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Linguistic Foundation of Foreign Language Listening Comprehension

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One of the urgent contemporary educational problems, solving of which is important for foreign language teaching and learning is improving listening comprehension skills as it helps to develop communicative competence of foreign language learners. The aim of the article is to discuss the importance of using linguistic findings in the process of teaching foreign language listening comprehension. Thus, the leading approach to research the problem of the article is the linguistic one. It helps to show the peculiarities of the speech perception process in connection with the type of the language; these peculiarities should be taken into consideration when developing listening comprehension teaching techniques and programs. The article illustrates this approach with the findings on the perception peculiarities of the English words and sentences. The findings are discussed in terms of their implication in foreign language teaching. The materials of this article may be of use to those who are interested in the research on problems of speech perception and improving the existing listening comprehension teaching methods.

Keywords: listening comprehension, communicative competence, speech perception, linguistic features, perception base

INTRODUCTION

Urgency of the problem

Listening comprehension is one of the most important components of oral speech communication which provides the basis for development of other speech aspects and cognitive development. Listening comprehension is a prerequisite for language acquisition. Listening comprehension is the first kind of speech activity a child acquires and it takes the most time to acquire it. If you have difficulties in understanding what another person is saying in a foreign language you cannot say you have a good command of a foreign language and you cannot use it as a means of communication. Listening in the right way is a crucial skill. Listening comprehension

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can sometimes be regarded as an independent kind of communicative comprehension makes it possible to self-control your own speech and realize whether your intentions in speech acts are understood activity having its own motive reflecting an individual's needs and the nature of his activity, e.g. when watching a film or listening to a radio program (Martynova, 2012; Yachina, 2015; Grigoryeva et al., 2015; Yusupova, Podgorecki & Markova, 2015; Asaphova & Golovanova, 2015; Chiknaverova, 2015). One of the most important aims of teaching listening comprehension is to develop such key components of foreign language communicative competence as speech competence, linguistic competence, socio-cultural competence, discourse competence, educational and cognitive competence, and adaptive competence.

Status of the problem

The necessity to design new, effective and flexible programs to teach listening comprehension is urgent in the modern society due to increasing international cooperation and collaboration. Taking into consideration the linguistic basis of the speech activity and listening comprehension as one of its main components one can offer reliable and working teaching techniques. Many linguists consider that the primary prerequisite of improving the existing foreign language teaching methods is knowledge of objective laws of the process of language acquisition (Chugaeva, 2007; Leontyev, 1965; Krause, 2002; Rumyantseva, 2000 and others). L. V. Shcherba was one of the first Russian scholars to treat methods of language teaching as a field of applied linguistics. He considered that a teacher when teaching some activity has to not only be able to perform this activity but also to know its general laws and mechanisms. In his view, only a person who knows the linguistic basis of speech activity can be efficient in teaching a language (Shcherba, 1974). But when preparing foreign language teachers the first thing which is paid attention to is their ability to speak this language well, to know its rules, although their theoretical knowledge of the laws of speech processes is not satisfactory (Zalevskaya, 1996) which influences the quality of teaching.

Teaching listening comprehension should be based on the specific complicated laws of this kind of speech activity, it should be consistent and systematic, however, the main principle employed in foreign language teaching is still the principle of "self-learning ability of the perceptive system" (Ventsov, Kasevich, 1994; Lopatina et al., 2015; Gutman et al., 2014). The systematic approach to this problem can be based on the fact that peculiarities of listening comprehension and perception strategies depend on the linguistic features of a certain language.

There are probably many reasons for the general paucity of the research in this area. One of the most obvious ones is that the speech perception process is hidden from direct observation and listening is the least explicit of the four language skills (Novik & Podgórecki, 2015). Thus, we can investigate it only by modeling the processes of speech perception in a foreign language and compare them with the ones in your native language and with the perception mechanisms of native speakers.

