaps the students train attention and short-term memory. While finding true or false statements the students train attention, short-term memory and text interpretation skills. The tasks to make up graphs, tables, schemes, draw routes develop attention, memory, logics, text interpretation skills.

To provide the ability to catch the meaning if the text is performed in the tempo natural for speech in English, we offer the students to repeat sentences after the speaker in the same tempo, paying attention to pronunciation of sounds and intonation patterns. We pay the student's attention to their tempo of reading. If they are set the task to read the text at home, they should keep in mind that tempo of reading is not of less importance than understanding the meaning of the words, the subject of the text and its communicative purpose.

Students' understanding of the importance of listening skills for learning and future professional activity success, for effective communication in society, finding out factors that hinder L2 listening comprehension, doing exercises directed to getting rid of these factors, keeping to rules of communication culture enable students to develop listening skills.

Listening skills must be developed together with other kinds of skills (reading, speaking, writing). For example, mechanisms of text understanding that are indispensable for effective listening are developed not only while listening but also while teaching reading skills.

6. Conclusions

Listening is an essential part of communicative process and one of the most difficult L2 skills to develop. Being a complex concept it if defined by scientists as a process, a multidimensional construct, or a competency.

We have researched mechanisms of listening, in particular mechanisms of perception, mechanisms of inner speaking, mechanisms of memory, mechanisms of speech segmentation, mechanisms of interpretation, anticipation mechanisms. On the basis of mechanisms of listening analysis we have found out students' listening comprehension difficulties. They originate from three sources: those connected with the listener, connected with the speaker and connected with outer factors. We attributed students' L2 listening comprehension problems to the following difficulties: difficulties connected with a lack of students' knowledge about the world; insufficient communicative competence that consists of phonetic,

lexical, grammatical, textual, sociocultural and functional aspects; psychological factors (inability to focus attention, listener's impatience to the interlocutor, not enough developed listening memory, low motivation); individual features of a student (individual cognitive features, age and personal interests, negative experience gained earlier while doing listening comprehension tasks); difficulties connected with incompetent text selection (mismatch between text complexity and level of students' listening comprehension development: high tempo, a lot of new words, new grammar structures, too saturated information content, difficult structure of the text, a lot of implications in the text for listening); outer factors (bad quality of the record, low or too high volume of sound, noise interference). Listening process has the inner form and does not emerge in the outer plan. That is why it is often difficult to decide what problems hinder understanding L2 oral texts.

We have worked out a questionnaire for finding out individual students' psychological and phonological L2 listening comprehension difficulties and have offered recommendations on these difficulties decrease. The questionnaire offers students to answer 15 questions. For each answer they may gain from -3 to +3 points. The questions concern such listener's features as attention, listener's patience, listening memory, and listener's phonological competence. After processing students' answers we made conclusions that most problematic zones are attention and phonological competence. Listeners' patience and listening memory are not so problematic, but are not perfect and need to be developed further.

Listening skills are interrelated with other language skills and must be developed together with reading, speaking, writing skills.

It is necessary to build students' communication culture. It is important to discuss with the group rules of behavior during listening to group mates and teachers. You should remind the students that these rules are obligatory for following not only in the classroom, but during any conversation.

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