

## The Ways of Development of Students' Creative Thinking by Actualizing their Auditory Differential Sensation

### Шляхи розвитку творчого мислення студентів шляхом актуалізації їх слухового диференційованого відчуття

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### ABSTRACT

**The aim** of our research is to show the ways of development of students' creative thinking by actualizing their auditory differential sensation; to propose three stages of perception and understanding of video resources.

**Methods of the research.** The following theoretical methods of the research were used to solve the tasks formulated in the article: a categorical method, structural and functional methods, the methods of the analysis, systematization, modeling, generalization. The experimental method was the method of organizing empirical research.

**The results of the research.** Perception and understanding of video resources has some stages: at the stage of perception, as evidenced by the review of the literature, finding out a general idea about the text, by implying of which it is formed (usually we mean about the volume, grammatical correctness), which forms a vague forecast of what the text will be about and by what elements it forms interest of students. The success of perception, in our opinion, is represented by the activity of reception and the accuracy of the recipient's expectations according to this text. Then we'd like to show criteria of perception and understanding of video resources: reception activity, which is determined by the attention to the video material or by ignoring it. The reception indicator is the amount of video material that the student watched. Such activity is the initial stage of emotional identification (surface emotional identification), as it was arisen on the basis of an emotional reaction, such as: "it is interesting" – "it is not interesting"; the accuracy of expectations, which reflects a perceptual forecast regarding video materials and it is verified by the indicator of the coincidence of dominants in the process of secondary perception of video materials. In such a way we mean the reactions to a certain fragment of video material and its complete primary viewing. In turn, expectations precede interpretations, forming presuppositions for interpretation. They can be considered a superficial interpretation.

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**Conclusions.** *It has been proven that at the stage of emotional identification secondary video material is supplemented with probable emotional connotations, awareness of the author's assessment and formation of his/her own, as well as their correlation. We consider the criteria of this stage to be: 1) consistency of emotional attitude of students, which is expressed through the correspondence of connotations in the Primary and Secondary video materials; the percentage of connotations of Secondary perception that coincided can be considered an indicator of connotations; 2) adequacy of assessment, such as the ratio of the assessment of the difficulty of understanding video materials with the indicator of adequacy of its interpretation.*

**Key words:** *creative thinking, auditory differential sensation, emotional attitude, Primary and Secondary video materials, understanding video materials.*

## Introduction

Under the influence of processes of globalization and the integration of our country into the European system the educational process in Ukraine at the educational institutions has some significant changes. They are focused on achieving world educational standards. New conditions of professional activity require different changes in the principles of general scientific methodology, the use of new, more effective approaches, methods and techniques of teaching different subjects at the universities.

The problem of developing students' creative thinking in the process of learning languages as means of communication becomes especially relevant in modern Psychology (Hamedi & Pishghadam, 2021). However, traditional methods of teaching do not give significant positive results. Students at the initial stage of learning have a low level of the development of auditory differential sensation, which disrupts the perception of the sound image of words. Students do not know how to predict lexical material when constructing their own statements, correctly encode and decode vocabulary material (Engle, 2002; Falé, Costa & Luegi, 2016). All these processes lead to the inability to reflect the required number of facts, to speak logically and competently, to argue students' points of view, to expand their statements

through lexical and grammatical knowledge, to saturate statements with lexical units on a given topic, to support a conversation or lead a discussion spontaneously. The main in this case is a Cognitive Approach to develop students' creative thinking, that will be able to make communicative methods of teaching more dynamic, that will give a new impetus to the renewal of creative thinking of students (Cui, Wang & Zhong, 2021).

Many psychologists (Івашкевич Ер. & Кюмарніцька, 2020; Максименко, Ткач, Литвинчук & Онуфрієва, 2019) have dealt with the problem of developing students' creative thinking in foreign language teaching. Modern modifications of developing pupils' creative thinking in the process of teaching foreign languages have received the most consistent theoretical justification in the researches of scientists (Drigas & Karyotaki, 2017). Nowadays, there is a further theoretical development and practical implementation of developing students' creative thinking according to foreign language learning by use of the models of learning different types of speech activity: reading, listening, writing, speaking at the lessons.

So, the *aim* of our research is to show the ways of development students' creative thinking by actualizing their auditory differential sensation; to propose three stages of perception and understanding of video resources.

