Discussion: The present paper has revealed that metaphorical formations play an important role in creating a positive mind frame by programming or reprogramming one's thinking patterns. The changes in the structural organization of metaphorical conceptual models testify to differences in the metaphorical conceptualization of POSITIVE THINKING and NEGATIVE THINKING concepts as part of modern American conceptual worldview.

Key words: cognitive linguistics, concept, metaphorical conceptual model, NEGATIVE THINKING, POSITIVE THINKING, discourse.

Vitae

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METHODOLOGICAL PRINCIPLES OF TEACHING ENGLISH PHONOLOGY IN LISTENING

Розроблено методичні принципи навчання фонологічного аспекту англійського мовлення під час слухання. Науковою основою для визначення зазначених принципів є висновки психоакустичних досліджень, які пояснюють психофізіологічну природу механізму сприйняття мовлення. Визначені методичні принципи базуються на ідеї слідування психофізіологічним законам сприйняття при навчанні іншомовного аудіювання.

Ключові слова: фонологічний аспект англійського мовлення, методичні принципи, психофізіологічні закони.

Verbal communication is considered to be a very complicated process that consists of a number of constituents some of which are on the surface and can be traced quite easily such as linguistic competence, others are hidden and signal their existence implicitly only, for example, pragmatic competence. However, speaking more globally communication is the integration in process of two big components – form and meaning. They function simultaneously and neglecting either of them makes communication impossible.

One of the formal linguistic aspects that requires special attention is phonology. Phonology is the background of any language because it serves as the material basis for meanings and functions. We can never express any idea without using sound and sound sequences.

The first step at which phonological skills reveal themselves is listening since listening is the first verbal action that language learners do. There is a great deal of methodological researches aimed at developing and perfecting methods of teaching listening (Bingol, Field, Harmer, Mai, Rivers, Vandergift). These researches deal with the problems of facilitating the process of oral acquisition in the foreign language, finding effective ways of overcoming difficulties and building psychological patterns of listening in order to organize it and get a better control over the process. In the majority of cases these are the problems that do not focus on the formal aspect of oral acquisition. There is a very limited number of works that cover the phonological aspect of listening (Richard Cauldwell Phonology for listening: relishing the messy https://www.researchgate.net/publication/228779527_Phonology_for_listening_relishing_the_messy) where a transcription-oriented method to analyze speech units phonologically is described. At the same time, there are findings in psychoacoustics that regard perception of the sound form as the prior step to formation of meaning. Scientists of this sphere indicate that meaning appears only after the sound image that can receive and keep it is created (Behtereva). Therefore, operating exclusively with the meaningful side while teaching listening in the foreign language seems to contradict physiological laws. Moreover, there are a lot of cases in everyday encounters as well as in professional and academic situations when context that we so much rely on does not help to get the message. It takes place when the problematic sounds or sound sequences concern the key ideas of the message or when there is too much of the sound matter that is not identified. Thus, search for effective ways of teaching the phonological aspect of the oral foreign speech is a topical methodological issue that justifies choice of the topic of this article.

Phonological knowledge and skills are a component of linguistic competence. They indicate the language user's ability to operate the phonological system of the language that includes such elements as sounds, sound sequences and prosodic patterns. Phonological knowledge and skills presuppose language user's ability to distinguish and produce phonological elements, to perceive and catenate sound sequences, to resolve (that is, to divide into distinct and significant parts) a continuous stream of sound into a meaningful structured string of phonological elements (CEFR 107).

Linguistic competence is just one part of the main goal of teaching the foreign languages which is formation of learners' communicative competence. This goal is stated in official documents and it is expressed by learners themselves

who are not willing to spend time and efforts on learning information that is not practically implemented. Importance of this goal became obvious with development of international social and economic relationship, globalization, migration, immigration and huge interest towards travelling. That's why nowadays in the methodology of teaching the foreign languages we observe a strong focus on the meaningful side of speech very often with enormous sacrifice of the formal aspect.

However, despite the fact that both foreign language teachers and learners clearly see the target, that is the communicative competence in the foreign language, not everybody manages to reach it. There are a number of reasons for that, but one is a great complexity of the phenomenon of communicative competence and impossibility to form it in a linear process of activities of the same kind no matter communicative or non-communicative. It means that in the process of formation of communicative competence it is necessary to work on form, meaning and functions and neglecting either of them prevents from getting the desired outcome.

