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## PERCEPTION OF INFORMATION TRANSMITTED THROUGH MEANS OF COMMUNICATION TECHNOLOGIES BY THE COMPONENT ELEMENTS

*The perception of information transmitted by communication technologies is associated with the peculiarities of the development of the emotional-volitional state of a person. The content of information, the abilities and social development of the person perceiving it are an important factors in the composition and development of this process. The perception of information transmitted by communicative means is also influenced by the interaction of signs, symbols, letters, sounds, colors, shapes, text and images that make up the information, and the human psyche. For example, the perception of a visible image begins with its lighting and depends on the mood, the physiological state of the person perceiving that information. In general, many factors are involved in this process. Depending on the influence of these factors, the same image is perceived differently by different people. In addition, the factors formed differences include the particular structure of the subject, the motivation of activity and the social environment. In the same way, the quality of information has an important impact on all of these. The main regularities of the relationship between the sender and recipient of information and the mechanism of "stimulus-reaction" between people are in the framework of the relationship theory. The methods of this theory are also used in research on the perception of information in psychology. It is shown that sensory effects of information come to the fore when it is perceived. These influences a system of signs, colors, shapes, sound, movements. Each of their physical nature affects the perception of information. The process of understanding itself is an important aspect of this perception. In general, the learning process of information is in accordance with the laws of perception of speech and virtual figures. The more mental factors are taken into account in full in the preparation of information, the more effective the comprehension process will be.*

**Key words:** *perception, information, communication, relationship theory, text, shape, model.*

Introduction to the problem. It is known that until the formation of men as homo-sapiens, they were a being consisting only of elements created by nature. Later, man himself began to create objects of the social environment. Today, when an ancient work of art is estimated, it is considered as a primitive model created during the cultural and spiritual development of man. However, everything created by man has its own meaning. The social environment affects both the senses and the subconscious. There are many symbolic systems defined the relationship between them. Unfortunately, it is difficult to say how well these systems "work", because modern science has just entered into a critical study of symbolic and pictorial languages [8, p. 65].

Visual images received by a social individual with ordinary perceptual abilities lead to less use of elements of perceived information. If there are representatives of different ethnic groups in the audience, then many elements are perceived as carriers of a universal culture. In this case, information expressing national

elements is just distraction of attention. On the contrary, if the ethnicity of the audience is the same, then the perception of characteristics of symbols, images, signs and sound of the national culture becomes easier. Some communicators prefer succeeding in mass perception and adapt the information they produce to it, placing only images of mid-level content in their presentations to ensure that the audience understands the information being conveyed. In this case, there is no analogical reflection of the stereotypical image of the society, on the contrary, a new symbolic art is established.

**The currency rate of the problem.** Each text alternates events, situations, thoughts, feelings, judgments, human values, generally, real life. How to perceive them has always raised many questions in psychology.

When the text is perceived, the fragments placed in it substitute each other, line up consecutively and finally, form a complete presentation in the human mind, and the subject analyzes the meaning of the text

on the basis of apperception (purposeful perception), perceiving semantic clarifications, a system of signs (phonological, lexical, intonation-expressive, pauses, etc.), which the author wants to express. Some argue that the process of transferring the essence of a text means its transformation into another form. Structures similar to the processes associated with the emergence of a mental conclusion, as well as the final emotional evaluation of any event are involved here [4; 7; 9].

Researchers states that the ability of the subject to focus on personal qualities when understanding texts is also great. In this case, a certain emotional state is formed in the subject. Subjects put forward a number of assumptions about the schemes affected them in the process of comprehension of the text, and there are three main factors to characterize the process [10]:

- 1) value-semantic sphere;
- 2) needs and abilities;
- 3) emotional and sensory impact and available information base.

Understanding the meaning of the text and the learning of information are influenced by the experience of the reader and the reading conditions. Subjective experience refers to the psychofunctional aspects of the personality structure, various psycholinguistic aspects, features of the text and etc. At the same time, the relationship between the source of information and the attitude of the subject through that, the time and place of the process, the role and influence of movement factors is also great [5].

Visual information is most often reflected in the form of analogues. Digital coding is conducted by determining certain combinations of the existed and non-existent signals of a certain sign. These combinations create meanings and descriptions matching the content. In this case, the signals transmitted during the reflection of the form are recorded in memory with a familiar form. Its proximity to the original is one of the important terms for the perception of the image by the person [6]. It is known that the main types of communication are intercultural, interpersonal and organizational.