### Methods of the research

The following theoretical methods of the research were used to solve the tasks formulated in the article: a categorical method, structural and functional methods, the methods of the analysis, systematization, modeling, generalization. The experimental method was used as the method of organizing empirical research.

### Results and their discussion

In the conditions of reforming the educational system of Ukraine there is a rethinking of the goals of developing students' creative thinking by actualizing their auditory differential sensation, content and organization of foreign language teaching.

Currently, the use of techniques and methods that form the students' abilities to acquire knowledge independently, to find and to analyze the necessary information, to draw conclusions and inferences, which increase the importance of the formation of students' universal learning activities.

In this case, the improvement of the perception at the lessons as the main form of the organization of educational activities becomes very important. According to the available definitions, a lesson is a form of organization of the educational process in which the teacher for a specified time organizes cognitive and other activities of a permanent group of students (with a whole class) taking into account the characteristics of each of them, in order for all pupils to master the basics of the subject directly in the learning process, as well as for the education and the development of cognitive and creative abilities, spiritual strength of students (Ehri, Nunes, Willows, Schuster, Yaghoub-Zadeh & Shanahan, 2001).

Scientists define a lesson as an integral part of the educational process, at which like a drop of water all the pros and cons of the scientific concept having been used by the teacher are reflected (Dubovyk, Mytnyk, Mykhalchuk, Ivashkevych Er. & Hupavtseva, 2020).

*The purpose of the lesson with the aim of developing students' creative thinking by actualizing their auditory differential sensation* has to be the acquisition of students' knowledge, skills and abilities, the development of their competencies, the achievement of final results having been established by the State standard of the appropriate level of education. The tasks of the educational sector at school, in accordance with the State Standard, are:

– further development of motivation to study Language and Literature, assimilation through Language and Literature the History, Culture, moral and aesthetic values, formation of students' spiritual world, their worldviews, the development of civic qualities, affirmation of national and universal values by means of Language and Literature;

– the development of skills to communicate freely in different situations, to formulate and defend one's own opinion, to lead a discussion, to evaluate life phenomena, moral, social, historical and other problems of the present, to express one's own opinion, to achieve mutual understanding and interaction with other people;

– the improvement of basic lexical, grammatical, stylistic, orthoepic, spelling skills, generalization and deepening of students' knowledge about Language as a social phenomenon and about Literature – as the Art of speech;

– the development of skills to navigate in a variety of information in Ukrainian and other languages, in the world of classical and mass literature, to use modern information for communications (Internet, distance learning system, etc.), to conduct research activities (to find, to perceive, to analyze, to evaluate, to systematize, to compare various facts and information), to apply in practice the knowledge acquired in the process of studying Language and Literature, acquired skills and abilities;

– the improvement of research skills of independent learning, providing self-development, self-control, development of artistic and figurative thinking, intellectual and creative abilities of students, their emotional and spiritual sphere, aesthetic tastes and general culture.

The Competence Approach reflects this or that type of educational content, which is not reduced to a psychologically oriented component, but includes heuristic experience of solving life problems by students, performing key functions, social roles, providing the manifestation of competencies. Competence approach in the process of education in contrast to the concept of "knowledge acquisition" involves the development of students' skills that allow them to act effectively in future situations of professional, personal and social life. Of course, subjective knowledge does not disappear from the structure of education, but they play a subordinate, indicative role, because students have abandoned not knowledge as a cultural subject, but a cer-

tain form of knowledge (knowledge "just in a case", such as information) (Ferdowski & Razmi, 2022).

As we rightly noted in other our articles (Mykhalchuk & Ivashkevych Er., 2021; Mykhalchuk & Khupavsheva, 2020) the theoretical development of the person deals with the substantiation of the Competence Approach (Jiang, Zhang & May, 2019). So, it is necessary not so much to have knowledge, but to have certain competencies and be ready to find and select the necessary knowledge in the vast repositories of information created by mankind at any time.

The aim at a foreign language lesson is the formation of foreign language communicative competence, which is a complex of integrative education, which includes Language, Socio-cultural, Compensatory, Educational and Cognitive components. This is the specificity of a foreign language lesson with the aim of teaching foreign language communication, the formation of language and speech skills by various types of speech activities: listening, speaking, reading, writing. According to scientists, the main characteristics of a foreign language lesson are language orientation, individualization, novelty, situationality and functionality (Ivashkevych Ed. & Onufriieva, 2021).