Unfortunately, phonological aspect is very often regarded with little importance in a communicative-oriented classroom (Gilakjani, Ahmadi). Meanwhile, the low level of phonological awareness and skills can cause problems for developing the communicative competence in general. For example, phonological awareness is the primary factor in solving reading and spelling problems (Rello, Ballesteros, Ali, Serra, Sánchez, Bigham). People who have problems with phonemic discrimination have difficulties in perception of new words (Rauschenberger, Rello, Baeza-Gates, Gomez, Bigham). A lot of findings prove that phonological deficiencies do not enable learners to get to the meaningful side even in the process of solving communicative tasks.

If to refer to superficial observation of the communicative process both in the native and foreign languages one can notice that people who can operate with phonological code quickly and with ease usually get higher social status, they are more respected by the members of community and are granted with more authority. Thus, phonological awareness and phonological skills are often a precondition of a life of a better quality. It means that having communicative competence as the main goal of teaching the foreign language it is necessary to extract the phonological aspect on the justified scientific grounds and make it the centre of the language processing whenever it is beneficial for learners.

When we speak about phonology in listening we mean its functioning in the perception process. In psychology perception is defined as mental mechanism that reflects actual properties of objects and phenomena of the outer world thus connecting us with them (Velichkovskiy, Zinchenko, Luriya). To work out useful principles of teaching phonology in listening one should get deeply into the nature of the phenomenon from the psycho physiological point of view in order to follow natural laws of acquisition but not to contradict them.

According to the results of psycho acoustic experiments the first response that is given by brain neurons to a verbal signal is always a response to its acoustic characteristics regardless the fact whether the meaning is known or not (Behtereva 80). Thus, phonology represents the primary acoustic code of signals that activates the long-term memory and only then the sensation of getting the meaning is created (Behtereva 80).

These findings are easily proved by the natural process of language acquisition: a baby experiments with sounds and sound sequences long before it begins to use them to express meanings.

In the process of teaching the foreign language we can often encounter problematic cases when learners perceive the sound form but they do not correlate it to any meaning, so a learner can listen to a text in the foreign language and write it down without knowing the meaning of some words.

Though speech perception is an inner mental process it is not passive but active and it depends on probabilistic characteristics of the verbal signals, their phonemic structure and peculiarities of their processing on the level of the matrix of the long-term memory (Behtereva 67). To get the verbal information we are to build a link between the source of information and our consciousness. The most explicit mechanism that is used for it is repeating, imitating and thus reconstructing the distinctive features of the verbal signal in our mind. This idea is supported by scientific findings about inner speech that accompanies listening. It is believed that while listening to somebody's speaking we articulate the same sound sequence silently to be focused on its relevant features and to specify phonemic perception (Velichkovskiy, Zinchenko, Luriya). This mechanism got the name of phonological loop that is "the system that serves two functions: to maintain material within the phonological store by subvocal repetition and to take visually presented material such as words or nameable pictures and to register them in the phonological store by subvocalization" (Baddeley 558).

Perception of verbal signals also closely depends on the period of time during which the listener's brain is exposed to them. Very short sounds whose duration ranges between 2.0 ms and 10.0 ms are perceived as clicks (de Vos, Hornikx). Successful listening cannot take place without formation of the complete sound image of the verbal signal (Nosulenko 36) It is stated that to evaluate the meaningful potential of a sound one needs to listen to it for at least 35 ms and in order to perceive it one should keep the image of this sound in memory for 200 ms (Aldoshina 45). Naturally perception of words is also connected to their duration. According to the experiments subjects can usually remember as many words as they can say in 2 seconds (Baddeley 558).

Reflection of the findings of the given psychoacoustic experiments can be observed in the natural process of communication when people obviously have difficulty in recognizing speech only because it is too fast for them. However, the results of the psycho acoustic experiments indicate the lowest level of sound duration beyond which speech becomes unrecognizable, but observation of the communicative process shows that perception of speed of speech depending on its duration is also an individual phenomenon. So speech at one and the same speed is recognized by one listener and is not by another. Therefore, a conclusion suggests itself that the minimal time duration can be different for different people and in the process of teaching the foreign language the speed of audio material is to be considered as one of the main factors of success in listening.