These all are the information transmitted to students by university teachers by reports, lectures, seminars. The teacher developing in this area, expanding the horizons of communication, gets opportunities to achieve their goals. They express their ideas more easily with the help of communicative tools such as audio and video facts, evidence, synopses, discussions, comments and the accompanying speech culture. Persuasive communicative relationship contributes to the formation of a certain attitude to the issue under

discussion. It arouses interest among students, gives motivation, activates the emotional field [8; 11]. The main attention is paid to the students' attitude, their emotional culture and individual motivation.

In the process of understanding, as well as in perception, there is a connection between an event and existence. The phenomenon reflects the surrounding objects, their forms and features in one form or another. PN Barkhaev explains this connection as follows: being-event-perception [4, 13].

**Goal and tasks.** The purpose of this study is to consider the possibilities of perceiving information through the means of communication technologies. We are talking about the psychological opportunities associated with the education of young people both in high school and at the university. In modern conditions of development of information and communication technologies, the possibilities of their application are expanding to improve the quality of assimilation of information in the preparation of future specialists.

**As a method,** we considered the approaches of many researchers associated with the analysis of the role of communication technologies in the learning process.

Main part. Researchers have a model of communication presented in three dimensions: space, movement, time. In this case, the stimuli affecting the perception receptors, and the degree of sensitivity to them, the ability to understand them are of particular importance.

Studies have shown that sensations change more slowly than the strength of the stimulus. In this case, in order to achieve some intensification of sensation, it is necessary to further increase the strength of the stimulus. But here, first of all, there must be a sense of proportion [12].

ICT technologies can increase the productivity of the educational process. At the same time, modern information technologies should be applied by taking into account the psychological characteristics of receiving information in the study process [9].

There are several ways to use computer technologies: a system of visual decription of a person (where vision analyzers are involved); audio presentation system for obtaining information (the ability to hear information); kinesthetic perception system based on emotions. With the active involvement of each person in the study process, the amount of memorization increases to 75%, the level of skill and ability of students will increase due to the priority of the informational approach to study. "The study shows that the student's perception of multimedia e-learning helps to increase the student's

performance. The result has shown that students have demonstrated better learning performance through e-learning" [7].

In the process of creating a visual image, it constantly transforms and changes. At this time, the possibilities on objective perception of a person become clear. An important issue that should be paid attention is the exclusion of visual illusions in the audience during information transmitting [14].

It is also known that the spatial category in visual images is also reflected in the temporal characteristics. Elements of the past, present and future are involved simultaneously with the images in the mind for a few moments. These characteristics of visual images, on the one hand, perceive the surrounding world as stable, and on the other hand, create the possibility of transforming current, past and possible events into what is happening [15]. This characteristic reflects the manifestation of reality in all its diversity, both visible and hidden connections, as an objective and subjective phenomenon through visual images.

The use of original visual materials at lectures and seminars allows students to learn the features of the taught subject deeply and compare it with their previous knowledge. An important role here is played by illustrative visualization – drawings, photos, cartoons, diagrams, collages, slides and etc.

The space-time composition of the visual image is formed as a result of the material movements of the subject. However, the process of image formation conclusions with the modeling of forming the image along with its material content, properties and the surrounding space of which it is located [12]. In the process of establishing a visual image, it is constantly changing, transforming and moving. Thus the feature becomes clear, unfinished parts are completed.

Preference should be given to pure primary colors rather than mixed colors in order to attract attention. Light, pure colors draw attention faster. Information can be given in the following order to take attention: orange, red, yellow, green, blue, purple. In natural light, warm colors (yellow, orange, red) have a more expressive effect than cold colors (green, blue, purple) [12]. Color has optically increasing or decreasing properties: light shades visually increase an object, and dark shades decrease it. This feature is related to the brightness of the color. Yellow is always the brightest, followed by white, red, green, blue, and black.

Another basic type of visual perception is perception of form. Research in this field has made it clear that cells contain a number of visual elements. If one of them follows the horizontal lines, the other

may not. On the contrary, it perceives vertical lines better. Such cells are called sign detectors. Moreover, they can perceive, for example, only a rectangle from a complex structure of visual shapes. Thus, the perceptive system gathers signs together by following their features. Then it adds these collected features to possible objects. If the process is successful, then the authentication is complete. A person trying to recognize an object first prepares a set of perceptual assumptions, expectations and thoughts. Increases the efficiency of the recognition process [9]. Restricts the search for a solution. Instead, a set of expectations and thoughts is distributed in the actual state of objects.