Modern foreign language lesson has to actualize a number of requirements, among which psychologists call the communicative orientation of the learning process, a content, educational and developmental value, favorable psychological atmosphere, rationality of the chosen structure, the correct distribution of time between stages of the lesson, creating necessary conditions for students, combination of different forms of the activity (individual, pair, group, frontal), providing systematic educational control of knowledge, organization of intensive independent activity, actualizing use of differentiated approach to different groups of students, maintaining optimal lesson pace for them, changing activities, creating problem and search different situations.

Successful implementation of the requirements for a modern foreign language lesson is possible only if the teacher has the

necessary professional knowledge and skills. Scientists include four groups of skills to professionally significant skills, such as:

- the ability to know the characteristics of the student's personality, which is formed and developed on the basis of the process of obtaining self-knowledge;
- skills related to the process of planning language communication in the educational process;
- skills related to the implementation of well-planned actions and gaining evaluation of positive results;
- the ability to analyze the results of being well-organized at the lessons (Huang, Loerts & Steinkrauss, 2022).

Thus, among the requirements for a modern foreign language lesson, it is important to understand the process of language learning itself (we mean a cognitive process).

In this context we've to say, that students have been interested in the problems of obtaining humanity of knowledge and understanding the information from ancient times. Researches about where and how the person's knowledge and experience are gained have outlined the subject area of a Modern Interdisciplinary Approach to the study of Cognition – such as Cognitive Science.

Cognitive Science has a specific aim of obtaining knowledge about knowledge, the focus of its attention on the problems of having been associated with obtaining, processing, storing, extracting and operating knowledge. These problems apply to all procedures that characterize the use of knowledge in human behavior. The most important is the process of thinking in the paradigm of communication. Cognitive Science deals with the information about the world, studying such complex phenomena of human existence as the perception of the world and the reflection of what was perceived in the human head (we mean the languages of the brain, the memory and the organization of human cognitive abilities). A distinctive feature of the immediate interests of cognitive science is the appeal to knowledge and cognition. Many researchers (Greco, Canal, Bambini & Moro, 2020)

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see the global task of Cognitive Science in understanding how a person with his/her relatively limited abilities is able to process, transform huge amounts of knowledge in extremely limited periods of time (Hogan, Adlof & Alonzo, 2014).

However, human knowledge and processes of cognition are too complex to provide their description within the paradigm of any Science, being the central problem in Philosophy, Psychology, Logics, etc. Therefore, Cognitive Science will be developed as an interdisciplinary science. It is designed to combine the efforts of specialists in different fields of knowledge: psychologists and linguists, philosophers, specialists in artificial intelligence, on the organization of knowledge bases in computers and mathematical modeling.

We think that video resources are the main instrument of development students' creative thinking by actualizing their auditory differential sensation. Let us explain our position.

Perception and understanding of video resources has some stages:

1. At the stage of perception, as evidenced by the review of the literature, finding out a general idea about the text, by implying of which it is formed (usually we mean about the volume, grammatical correctness), which forms a vague forecast of what the text will be about and by what elements it forms interest of students. The success of perception, in our opinion, is represented by the activity of reception and the accuracy of the recipient's expectations according to this text. Then we'd like to show criteria of perception and understanding of video resources:

1.1. Reception activity, which is determined by the attention to the video material or by ignoring it. The reception indicator is the amount of video material that the student watched. Such activity is the initial stage of emotional identification (surface emotional identification), as it was arisen on the basis of an emotional reaction, such as: "it is interesting" – "it is not interesting".

1.2. The accuracy of expectations, which reflects a perceptual forecast regarding video materials and it is verified by the

indicator of the coincidence of dominants in the process of secondary perception of video materials. In such a way we mean the reactions to a certain fragment of video material and its complete primary viewing. In turn, expectations precede interpretations, forming presuppositions for interpretation. They can be considered a superficial interpretation.

2. At the stage of interpretation, with the help of thinking and memory, the meaning of perceived video material is analyzed, key words are singled out, meanings are formed. These meanings form a rational structure of sense in order to implement a secondary perceptual process. In our opinion, the successful criteria for understanding and interpreting the video material at this stage are:

2.1. Adequacy of interpretation of video materials (qualitative criterion), such as selection of the main, basic dominants in their structure.