Researches in physiology of ear have found out that the auditory system contains a lot of so called neurons of novelty or, in other words, neurons of recognition that are activated and begin to produce electric impulses only when

there is some change in a signal, for example, switching on, switching off, change of loudness, modification of pitch and so on. If the signal is stable these neurons are not activated and control over the signal is performed by a limited number of neurons (Aldoshina, Behtereva). The sensation given to us by activation of neurons of novelty is recognized as attention. It is obvious that we can focus attention during a limited period of time (Nosulenko 159) and this fact is predetermined physiologically.

So, speech perception depends directly on certain physiological characteristics the main of which are as follows.

1. The brain responds to the acoustic characteristics of the verbal signal before it forms the meaning.
2. Perception of oral speech is accompanied by inner articulating of what is being perceived.
3. A sound should have a definite duration to be perceived.
4. A sound signal given under a new condition gets more attention than a stable sound signal.

The given physiological characteristics are to be the basis for elaborating the principles of teaching phonology in listening because effective learning cannot take place if the tasks are beyond students' physiological abilities.

First of all, sound images of words are to be fixed in learners' memory. It means that before offering learners a meaningful task with the definite language material it is necessary to give them some time for memorizing the corresponding sound sequences. For example, it is not enough for a learner to be informed that the word 'table' is 'a piece of furniture with a flat top and one or more legs' to remember the form and meaning simultaneously. And it does not matter whether the lexical unit is introduced with the help of a definition, a picture or an equivalent in the native language. To learn a word one should focus on the sound sequence 'table' first, listen to it carefully and pronounce it by oneself and only then to produce actions that help to stick the sound sequence 'table' to the corresponding meaning. It is obligatory because in the combination – 'the form 'table' plus the meaning 'table' – it is the form that represents the new information for the English language learners. If the stage of fixing the sound image of a word in learners' memory is skipped by the teacher learners can report in the native language that they were taught the word 'table' but they cannot recall the English word. The reason for that is that when we begin to work with the foreign language we mostly operate with known ideas but these ideas are carried by different phonological matter. So in case of ignoring the phonological form while practicing a lexical unit one only creates the impression of learning the unit but actually formation of the perceptive skills does not take place.

It is important to remember that perception is an active process that means that mere listening is not the most effective technique. For fixing a sound image of a foreign word in learner's memory it is recommended to use imitation activities even if the aim is teaching phonology in listening and not in speaking. Using imitation is justified by the findings concerning phonological loop that is accompanying perception by inner articulation. While doing imitation activities we simulate the phonological loop on the level of expression and in this way we control accuracy of perception.

To simulate phonological loop on a more advanced level one should be involved in synchronous imitation of the authentic speech (performed not after listening to a sound sequence but simultaneously while listening). It can be done in reading while listening and it mainly presupposes activities of two types: silent synchronous articulating of an audio text and synchronous reading aloud of the audio text. Synchronous reading both silent and loud enables to form sensation of the foreign speech in learner's mind. It is a very effective technique to make the foreign sound matter a new property of learners' conciseness. It is also known that 'the oral rendition provided in reading while listening presumably allows the release of cognitive resources, typically devoted to decoding, towards higher-level processes like comprehension. Besides helping young and struggling readers by providing the oral version of the words they decode with difficulty, reading while listening may also help learning new words or help comprehension because it provides multimodal input of the same information" (Gerbier, Bailly, Bosse).

Moreover, teaching phonology in listening should involve usage of a large variety of audio material. The thing is that pronunciation is very strongly affected by speakers' individual peculiarities. Findings in phonology suggest that one and the same person cannot pronounce one and the same sound absolutely identically. And if we speak about different people's pronunciation we can never expect utter sameness due to their different psycho physiological characteristics such as a size and shape of the speech apparatus, health, and a speed of thinking and so on. It means that one and the same word is pronounced slightly different by different people and every time we hear a new variant we form a new sound image of this word and store it in memory. The more samples of pronunciation we are exposed to the more foreign words we begin to identify correctly. When learners have practice in listening only with the teacher's pronunciation they usually have the low level of phonological skills because they memorize only one variant of pronunciation, so, on the one hand, their memory stock is very limited, and on the other hand, they do not get ready for the situation when they can have difficulty in recognizing a familiar word and when it happens they immediately give up believing that they encounter a new word.