METHODOLOGICAL FRAMEWORK

Linguistic basis for listening comprehension teaching

Listening involves both bottom-up and top-down perception processes and requires the use of non-linguistic as well as linguistic knowledge. The holistic approach to the description of the process of speech perception assumes revealing the features of a speech signal which allow to identify the perceived speech units as integral unities.

The theoretical framework for this article is provided by the traditions of St. Petersburg linguistic school which put forward a model of speech perception stating that

speech perception is based on the perception of essential linguistic features (Zinder & Shtern, 1972; Shtern, 1992; Chugaeva, 2007). Linguistic features are understood as factors that influence speech perception. The linguistic phenomena are described on different language levels: sounds, words, sentences and texts and have quantitative and qualitative characteristics. The set of essential linguistic features can be identified in experiments and lies in the basis of the perception types of linguistic units. Perception types are understood as groups of linguistic units (e.g. words or sentences) united by a set of essential linguistic features.

The process of speech perception is understood to be a level process. In the process of perception of speech the listener uses and integrates information at different levels. According to V. B. Kasevich, there are three main levels of speech perception: psychoacoustic (perception of physical characteristics of a speech signal), linguistic (phonetic, lexical, syntactical, and semantical representation of a speech signal) and cognitive (making information hypothesis about the structure of a speech sound) (Kasevich, 2010). For foreign language learners it is necessary to train listening comprehension at the linguistic level which is represented as a system of models of linguistic units.

The listening comprehension teaching problem can also be treated in the terms of the model of the perception base of a language described by Z. N. Dzhaparidze (1985). The perception base is defined as a hierarchic system of models of speech units and correlation rules which are kept in the memory of an individual. Z. N. Dzhaparidze described the models of only phonetic phenomena (speech sounds, syllables, rhythmic structures, etc), however, experiments (Abramov, 2004; Krause, 2002; Shtern, 1992; Chugaeva, 2007) show that listeners can use models of units of other language levels, which presupposes a more complicated structure of the perception base.

The statistical descriptive model of speech perception by essential linguistic features (Zinder, 1972; Shtern, 1992) considers the word to be the main unit of perception. At the same time it allows to model the perception mechanisms of speech units at any linguistic level (sound, syllable, word, sentence, text).

T. V. Chugaeva understands the perception base as hierarchic statistically distributed system of multidimensional matrices of language units, united by numerous crisscrossing perceptually-relevant linguistic features including perception models of words and sentences (Chugaeva, 2009). The model describes formal (surface) features of a linguistic unit which are essential for the oral perception of this unit, their combinations provide for the perception of a certain linguistic unit as an integral unity.

It is well-known that speech units are organized in speech mechanisms hierarchically in accordance with their frequency of use in speech. The frequency feature turns out to be essential for perception of all linguistic units. Clearly, spoken language makes greater use of high-frequency words of the language, e.g. Stahr (2009) found that vocabulary size and depth of vocabulary knowledge are both significantly correlated with listening comprehension. Therefore, another way to describe the perceptive models of linguistic units is to use the data received by means of linguostatistical analysis (content analysis) of the essential linguistic features of linguistic units. It gives information about the frequency characteristics of linguistic units based on the linguistic feeling of native speakers.

In the process of learning a second language an individual forms a new perception base which is upgraded in the process of mastering this language. Three mechanisms are singled out: a native language mechanism of perception, an authentic mechanism of perception in a foreign language and a forming mechanism of perception in a foreign (second) language. The last one is greatly influenced by the native language mechanism but tries to approximate oneself to the authentic one (Shtern, 1992). The stages and peculiarities of development of the perception base of a foreign language can be described by means of experimental research.

It should be noted, that there are few works which describe language interference in the field of listening comprehension and formation of the L2 perception base which try to

reveal typical mistakes foreign language learners tend to make, or linguistic features which are mostly exposed to interference. Thus, studying and taking into consideration the typical characteristics of perception interference one can, on the one hand, reduce the likelihood of listening comprehension mistakes caused by cross-language interference and, on the other hand, improve the existing listening comprehension teaching techniques and programs.