Similar complexities are inherent in the process of motion perception. A moving object can be seen by the visual perception. Because the object is projected in motion. However, movement is not always perceived separately. In the study of the psychology of perception, it was determined that, for example, the a rapidly rotating motion is perceived as a whole. The reason for this is the time limit between movements. Lack of time does not allow them to be perceived separately in the eye analyzer. As a result, the rotation movement is perceived as a whole. This perception of movement is the "stroboscopic effect" in psychology [7, p. 163].

Another sensory effect perceived is sound. Sound waves surround a person constantly. It is impossible to get rid of it. If it is possible to hide from light waves in a house or under a tree, sound waves pass through the thickest walls, even layers of water. "It means the filtering power of sound. They are expanded by concentric waves in the form of a spherical balloon, and after the first impulse of the sound source, they gradually fade away if the wave energy is depleted. Otherwise, the human ear would not be able to withstand such a strained wave network" [13].

Sound signals arrive later than the object is noticed. However, it is difficult to separate and differentiate the audio and visual channels when analyzing the image, as well as the audio signal of the object. Their meanings are combined in the process of human perception. Therefore, audio and visual images provided by information technologies should serve the same content and complete each other [10].

It is also known from physics that sound quanta are collected from height, continuous and dynamic elements. These three concepts form a unity with each other: if there is no height, its continuation and dynamics are meaningless. On the other hand, dynamics and continuity must belong to something. This unity is only undermined by sounds that do not affect the human hearing or that are beyond the range

of person's hearing. This probably shows the wisdom of nature, because if these sounds are not heard, they are capable of creating terrible shocks and nervous tension. On the other hand, the healing properties of ultra waves are well known. What said about the voice gives reason to conclude that the voice quality of both the teachers and the technological tool used by them must be taken into account in the process of transmitting information.

Another important issue is the semantic perception of images. R.M. Aliguliyev and Y.M. Jafarov explain the issues of understanding the semantics of words especially in the virtual space, by the fact that the sound complex of a word in real life creates its own meaning – content significance in human thinking, and a person finds the source of meaning (denotation) of the necessary object, by own. In the virtual world, the denotation of the word is virtual. Here, a person searches not for the denotation of the word, but for information such as text, graphics, audio, video reflecting its meaning in more detail, guided by the entered keyword. One of the comprehensive definitions related to the meaning of the word is: "The meaning of the word (significant meaning, significance) is the highest stage of the reflection of reality in the human mind together with the conceptual stage. The meaning of the word reflects the general and important features of the subject, perceived in the social practice. The meaning of the word strives to be understood as the last level of understanding" [2, p. 34]. They value virtual space as a new semantic environment for synonyms. Here, synonyms have two aspects of word meaning: 1) main meaning in the language; 2) the specific meaning in context.

Despite the researches done in these areas, synonyms in the virtual environment are currently characterized by a number of difficulties arised during obtaining the information from information retrieval systems. From this point of view, R.M. Aliguliyev and Y.M. Jafarov also explain the difficulties on the comprehension of the semantics of key words clarified the essence of information.

1. Synonyms can be a word, a phrase, a sentence, a specific meaning group of a sentence, or even a whole text since they are revealed in a more contextual sense in the virtual space. Therefore, to search for any information in the search engine, it is necessary to enter all possible synonymous contexts related to it.

2. It is also a common case that words in completely different meanings in the language acquire synonymous meanings in the virtual language environment.

3. The development of the Internet has led to the emergence of a large number of synonyms, which

has a great impact on the difficulties observed with synonyms in the virtual environment [2, p. 37].

As it can be seen, the organization of perception as a process consists of working on information created sensory information about external objects and events. The process of perception has several features: completeness in perception; meaningfulness in perception; selectivity in perception; personal expectations. People differ in what information they exchange, what roles they play, what goals they pursue and etc. Since every person living in the society has their own thoughts, outlook, life rules and expectations, it is not easy to meet someone whose ideas coincide with yours. It would be easier for you if you lived among animals. All animals are the same, they are all driven by instincts. But when you live among people, you'll have to deal with rapidly changing moods, opinions not matching with yours, violence to overcome and protection from it, and differences in language understanding. All people can speak the same language, but the words spoken by everyone, the meanings of the thoughts are not always understood by his interlocutor as they are in their essence.

The result is that even the simplest processes in the science of psychology still keep their secrets hidden from science. No matter how simple our approach is to the process of perception, there is a need to clarify how it occurs. Therefore, for example, how to perceive text and images attracts attention as an actual issue. Cognitive processes take place under the influence of feelings and emotions, and are accompanied by them, and this process is influenced by a number of structures of personality, that is why, the process of perception takes on a new essence in every social structure and historical situation. Therefore, it is believed that there is a need to study the perception of images by students in modern education.

