



PSYCHOPHYSIOLOGICAL SIGNIFICANCE OF THE PROCESS ON TEXT LISTENING COMPREHENSION

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ANNOTATION

The article talks about the relationship of psychophysiology to the process of listening and understanding the text, as well as the essence of psychophysiology and its importance.

Keywords: psychophysiology, speech sounds, analysis, linguistic element, perception, listener, phonological feature, wave, perceptual speech

It is known that speech perception consists of the process of hearing, interpreting and understanding speech sounds. Speech perception research is important because it focuses on understanding how human listeners recognize speech sounds and using this information to understand spoken language. In particular, speech comprehension is based on the influence of neurons located in the temporal part of the human brain. In particular, speech comprehension is based on the influence of neurons located in the temporal part of the human brain. In essence, we perceive speech as sound waves with different frequencies. These waves vibrate the human eardrum at different frequencies. These vibrations are transmitted to the brain through the human auditory system. The word that we have heard and known means the wave frequencies that are repeated in the same way. [I-1; 215]

Hearing is also one of the senses, and the process of speech perception is carried out through a sound signal. The human hearing system has three main components: the outer ear, the middle ear, and the inner ear. The outer ear directs sound waves through the ear canal to the eardrum. The ear is an airtight membrane where sound waves begin to vibrate. The middle ear uses three small bones to transmit vibrations from the ear cavity to the inner ear. The inner ear is a small but very complex organ that transmits vibrations from the membrane to the brain.



After initial auditory signal processing, it looks for speech sounds, acoustic noises, and phonetic information. This speech data then forms higher-level language skills by identifying words.

There are specific aspects of speech perception, first of all, when studying speech, we can see the intersection of its acoustic features and linguistic form. According to Matthew and Morton, it is this line of research that is complex, with different views and arguments expressed in a wide range of literature, starting with classical sources. [I-2; 201]

In the speech sound signal, the acoustic signal plays an important role in speech perception. In speech, the sound and the places where it is used is a very important process. In the analysis, we can see the difference of speech sounds belonging to different phonetic categories. Accurate pronunciation of sounds is included in the rules of articulation.

Listening comprehension research and practice can help solve several problems. The reflection of a phoneme in speech does not always give rise to concordances. One of these inconsistencies is the speed of the speech, which causes difficulties for the listener in the reception of the speech. In addition, the interpretation of speech depends on physical and psychological characteristics. For example: men, women and children have different voices, and their voices have different dynamic dimensions and resonant frequencies.

We can distinguish between visual and auditory abilities to judge the accuracy of the sound produced by a person. Compared to the visible object, the light reflected from the side of the object falls on the retina. The receptors in this area expand the eyelids under the influence of light. The listener's attention to the listening skill belongs to the spectral areas, except for the fact that the necessary sentences are not selected when listening.

As a link between phonological features and auditory features, there are acoustic features and distinguishing features. Acoustic signals are incoming signals that contain an event or information. The statistical indicator analyzed by the frequency composition of a specific signal or type of signal (including noise) is called its spectrum [III; 1]. Acoustic properties result from articulation. This can be caused by secondary articular movements caused by external conditions such as noise. Symbols are analyzed to identify specific articulatory events associated with them. We can include the phenomena of assimilation and dissimilation in the phenomenon of articulation. These features define phonemes, syllables, words, which are speech segments. This process is part of the lexicon stored in



the listener's memory. These units are activated during lexical access and compared to the original signal to see if it matches. If the signal does not match, it is compared with another signal. Listeners thus create the necessary articulatory processes to produce the perceived speech signal. One of the main problems of speech perception is noise. If the speech is interpreted in a clear and pure form, it will be perceived quickly, regardless of the presence of noise. Classic studies have shown that hearing loss impairs the discrimination of auditory forms of speech. Until the sensory traces disappear, the auditory effects of speech are resolved by the perceptual stream. In Matthew's Handbook of Psycholinguistics, Howell and Darwin argue that the degrees of content attenuation vary, but that after 100 ms we can hear small components of speech, and after 400 ms we hear nothing. [I-3; 204]

An intelligent person can quickly regulate a disordered speech pattern, if the integration of auditory features is delayed, he may not be able to perceive. Manifested in natural perception, it is impossible to incorporate auditory features into undeveloped expressions of flexibility for a long time. In their research, scientists conducted several experiments on speech perception. According to Eimas and Miller, they conducted an experiment in 14-week-old infants to prove that the perceptual organization of speech is not learned in the experiment. The results of the experiment showed that the acoustic elements of speech created by synthesis are not compatible with each other in terms of spectral and spatial aspects [I-3; 204].

Perceptual speech can be likened to a supernatural phenomenon, as it is formed by the uneven repetition of words. The formation of consonants and vowels in the acoustic signal is created through the template of the speech spectrum. That is, a speech sample in which three or four pure clear tones are heard can differ in frequency and amplitude.

Attention plays an important role in speech perception. It is difficult for listeners to perceive false wave sounds during listening. That is, if the forms of speech are heard as contrasting sounds, the listener perceives these sounds as noise. Liebenthalny also mentioned that the incomprehensible occurrence of phonetic symbols in the process of hearing creates the abstraction of sounds [I-3; 207].

Of course, the goal of speech perception is to understand changes in sound. A frequency that is not fully received in the mind does not create an impression of phonetic sounds. Natural and high-level speech attracts attention phonetically, and attention to speech decreases.



According to the research scientists, there were many critical opinions about the auditory and visual features of perception, and in later researches, they studied the listener's speech separately from the auditory ability. Sumbly and Pollack say that a person who is aware of this situation considers speech as a multimodal phenomenon, that is, he perceives speech between the eyes and ears [I-3; 208]. A multimodal phenomenon is the use of several methods in the same direction, an example of which is the above-mentioned perception of speech through eyes and ears. In multimodal speech perception, the formal conclusion of hearing and vision was the same as that of hearing. That is, visual and auditory features are described as a single multimodal stream that interacts.

Researchers have metaphorically defined both conceptualizations (a concept that is the main link of the human mental code, defined as the result of cognitive knowledge, activity of society) as follows: to create a caricature of two points of view, the recipient is a weak and deaf spectator. described as and placed in one shell. Each type of perception was analyzed and the differences between them were determined. The results of the analysis revealed that attention plays an important role in events and events that are seen and heard [I-3; 208]. Regardless of which conceptualization (seeing or hearing) is closer to reality, the visual perception of speech presents a problem: although physical movements are regular, none of the movement parts are specific to speech. Hearing and seeing have their own distinct aspects, but they also have similarities. The results of multimodal studies show that it is often assumed that there is a correlation between seen and heard speech.

A listener's successful identification of a phoneme can occur as a result of comparison with a sign that exists among other segments of the language. But classical psychoacoustic studies show that the hearing properties of speech are considered very weak in humans, and they emphasized that they can remember even a quarter of a second.

According to Hirsch's scientific basis, the short-term auditory properties depend on the dynamic dimensions of the produced sources in a different form, perhaps in order to retain the information in the listener's memory. When the listener remembers the sound, he uses the information in his memory, but during listening, he does not copy the information from his memory, but recreates it and interprets it [I-3; 213]. The second problem arose from the point of view of probability, and it was assumed that there were problems in hearing phonemes. But this situation is compared with the view that "the ability to hear is well



preserved in the memory of undeveloped speech forms." There is also a possibility that the expressed phoneme determines the form of perception through normative assessment.

The flexibility of the norms of perception and understanding of the linguistic elements of speech is clearly visible, in turn, it is difficult for the perceiver to recognize the features of the language in certain situations, in particular, in situations that create a new form of listening.

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