2.1. Completeness of understanding (quantitative criterion), that is the presence in the structure of the secondary material (which is produced by the student after the second, third, etc. viewing of the video materials) of all the respondents regarding the semantic dominants from the primary precepted video material.

So, let's describe the impact and the importance of using video resources the developing of creative thinking of students. Videos, like other theme-based materials, are effective springboards for different other content-based classroom activities. They provide background information and proper stimuli for subsequent reading, writing, speaking and listening activities (El-Zawawy, 2021).

As scientists (Gathercole, Pickering, Ambridge & Wearing, 2004) observe, the use of video in the classroom is highly motivational for students. They are stimulated to acquire new words and phrases, while they are learning about the target culture and they are receiving renewed input of the target language.

Other authors highlight the importance of the video as a facilitator of mental processing, thanks to the images on the TV

screen that are life-like, such as representations of people or objects (Hornberger & Link, 2012).

The use of audio player Cds with conversations between people is a common practice at schools, but it seems rather unnatural for students because they are avoided to see the speaker and the environment. Video provides this environment, and this helps learners to understand a particular discourse and improve their long-term listening comprehension, as well as their confidence in speech acts (Mai, 2022).

The researches of scientists (Murphy, Melandri & Bucci, 2021) note that to make the listening input easily is comprehensible for the scenes with utterances. They should be back up by body language. The students who were in sound-only conditions were less successful in maintaining the interest and concentration in listening. For scientists (Ivashkevych Er., Perishko, Kotsur & Chernyshova, 2020) more important is that video which provides visual stimuli that can help students generate predictions and speculations activating their background schemata.

So, we provided our research at the 1<sup>st</sup> course of philological faculty of Rivne State University of the Humanities. Our research lasted during 2022. In this research 43 students participated (Groups IM-11, IM-12).

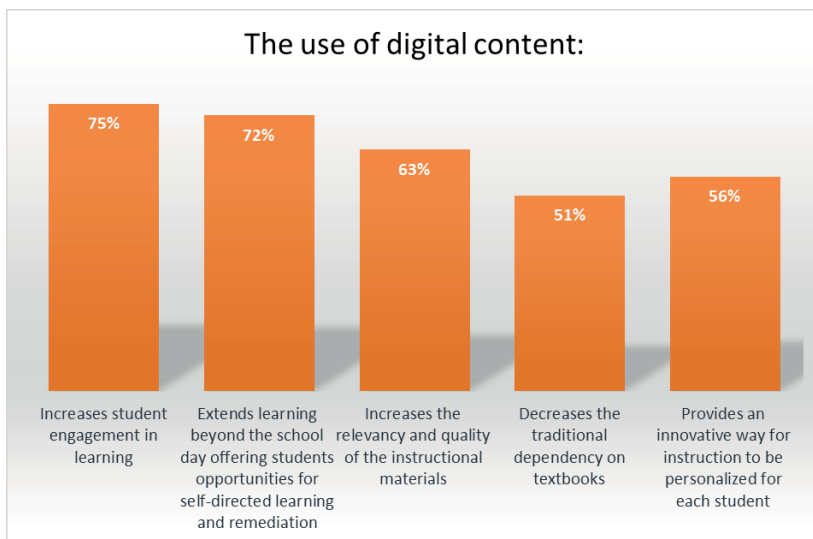
The research over this span of time has consistently shown the positive benefits of its use. Evidence-based findings indicate using video in the classroom, which:

- facilitates thinking and problem solving;
- fosters mastery learning;
- inspires and engages students;
- helps to develop learner's autonomy.

At the English classroom video is new only in its improved quality and wider availability. The use of video in the classroom will continue to expand. The principals who've employed blended learning at the lessons say that the use of digital content:

- increases students' engagement in learning (74.68%);

- extends learning beyond the school day offering students great opportunities for self-directed learning and remediation (71.96%);
- increases the relevancy and quality of the instructional materials (62.58%);
- provides innovative ways for instruction to be personalized for each student (55.64%);
- decreases the traditional dependency on textbooks (50.91%) (Fig. 1).