Perception characteristics of English words and sentences

The word is considered to be the main unit of perception; however, experiments show that an individual can operate with units of different linguistic levels. The language speaker has implicit criteria for not only identification of syllables and words in the process of speech but also for identification of sentences.

The essential linguistic features of the English words are described in the works by T. N. Chugaeva (2009), O. V. Baiburova (2008). They used the analysis of variance to find out the significance of each linguistic feature of the word: *accented vowel*, *initial sound*, *part of speech*, *length in morphemes* and *length in phonemes*, *accented structure*, *consonant index*. T. N. Chugaeva has also carried out the linguostatistical analysis of two frequency strata of the British National Corpus which helped her to describe the phonetic types of the English word in the terms of their linguistic features (Chugaeva, 2007).

The English sentence as a unit of perception is described in the research (Porchesku, 2013) which is also based on the statistical descriptive model of speech perception. The spoken sentence as any other unit of perception has its form which plays center stage in the process of speech perception of a foreign language sentence. The model helps to identify the so called "anchor" points in the perception of the sentence structure. The research shows that perception of the sentence can be influenced by the following linguistic features of the sentence: *extended sentence – unextended sentence*; *affirmative sentence – question*; *tense of the verb-predicate*; *active – passive*; *structural pattern*; *positive sentence – negative sentence*, *structural type of the sentence*, *length in words*, and *frequency* of the linguistic features of the sentence. The peculiarities of perception of the linguistic features of the sentence were investigated on the bases of two programs: isolated sentence and a sentence in the text. The linguostatistical analysis of a corpus of spoken texts was also carried out to reveal the frequency of each linguistic feature of the English sentence.

RESULTS

The findings of the research have helped to identify the peculiarities of the sound image of the English high frequency words. About 90 % of the two high frequency strata is represented by one-syllable words, in comparison with Russian they are two-syllable words (50.2 %) and three-syllable words (22.3 %). The consonant index of the English word is higher than that of the Russian one (2.43 *vs* 1.4). The typical consonant type of the English word is CVC while in Russian it is two syllable CVCV type. A typical frequent English word is non-affixal, while in Russian many frequent word types contain suffixes or prefixes. Most accented vowels of the high frequency English word strata are represented by short front vowels (Chugaeva, 2007).

The high frequency stratum of the English sentences is characterized by the following peculiarities: the most frequent sentence type is a simple sentence of *SPO* or *SbeC* structural pattern, then go compound sentences having two clauses, the next type is a semi-composite sentence, and the last is a composite sentence consisting of three clauses. Clauses in composite sentences are usually connected by means of the following conjunctions: *that*, *and*, *what*, *because*, *which*, *but*. The average length of the English sounding sentence is 13.16 words (simple sentence – 5.8; semi-composite sentence – 11.7; composite sentence – 22). The predicate in an oral sentence is, in most cases, in the form of the Present Simple Tense (59 %). The most frequent verbal is the infinitive (55.6

%) and the most frequent patterns with the verbals are V+Inf, N+Inf, Adj+Inf (Porchesku, 2013).

The findings of the research done within the framework of the statistical descriptive model of speech perception have also helped to identify the main problems Russian learners of the English language tend to face in the sphere of listening comprehension.

The experimental data show that Russian learners (students of language departments) demonstrate that their level of listening skills and perception mechanisms differ significantly from those of native speakers. The average rate of successful recognition of separate words recorded in white noise is twice as low as that of native speakers (Chugaeva, 2007). As to the sentence, it is even lower; the Russian speakers demonstrate only 31 % of successful recognition of sentences in comparison with 77 % of native speakers (Porchesku, 2013).

Russian learners of English and native speakers rely on different linguistic features in the process of speech perception. For example, in the process of perception of long (four-syllable) English words the following features turn out to be relevant: *accented vowel*, *consonant index, word frequency, length in morphemes*. However, Russian learners tend to rely on *length in phonemes*, as for *consonant index,* it becomes irrelevant for them (Chugaeva, 2009).