It is common experience when a learner failing to recognize a word while listening to it two or three times, fails to recognize it at all. This effect is described on the physiological level by mentioning the neurons of novelty that are activated for a new condition. When we listen to one and the same sound sequence for several times we make the signal stable and mental resources for its decoding become limited. This leads to a conclusion about uselessness of listening to one and the same part of an audio text for more than three times in the same conditions. It can even be dangerous for formation of the accurate sound form of a word because after once getting a wrong sound image we learn it as it is and every time we receive the corresponding stimulus we respond to it with the defectively created sound image. Both teaching and learning experience shows that relearning consumes much more efforts than learning. So, to identify the unrecognizable sound sequence one should either postpone the listening activity later in time, or to move to another place for listening, to switch on the recorder louder, to use earphones or to change the conditions for listening in any other ways.

An important factor of success in listening predetermined by the psycho physiological laws concerns the speed of oral speech. Teaching experience shows that learners are unable to perceive speech that is too fast for them: excessively high speed of speech affects learners negatively making them panic and feel discouraged. If a learner identifies high speed of an audio text as the main reason for failure in listening he / she usually gives up trying strategies based on involving contexts to recognize the sound sequences. It is mentioned above that the minimal universal duration of sounds to be perceived is defined. But people's abilities are different: somebody can identify a sound sequence for the given period of time and another fails to do it. This fact leads to formulation of the principle of varying speed of audio materials while teaching phonology in listening. It is necessary to expose learners to slower and faster speech observing their results and thus finding the appropriate speed of audio texts that is challenging but within the learners' physiological abilities.

Working on phonology in listening can never be an independent process for a certain period of time. Teaching phonology in listening should take place in parallel to teaching oral comprehension because excess of formal practice makes the whole process useless and discourages learners. That's why another important principle of teaching phonology in listening is a well-balanced alternation of formal and communicative activities. The balance can be defined only in the process of analysis of learners' success in listening: if they fail to cope with listening activities it is the types of mistakes that can reveal the component that is not sufficiently developed. So, failures in oral comprehension can be caused by poor general knowledge that prevents learners from identifying ideas described in audio texts, insufficiently developed vocabulary and grammar skills. However, there are numerous cases when while listening learners do not recognize the material that they know well. The teacher can identify this type of failure when he / she provides a learner with a script of the audio text and the learner recognizes easily those parts which he/she failed to recognize while listening. If this happens it is necessary to focus learners' attention on the phonological side of speech and to offer activities aimed at developing articulation and auditory skills.

Considering the scientific information and ideas described in the article we define the main methodological principles of teaching phonology in listening as follows.

1. It is necessary to focus learners' attention on the sound form of a word before introducing its meaning.
2. It is important to expose learners to a variety of audio materials in the process of teaching the foreign language.
3. It is required to consider the speed of oral speech while teaching phonology in listening.
4. It is effective to vary conditions of listening.
5. It is needed to involve learners in imitation activities, in synchronous articulation and in loud reading while listening.
6. It is essential to have a well-balanced practice of phonological and oral comprehension skills.

The methodological principles of teaching phonology in listening are expected to contribute to effectiveness of formation of learners' auditory skills, oral comprehension skills as well as the general level of communicative competence.

At the same time the given principles can become the basis for elaborating special techniques of teaching phonology in listening that can become perspectives of further research.

References

1. Aldoshina, Irina. "Osnovy Psykhoacustiki (Foundations of Psychoacoustic Studies)", 2000. [ebook] Available at: http://lib100.com/music/osnovi_psihoakustiki/pdf/. Web. 24 Mar. 2019.

2. Baddeley, Alan. "Working Memory". *Science* 255 (1992): 556–559. Print.

3. Behtereva, Nataliya, and Pavel Bundzen. "Mozgovyye Kody Psikhicheskoy Deyatelnosti (Brain Codes of Mental Activity)". Leningrad: «Nauka», 1977. Print.

4. Bingol, Mustafa Azmi, and Behcet Celik. "Listening Comprehension Difficulties Encountered by Students in Second Language Learning Class" *Journal of Educational and Instructional Studies in the World* 4 (2014): 3–9. Print.