**Fig. 1. The ways of use digital content by students, watching video materials at the lessons**

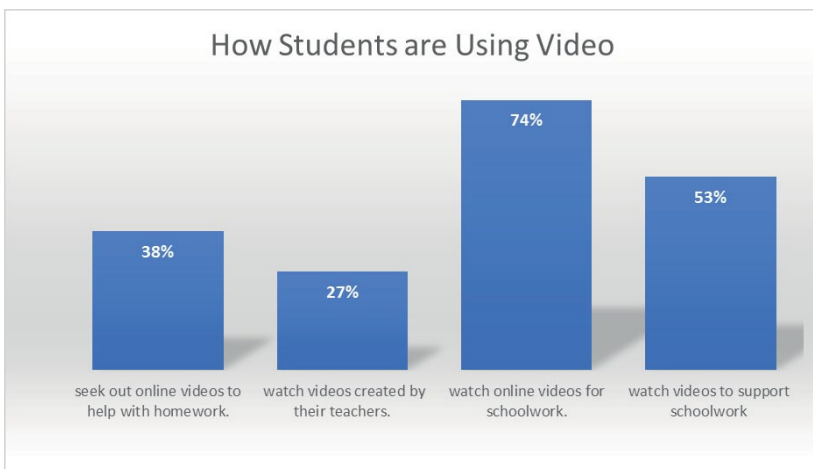
Let's describe how students are using video. Data and teacher experience are far from the only drivers of video in the process of education. Students' experience is a key factor in the explosion of video in the classroom. Today's students have never known a world without video. Among students in the age of 18 or younger, 89.56% use smartphones. Around a half of students have their own smartphones. A quarter of them say they're "con-

stantly connected” to the Internet. **91.76%** of US students watch Youtube, compared to just **85.66%** of students who use Snapchat, and **81.17%** of them who use Facebook.

Since video is a constant in students’ personal lives, it’s natural for them to want to use it at the lessons. Here’s how students are using video to support their education:

- more than a third (**37.93%**) of students seek out online videos to help with homework;
- **26.95%** said that they regularly watched videos having been created by their teachers;
- **73.93%** of students said they watch online videos for homework.

The top subject areas in which the students watch videos to actualize their knowledge are: Science (**65.73%**), Logics (**58.92%**), Social Studies/History (**52.94%**) and English/language Arts (**44.91%**) (Fig. 2).



**Fig. 2. The ways of use video resources by students**

So, let us show benefits of using video materials by students:

- Videos create a more engaging sensory experience than using print materials separately. Learners actually get to see

and hear the concept having been taught and can process it in the same way they process their everyday interactions.

- They provide a go-to resource that can be watched from anywhere with an Internet connection. Video materials are accessible on a multitude of devices including laptops, tablets and smartphones. This allows for viewing at the students' convenience and from wherever they are.

- Videos increase knowledge retention, since they can be stopped and replayed as many times as it needed. They can also be reviewed long after the initial lesson was taught.

- They greatly assist in the process of learning of all subjects, but particularly those topics that are complex and/or highly visual (such as step-by-step procedures or Science and Math formulas).

- They increase proficiency in digital literacy and communication, which are important for the 21<sup>st</sup> century skills.

- Videos in a great degree develop a creative thinking of students.

There are also benefits to teachers:

- Videos increase students' engagement, which in turn help scientific achievements. If students are interested in the material, they will better process and remember it.

- They offer the flexibility to pause or skip throughout the video to have a class (group) discussions or review particular areas.

- They enable teachers to create a flipped classroom, or provide "blended" learning environment. However, videos are also beneficial to teachers who teach in traditional classroom settings.

- Digital videos facilitate remote learning opportunities where teachers can reach students from all over the world.

- Nowadays many videos contain analytic characteristics that enable teachers to track students' engagement and attendance while viewing. Companies like "Next Thought" even provide platforms that can track how long a video was viewed for

and what percentage of the video was watched. This allows the facilitator (the teacher) to gage the effectiveness of the video.

- Videos provide opportunities for students to get feedback and assistance through the video. This is helpful for students who are unable to attend classes, or who need tutoring or reviewing sessions.

- Videos seek to change the roles of teachers from lecturers to facilitators. It's important to note that videos are meant to enhance course materials and lectures, but not to replace them.

