

DAS SYSTEM ZUM STUDIEREN VON METHODEN ZUR ERSTELLUNG UND VERWENDUNG VON BILDUNGSVIDEOINHALTEN IM PUBLIKUM

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Zusammenfassung: Der Artikel stellt das System der Funktionen von Lernvideoinhalten vor: visuelle Präsentation von Informationen, hohe Geschwindigkeit der Informationsübertragung, Verwaltung der Aufmerksamkeit des Publikums, Aufrechterhaltung des Interesses am Lernen durch emotionale Inhalte, Übermittlung von Bedeutung durch visuelle Strukturierung von Informationen, Übermittlung von Werten durch Mittel der nonverbalen Kommunikation. Basierend auf der Systematisierung der Funktionen der Verwendung von Lernvideoinhalten in der Bildung wird eine Liste identifiziert Medienkompetenzen, die von einem modernen Lehrer benötigt werden: die Fähigkeit, visuelle Videos zu erstellen und zu verwenden; die Fähigkeit, eine ergonomische Informationsgeschwindigkeit im audiovisuellen Strom zu wählen; die Fähigkeit, die Aufmerksamkeit des Publikums mit audiovisuellen Mitteln zu steuern; die Fähigkeit, emotionale Inhalte zu erstellen und zu nutzen; Fähigkeit, Informationsvisualisierungssysteme zu entwerfen; Erfahrung vor der Kamera. Ein funktionaler Ansatz zur didaktischen Gestaltung ermöglichte es, die Auswahl der Aufgaben für den praktischen Ausbildungszyklus dieses Kurses zu rechtfertigen. Durch das Studium der Gesetze der visuellen Wahrnehmung und Ergonomie, des Ausdruckspotentials verschiedener Videogenres, der Beherrschung der grundlegenden ästhetischen und technologischen Prinzipien und Techniken zur Erstellung von Videofilmen entwickeln die Studierenden Weiterbildungskurse in der Fähigkeit, Videomaterialien zur Erreichung von Lernzielen einzusetzen und damit zu arbeiten digitales Video mit verschiedenen technologischen Lösungen.

Schlüsselwörter: Lehrvideo; animiertes Video; digitales Geschichtenerzählen; Medienerziehung; Video-Infografiken; Informations- und Kommunikationstechnologien; Multimedia; Pädagogische Hochschulen; Studenten.

THE SYSTEM OF STUDYING METHODS OF CREATING AND USING EDUCATIONAL VIDEO-CONTENT IN AUDIENCE

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Abstract: The article presents the system of educational video content functions: visual presentation of information, high speed of information transfer, management of audience attention, maintaining interest in learning through emotional

content, transmitting meaning through visual structuring of information, transmission of values by means of non-verbal communication. Based on the systematization of the functions of using educational video content in education, a list is identified media competencies required by a modern teacher: the ability to create and use visual videos; the ability to choose an ergonomic speed of information in the audiovisual stream; the ability to control the attention of the audience using audiovisual means; the ability to create and use emotional content; ability to design information visualization systems; experience in front of the camera. A functional approach to didactic design made it possible to justify the choice of tasks for the practical training cycle of this course. Studying the laws of visual perception and ergonomics, the expressive potential of various video genres, mastering the basic aesthetic and technological principles and techniques for creating video films, students develop advanced training courses in the ability to use video materials to achieve learning goals and work with digital video using different technological solutions.

Keywords: educational video; animated video; digital storytelling; media education; video infographics; information and communication technologies; multimedia; pedagogical universities; students.

Video lectures are actively included in the educational process, in both format: the main and additional educational product. Especially in the context of the pandemic, we see that the demand for video materials has increased.

L. A. Kruglova, exploring the transformation of audiovisual content in new media, notes: "Flash and broadband access have made watching videos on the Internet fast and convenient.

The audience reads less and less, looks at pictures - it watches videos more and more. And this happens for a completely understandable reason - video is the most systemic, complex and most empowering medium" [9, p. 61].

Modern teachers also use the visual channel of information transmission in their professional activities, creating and demonstrating screencasts in the classroom [2; 3; 11; 18], video lectures [5; 13; 14], conducting video conferences [19, p. 43], organizing streaming broadcasting [1]. Of particular importance is the educational video in the context of the development of distance learning.

A modern teacher must be ready to use modern information and communication technologies and the media to solve cultural and educational problems.

Main part

Within the framework of this article, based on the system-structural method of research, we will analyze the use of visualization tools in teaching in a comprehensive manner, based on an understanding of the nature of visual perception, thinking and communication. A functional approach to didactic design will make it possible to identify a list of competencies necessary for a teacher in the field of methods for creating and using computer video and to justify the choice of tasks for a cycle of practical classes of this course.

Functions of educational visual content

The use of video content in the learning process performs the following functions:

- 1) visual presentation of information;
- 2) high speed of information transfer;
- 3) managing the attention of the audience;
- 4) maintaining interest in learning through emotional content;
- 5) conveying meaning through the visual structuring of information;
- 6) transmission of values by means of non-verbal communication.

Competence in the field of methods for creating and using educational video content. Let's consider what skills a teacher should have in order to create and effectively use the expressive potential of video content in the educational process.

1. Ability to create and use visual video materials. Visual perception provides "immediate awareness of the form, grasping its most characteristic features and patterns due to the accumulated experience, the presence of standards and cognitive maps in memory" [4, p. 91]. This perception provides realistic or objective video content. Video recordings provide a visual representation and identification of the studied objects, allow the viewer to form a personal visual experience. The visibility of the video sequence speeds up the perception of educational material and facilitates the acquisition of practical skills.