5. Common European Framework of Reference for Languages. *En.wikipedia.org*. (2019). [online] Available at: https://en.wikipedia.org/wiki/Common_European_Framework. Web. 24 Mar. 2019.

6. Field, John. "Listening in the Language Classroom." Cambridge: Cambridge University Press, 2009. Print.

7. Gerbier, Emilie, and Gérard Bailly. "Audio-visual Synchronization in Reading while Listening to Texts: Effects on Visual Behavior and Verbal Learning". *Computer Speech and Language* 47 (2018): 79–92. Print.

8. Gilakjani, Abbas Pourhosein, and Mohammad Reza Ahmadi. "Why is Pronunciation so Difficult to Learn?". *English Language Teaching* 4 (2001): 74–83. Print.

9. Harmer, Jeremy. "Listening". *The Practice of English Language Teaching*. London: Longman, 2001. 228–233. Print.

10. Mai, Luu Hoang, and Luu Thi Bich Ngoc. "Enhancing Listening Performance through Schema Construction Activities". *Journal of Language Teaching and Research* 5 (2014): 1042–1051. Print.

11. Nosulenko, Baleriy. Psikhologiya Slukhovogo Vospriyatiya (*Psychology of Auditory Perception*). Moscow: "Nauka", 1988. Print.

12. Rauschenberger, Maria, and Luz Rello. "Towards the Predicatiopn of Dyslexia by a Web-based Game with Musical Elements". *W4A* April 0–04 (2017): 1–4. [online] Available at: https://www.researchgate.net/publication/314281580_Towards_the_Prediction_of_Dyslexia_by_a_Web-based_Game_with_Musical_Elements Web. 24 Mar. 2019.

13. Rello, Luz, and Miguel Ballesteros. Dytective: Diagnosing Risk of Dyslexia with a Game. [ebook] Available at: https://blog.changedyslexia.org/wp-content/uploads/2017/03/PerHealth2016-Dytective.pdf. Web. 24 Mar. 2019.

14. Rivers, Wilga M. Teaching Foreign Language Skills. Listening Comprehension. Chicago and London: The University of Chicago Press, 1998. Print.

15. Vandergift, Larry. “Facilitating Second Language Listening Comprehension: Acquiring Successful Strategies”. *ELT Journal* 53/3 (1999): 168–171. Print.

16. Velichkovskiy, Boris, and Vladimir Zinchenko. Psikhologiya Vosproyatiya (*Psychology of Perception*). Moscow: Izdatelstvo Moskovskogo Universiteta, 1973. Print.

17. Vos de, Rick, and Maarten Hornikx. “Acoustic Properties of Tongue Clicks used for Human Echolocation”. *Acta Acustica united with Acustica* 103 (2017): 1106–1115. Print.

METHODOLOGICAL PRINCIPLES OF TEACHING ENGLISH PHONOLOGY IN LISTENING

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Abstract

Background: The research of principles of teaching English phonology in listening is a topical scientific problem since learners of English often have difficulties with recognition of familiar words while listening to authentic audio texts. Solution of this problem makes an important contribution to improving methodology of teaching listening in the foreign language.

Purpose: The purpose of the analysis is to determine the main principles of teaching English phonology in listening on the basis of functions of the main psycho physiological mechanisms of speech perception.

Results: Methodological principles are the background of the teaching and learning process. They create order of this process and set up the target. Methodological principles of teaching phonology in listening are based on psycho physiological laws of speech perception in order to follow the natural process of language acquisition.

The main methodological principles are the following: focusing learners’ attention on the sound form of a word before introducing its meaning; exposing learners to a variety of audio materials in the process of teaching the foreign language; considering the speed of oral speech while teaching phonology in listening; varying conditions of listening; involving learners in imitation activities, in synchronous articulation and in loud reading while listening; arranging a well-balanced practice of phonological and oral comprehension skills.

Discussion: Establishing effective methodological principles of teaching phonology in listening requires data from different scientific fields. Findings of methodology alone are not sufficient since they do not provide necessary information about psychology of perception and linguistic mechanisms.

Key words: methodological principles, phonology in listening, psycho physiological laws.

Vitae

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