- Visual stimulation grabs students' attention. Visual stimulation encourages students' interaction with the content or the concept. It also creates a bigger memory imprint in the pupils' mind, making teaching with videos greater for information retention, using video resources actualizing students' language skills.

### **Conclusions**

It has been proven that at the stage of emotional identification secondary video material is supplemented with probable emotional connotations, awareness of the author's assessment and formation of his/her own, as well as their correlation. We consider the criteria of this stage to be:

1. Consistency of emotional attitude of students, which is expressed through the correspondence of connotations in the Primary and Secondary video materials; the percentage of connotations of Secondary perception that coincided can be considered an indicator of connotations.

2. Adequacy of assessment, such as the ratio of the assessment of the difficulty of understanding video materials with the indicator of adequacy of its interpretation.

So, let us describe the result of students' understanding of video materials. According to the Theory of the Activity, any activity must end with a result. Speech activity consists of two processes, which are opposite in their direction: understanding and production of speech. We define the result of speech production as a text. At the same time, regarding the understanding of

video materials, this question remains completely unresolved, in particular, the problem of the relationship and interaction of the process and the result of understanding needs to be solved. Since understanding occurs in the mental world of the subject's perception, it has a subjective and hidden character, which complicates the theoretical solution of this problem and brings it closer to the psychophysical problem of consciousness. We offer several options for interpreting the result of understanding video materials, such as:

- meaning as a result of understanding;
- image as a result of understanding;
- a visual concept as a result of understanding;
- a secondary text as a result of understanding;
- a minimal model of the perceived text as a result of understanding;
- a conclusion as a result of understanding;
- a cognitive map or mental representation as a result of understanding video materials.

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**Михальчук Наталія, Комарницька Людмила. Шляхи розвитку творчого мислення студентів шляхом актуалізації їх слухового диференційованого відчуття.**

**Мета дослідження** – показати шляхи розвитку творчого мислення студентів шляхом актуалізації їх слухового диференційованого відчуття; запропонувати три етапи сприйняття та розуміння відеоресурсів.

**Методи дослідження.** Для розв'язання поставлених завдань використовувалися такі теоретичні методи дослідження: категоріальний, структурно-функціональний, аналіз, систематизація, моделювання, узагальнення. Експериментальним методом є метод організації емпіричного дослідження.

**Результати дослідження.** Показано, що сприймання і розуміння відеоматеріалу відбувається в декілька етапів: на етапі сприйняття формується загальне уявлення щодо тексту (зазвичай щодо обсягу, граматичної правильності, що формує нечіткий прогноз того, про що йтиметься в тексті та формує зацікавленість). Успішність

сприйняття, на нашу думку, репрезентується активністю рецепції та точністю очікувань реципієнта щодо тексту. Тоді критеріями можна вважати: активність рецепції, яка визначається увагою до відеоматеріалу або його ігноруванням. Показником рецепції є кількість відеоматеріалу, який студент переглянув. Така активність є початковим етапом емоційної ідентифікації (поверховою емоційною ідентифікацією), оскільки виникає на основі емоційної реакції цікаво – нецікаво; точність очікувань, що відображає перцептивний прогноз щодо відеоматеріалів та верифікується показником збігу домінант у вторинному сприйманні відеоматеріалів – реакціях на певний фрагмент відеоматеріалу та повний первинний його перегляд. Своєю чергою очікування передують інтерпретації, формуючи пресупозиції для тлумачення. Їх можна вважати поверхневою інтерпретацією.

**Висновки.** Доведено, що на етапі емоційної ідентифікації відбувається доповнення вторинного відеоматеріалу ймовірними емоційними конотаціями, усвідомлення авторської оцінки та формування власної, а також їх співвіднесення. Критеріями цього етапу вважаємо: 1) узгодженість емоційного ставлення, що виражається через відповідність конотацій у первинному та вторинному відеоматеріалах; показником конотацій можна вважати відсоток конотацій вторинної перцепції, які збіглися; 2) адекватність оцінки, тобто співвідношення оцінки складності розуміння відеоматеріалів з показником адекватності інтерпретації.

**Ключові слова:** творче мислення, диференціальне слухове відчуття, емоційне ставлення, первинні та вторинні відеоматеріали, розуміння відеоматеріалів.

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