In fact, based on the opinions of the point of view of researchers, "the history of communication did not consist only of the development of means of information transfer, it is also related to the history of information transmission through communication channels and material messages like letters encoded in material, symbolic and form. It is also considered as the development of a historical form of communication and culture, and humans as "communicators": primitive people's pre-hunting dances, unique individual declarations of love, rules of engagement between business partners, hiring journalists and organizing a press conference with the head of state can be some of the examples related to that" [6, p. 7].

Researchers believe, that explains about the choice of life strategy "Information and communication technologies (ICTs) evolve rapidly, and employees perceive ICTs as both resources and demands. Based on the job-demands-resources model, we develop an ICT demands-resources model to analyze how employees' perceptions of ICTs impact burnout, work-family balance and job satisfaction" [6, p. 8].

As in all areas of social life, the computerization of learning and perception puts new demands on studying theories. Thus, the first issue in learning is related to the relevant perception of the subject. There are general principles in this process. These principles are expected in the learning of new material in each studying activity. In particular, creative aspects of cognitive processes in educational activity work with these principles. The specified characteristics of mental activity require the actualization of the necessary knowledge in the learning process. The new educational conditions should be aimed at solving these difficulties. It is necessary to create a development environment for these conditions. A.A. Alizade's conclusion is that the product of perception is an image. "At the end of the 20th century, the image category began to be systematically investigated in a theoretical-historical context. An image is a subjective view of the world. This important image includes the subjects themselves, other people, spatial

and temporal characteristics of events. There were even traditions of limiting the image to perceptive processes. According to modern psychological concepts, the image manifests itself as both a sensory (feeling) and a mental image [1, p. 8].

**Conclusion.** The lack of an informational approach to educational activity is experienced in the determination of the tasks that students set for themselves in the educational activity. In the information approach, it is important to define tasks during work on it. Predetermination of the teaching task appears as a function of objective and subjective factors. The last mentioned task covers the learners' knowledge levels, learning abilities and thinking, students and teachers, and involves not only learning but also the ability to be a role model for other learners.

Visual perception does not exist in isolation from other components contributed to the perception of the world. In fact, a person's attitude to information is established in the context of energy-information relations. The role of mental energy in the creation of energy-information relations is great. Productivity of human activity and its results is related to mental energy. When there is a match between information and a people's energy field, they are interested in activities not only at the level of internal processes, but also at the level of the social structure of the personality (interest, goal, orientation, etc.).

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### **Хасанова М.Ф. СПРИЙНЯТТЯ ІНФОРМАЦІЇ, ЩО ПЕРЕДАЄТЬСЯ ЗАСОБАМИ КОМУНІКАЦІЙНИХ ТЕХНОЛОГІЙ, СКЛАДОВИМИ ЕЛЕМЕНТАМИ**

*Сприйняття інформації, що передається за допомогою комунікаційних технологій, пов'язане з особливостями розвитку емоційно-вольового стану людини. Зміст інформації, здібності та соціальний розвиток людини, що її сприймає, є важливими чинниками у складі та розвитку цього процесу. На сприйняття інформації, що передається комунікативними засобами, також впливає взаємодія знаків, символів, букв, звуків, кольорів, форм, тексту та зображень, з яких складається інформація, і психіки людини. Наприклад, сприйняття видимого зображення починається з його освітлення і залежить від настрою, фізіологічного стану людини, яка сприймає цю інформацію. Загалом, у цьому процесі задіяно багато факторів. Залежно від впливу цих факторів один і той же образ різними людьми сприймається по-різному. Крім того, до факторів формування відмінностей відносять особливості структури суб'єкта, мотивацію діяльності і соціальне оточення. Таким же чином якість інформації має важливий вплив на все це. Основні закономірності взаємовідносин між відправником і одержувачем інформації та механізм «стимул-реакція» між людьми знаходяться в рамках теорії відносин. Методи цієї теорії також використовуються в дослідженнях сприйняття інформації в психології. Показано, що сенсорні ефекти інформації виходять на перший план при її сприйнятті. Вони впливають на систему знаків, кольорів, форм, звуків, рухів. Кожна їх фізична природа впливає на сприйняття інформації. Сам процес розуміння є важливим аспектом цього сприйняття. У цілому процес засвоєння інформації відбувається за законами сприйняття мови та віртуальних фігур. Чим більше розумових факторів буде враховано в повній мірі при підготовці інформації, тим ефективнішим буде процес її розуміння.*

**Ключові слова:** сприйняття, інформація, комунікація, теорія відносин, текст, форма, модель.