At practical lessons on video filming, students come to understand how the selection of material, the choice of angle, lighting and frame composition allows you to visualize the object being shown. In a practical lesson on creating screencasts, students gain experience in visually demonstrating a sequence of actions, and skills in commenting on a visual sequence.

2. The ability to choose an ergonomic speed of information in the audiovisual stream. It is known that a high speed of identification of visual objects provides a high semantic density of the visual range, reducing the time of perception.

By editing footage or creating animated videos, students gain experience in organizing a multimedia information flow. The experience of editing allows you to understand how the chronological organization of the video reveals the author's logic of presenting the material. During practical classes on creating video infographics and animated presentations, the ability to create an ergonomic balance of visual and audio streams is formed. Subsequent collective viewing and analysis of video materials helps to identify errors associated with excessive semantic density or, conversely, an excessively long frame that is not justified in terms of content.

3. The ability to control the attention of the audience using audiovisual means. It is known that the sequence of perception of a graphic object is determined by the principle "from general to particular", from form to content. The attention of the viewer is attracted by large and easily recognizable forms. In addition, moving objects attract attention. Modern video production is filled with dynamics provided by the movement of the camera and objects in the frame, editing techniques and animation effects.

The experience of scripting, compositing and editing footage or creating an animated video teaches listeners to evaluate the meaning of a frame, design a sequence of perceptions and control the viewer's attention, building a sequence of

frames and movement within the frame in accordance with the logic of the presentation of the material.

4. Ability to create and use emotional content. Experienced lecturers use emotional or subjectively colored inserts for emotional release, maintaining interest and attracting the attention of the audience. Jokes, stories, ironic or surprising illustrations are used by educators in educational videos and presentations for the same purpose. They contribute to the retention of attention, the establishment of an emotional connection, the awakening of interest in the educational material. In advertising, management and education, the method of storytelling is used to convey values and motivate the audience. “Digital storytelling is a method of electronic communication based on the organization of multimedia content around a single story” [8, p. 41]. Storytelling techniques activate the mechanisms of narrative thinking, which is closely related to the processes of generating meanings and interpreting what is happening. The viewer compares himself with the characters of the story, puts himself in their place, empathizes, evaluates their actions, correlates what he sees with the personal picture of the world and the system of values. Narratives “allow us to comprehend actions, to integrate life events into a single whole” [10, p. 4].

5. Ability to design information visualization systems.

Visual thinking is defined as “mental activity based on the operation of visual spatially structured schemes” [16, p. 138]. Reasonable use of visual information structuring techniques contributes to the transformation of educational content into understandable and easy-to-remember schemes. For this purpose, abstracts are created based on visual coding of information: building lists and rubrication systems, graphical highlighting (underlining, color, etc.) of information, creating diagrams, diagrams, tables, blocks, mind maps [20]. Knowledge of the principles of visual structuring and design of information is necessary to create video infographics and animated presentations.

The development of video infographics by students involves the processing of information received from various sources, its analysis, and generalization. To create high-quality video infographics, you need to do a lot of analytical work, and then choose visualization tools that allow you to present the conclusions to the audience as fully, accessible and visually as possible. The experience of developing static infographics in practical classes is described in the articles “Principles of using online infographic editors” [6] and “Teaching methods for developing infographics in a pedagogical university” [7] and is applicable to creating video materials in this genre.

Thus, the analysis of the functions of using video materials in the educational process allows us to design a cycle of practical classes aimed at the formation of the declared competencies and to justify the choice of genres, techniques and technologies (Table 1).

Functions of educational content	of visual	Competences in the field of computer technologies	video	Genres, techniques and technologies studied in practical classes
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Visual presentation of information.	Ability to create and use visual video materials.	Video filming. Creation of screencasts.
High speed information transfer	The ability to choose an ergonomic speed of information in the audiovisual stream.	Filming and editing of footage. Create animated videos
The ability to control the attention of the audience.	The ability to control the attention of the audience, using audiovisual means.	Filming and editing of footage. Create animated videos
Maintaining interest in learning through emotions.	Ability to create and use emotional content.	Creation of animation in the genre of digital storytelling. Performance in front of the camera.
The transfer of meaning through the visual structuring of information.	Ability to design information visualization systems.	Create video infographics and animated presentations
Translation of values by means of non-verbal communication.	Ability to perform in front of the camera	Performance in front of the camera. Thematic montage.

Understanding the functions and expressive potential of video enables learners to use video materials to achieve their learning goals. The study of the presented system of genres, techniques and technologies of video content is an effective means of developing a whole range of skills for presenting and processing video content, which are so in demand in the modern educational process. Studying the laws of visual perception and ergonomics, understanding the expressive potential of various video genres, mastering the basic aesthetic and technological principles and techniques for creating video films allow future teachers to apply these principles using different technological solutions. In addition, the experience of project work on video films received by students in the course of mastering the curriculum will allow organizing project activities of students and masters in the field in the future.

Conclusions

Drawing conclusions, we can say that using them in the classroom improves the quality of learning, serves not only to present knowledge, but also to control, consolidate, repeat, generalize, therefore, performs all didactic functions. Technical means at the lesson arouse the cognitive interest of students.

An important role is played by the use of video materials, since the dynamism of the video film gives speech a clarity that is not achievable by any static images, and also has the ability to create a speech environment that students lack when teaching a foreign language. Of course, video materials cannot replace other visual aids. It's just that each of them should find the optimal place in the educational

process. The effectiveness of the use of technical teaching aids depends on the professional training of the teacher. Preparing for a lesson with the use of technical means, the teacher must carefully prepare for the lesson. Thus, the demonstration of a video film should not be just entertainment, but should be part of a purposeful educational process that meets all the requirements of teaching methodology. Video is an indispensable aid where it is necessary to show how this or that phenomenon reflects a non-speech situation.

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