Speaking about the English sentence, the mechanisms of perception of English speakers and Russian L2 speakers rely on the same relevant features (*sentence pattern, tense of the verb-predicate, modality*) but at the same time bottom-up strategies of perception prevail: listeners tend to reproduce individual words, syllables and sounds without recognizing the sentence as a whole and making mistakes in recognition of its linguistic features. The Russian learners have difficulties in identifying the structural pattern of the English sentence, make mistakes in reproducing the tense of the verb-predicate, and do not differentiate between affirmative and negative or active and passive sentences. The kinds of substitutions they make point to the fact that they employ bottom-up strategies of sentence perception but they appear to understand separate words without identifying their place in the sentence structure. Their inability to recognize the linguistic features of the English sentence prevents them from identifying the sentence as an integral unity.

DISCUSSION

Learners of a foreign language often regard listening as the most difficult language skill to learn. As Vandergrift (2007) argues, one of the reasons might be that learners are not taught how to learn listening effectively. As the results of the above research show, the perception base of the foreign language is not well-formed at both the level of the word and the level of the sentence, e.g. the learners do not have models of typical English words and sentences in the perception base.

One of the approaches to developing listening comprehension teaching programs is the so called bottom-up approach. The bottom-up approach includes exercises that develop bottom-up processing, which helps learners to recognize individual words, sentences, and clause divisions, recognize key linguistic feature of the words and sentences which help to identify these linguistic units as integral unities.

Efficient and effective use of bottom-up skills in listening comprehension appears to be related to the degree to which word and sentence recognition skills are atomized (Vandergrift, 2004). It is also confirmed by the experience of the authors of the listening comprehension teaching program (Chugaeva, 2005) developed on the basis of the research on the perception peculiarities of the English word. Such programs help to train the listening skills of perception of a separate word or sentence and their linguistic features, thus, forming "perception automatisms" (Zalevskaya, 1988). Such approach takes into consideration the fact that speech perception is carried out at different levels. The listening comprehension teaching programs balanced according to the linguistic units and their essential linguistic features allow to form the new perception base of a foreign

language learner at all linguistic levels. Training the formal (surface) level of speech perception contributes to the development of the upper (semantic) level of perception. Improving perception mechanism at the bottom levels of speech perception results in considerable improvement of listening comprehension skills as a whole.

CONCLUSION

The article attempts to review some of the linguistic factors that influence students' English listening comprehension skill and the strategies for improving their listening comprehension. Listening plays a significant role in daily communication and educational process. Listening comprehension abilities influence the capacity for improvement in other language skills such as speaking, reading, and writing. In spite of its importance, listening has long been the understudied field in second language acquisition, research, teaching, and assessment. In recent years there has been an increased interest in L2 listening ability because of its acknowledged importance in language learning and teaching and developing the foreign language communicative competence. The level of listening comprehension skills and consequently the level of foreign language communicative competence is still quite low; thus, it prevents school graduates from interacting with their foreign partners. At the same time educators search for ways and methods of making listening comprehension teaching programs more effective.

To improve students' listening skills, teachers should base their teaching on theoretical principles. Foreign language students do not have an innate understanding of how effective listening is carried out; therefore, it is the responsibility of teachers to share that knowledge with them. An effective way to teach foreign language listening skills is to model them themselves developing scientifically adequate programs. Understanding the importance of the linguistic knowledge for the speech perception process and awareness of the laws of speech perception provide a good foundation for developing programs for teaching foreign language listening skills.

RECOMMENDATIONS

Current research on foreign language listening comprehension has revealed the importance of linguistic knowledge in the bottom-up process of speech perception. The linguistic approach to the problem of teaching listening comprehension helps to get relevant information about the perception image of linguistic units of the language taught thus providing for the basis and principles of structuring the training material when developing listening comprehension teaching programs. The findings described in the article can be of use to everybody who is interested in developing good spoken language skills and improving the communicative competence of the foreign language learners and its components.

Another sphere of application of the approach represented in the article is developing listening comprehension testing programs which can be based on the perception of the linguistic features of speech units and show the stage of development of the perception base of a foreign language learner in comparison with a native speaker.

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