Antonio Dos Reis
PhD in Education Sciences, Director of the Graal Institute, Scientific coordinator, university teacher, consultant on e-learning
University of Extremadura, Spain
antoniodreis@gmail.com

Nataliia Morze
Doctor of Pedagogical Sciences, Professor, Corresponding Member of National Academy of Pedagogical Sciences of Ukraine
Vice-Rector on Informational Technologies
Borys Grinchenko Kyiv University, Kyiv, Ukraine
n.morze@kubg.edu.ua
ORCID: 0000-0003-3477-9254

Svitlana Vasylenko
Vice-Head of IT in Education Laboratory,
Borys Grinchenko Kyiv University, Kyiv, Ukraine
s.vasylenko@kubg.edu.ua
ORCID: 0000-0002-5790-572X

DIDACTIC VIDEO CREATION AS A COMPONENT OF THE IMPLEMENTATION XXI CENTURY TEACHERS' METHODOLOGICAL COMPETENCIES

Abstract. This article is devoted to the results of the study of the developing method for creating didactic video and its use in educational process of higher education institutions. The authors made teacher's survey about they experience in creating video, knowledge of the principles and stages, tools for creating and editing video. The article proves the choice of the topic because of the predominance of the visual style of perception of information by the educated youth. The list of IT-competencies and methodological competences of teachers necessary for the creation of the didactic video is listed. A certain list of tools that can be used to create a didactic video with algorithms for the use of these tools in the preparation of high-quality educational video materials is proposed. Provides some information about online and software applications for video editing. In addition, the authors emphasize that the quality of the didactic video is determined by the quality of multimedia presentations, the description of which requirements is also given in the article.

Keywords: Didactic video; MM presentation; learning style; teachers' IT-competencies; teachers' methodical competence

Analysis of the dynamics spreading of innovative teaching methods allows us to conclude that more and more people are going to have distance or online courses in their life. Because of the variety of information receiving styles: kinetics, audiovisual, discrete (digital), it's not enough to put in the course a textbooks in PDF file or provide additional text explanations. There is an urgent need to provide information for students in a variety of ways, even if there is a duplication of it, for the best work of the information perception channel that determines the learning style of the student of high education.

Dr Tesia Marshik approve that having a preferred learning style does not cancel learning opportunities using other styles. She recommends that you practice your style more, because it corresponds with motivation and does not create discomfort in the learning process. Other things being equal, acquaintance and formation of competencies will certainly increase the ability to assimilate the material, but this is only one factor. In addition, if you have problems with auditory or visual processing, these deficits will affect your ability to absorb "new" material, depending on how it is presented ("Learning styles & the importance of critical self-reflection. TEDxUWLaCrosse", 2015).

If you use the active reading method in working with text materials - to highlight the main points, to analyze the unknown earlier, to find arguments in favor of, or opposite to the facts

given, then after a sufficiently long time in the mind, the selected fragments of the text will be restored.

The problem of visibility in the teaching of pupils of different ages was considered by John Amos Comenius, Johann Heinrich Pestalozzi, Friedrich Adolph Wilhelm Diesterweg, Konstantin Dmitrievich Ushinsky. John Amos Comenius considers the main form of knowledge of sensation and perception - learning in concrete images that can be achieved through the use of visibility.

From a psychological point of view, Andrey Brushlinsky, L. Vygotsky, V. Davydov, A. Leontiev, L. Rubinstein, P. Galperin raise the problem of visibility, I. Toidez end others.

Friedman considers the visuality as the model of simulator. L. Zankov, A. Khaltobin, A. Zilberstein, L. Khitiaeva argues that visibility contributes to the development of cognitive activity. V. Zinchenko, N. Vergelis, V. Velichkovsky, studied the problems of the formation of the visual image, the functional structure of visual memory, the development of "visual" thinking. V. Evdokimov, N. Silich studied the impact of visibility on the effectiveness of the learning process in general. S. Shapovalov and N. Shahmayev considers the problem of visibility in conjunction with the problem of developing and using the technical means during teaching. I. Yakimanskaya explores the problem of the development of spatial thinking of children and the role of visibility in solving this problem. J. Watson believes that the most correct way to imagine the process of visualization as the creation of an internal image of the object perceived by the child. In this sense, the notion of "visualization" is much broader than the traditional understanding of the concept of "visibility". In creating the internal image of the object can participate not only the visibility, but also other means that connect different senses and form a special language of knowledge.

Consequently, we can conclude that the main purpose of the visualization of the educational process is to support logical actions at all stages of educational activity, primarily in the conduct of analytical operations (analysis, comparison, conclusion, systematization, finding of ties and relationships, evaluation of information etc.)

However, the role of the visualization of the educational process in the development of the student's educational abilities, the variety of its functions in this process, and the ways of applying for the solution of the whole variety of didactic tasks are poorly researched in pedagogical science and practice.

Modern technology development allows you to visualize educational materials for visualizations and voice audiences. Kinesthetics will be attracted be the set of interactive exercises of modern modulators of various phenomena. Accordingly, in the activity of the teacher there is a transition from empirical compilation of visibility to the design and modeling of educational process, design and didactic design, which also includes the creation of didactic video. Acquiring the skills of creating didactic videos is one of the ways to increase the effectiveness of forming the skills of the future specialist of the education system - the teacher of the XXI century. Given that the cognitive process is represented as an upward spiral, each stage involves the implementation of mental and educational actions, and its "rise" should begin with presentation of visualized material - didactic video, which in this case will realize the following educational goals:

- Actualization of the necessary initial knowledge for the successful mastering of new material;
- Repetition of previously studied material;
- Motivation for research activities, etc.

Thus, the didactic educational video will initiate the development of such individual personality qualities of student as an emotional perception of information, the ability of creative thinking (analysis of information, ability to determine the main thing, systematization of the

received data), etc. This will contribute to a more active and qualitative transition to a new stage - the educational activities associated with the solution of the set teaching and teaching tasks.

When planning a didactic video, you should take into account the peculiarities of gradually assimilating this video to a student such as:

- Emotional-sensory experience video;
- Identification of the main - properties of the object on the basis of abstraction and establishing links between elements of the content;
- Identification of functional connections in the structure of the object;
- Systematization of the seen and construction of image-conceptual models of the concept, actions, etc;
- Planning of educational activities is possible.

According to 5 key characteristics of the Smart University, the student has for social orientation, mobility, accessibility, technological efficiency and openness ("Measurement of the Information Society", 2012). Didactic video can be successfully used as an element to provide mobility not only in a narrow interpretation - such as, access to learning content through mobile devices and their use for research, payment transactions, feedback from the teacher or representatives of the dean's office or departments, etc. Mobility is important as the access of every student and teacher to educational services from any place and at any convenient time. In accordance with the student's unusual trajectory, a student can watch videos as many times as he or she needs it. Therefore, it is important to create a mode of accessibility as a feature of the "Smart University", characterized by open access to the media library (Morse, Smirnova-Tribulskaya, 2014).

Motivation to write this article by authors were the results of a survey (Fig. 1.) of teachers on the need to provide a recommendation for the creation of a didactic video, which revealed that the use of didactic video in the educational process is relevant and timely. 100% of respondents indicated that video collections for the training of modern youth are relevant. Only a quarter (27%) of respondents indicated that they had experience in making didactic videos. As for the duration of the didactic video, thoughts were distributed as follows: 45% indicated 5-10 minutes and 55% - up to 20 minutes. Respondents were asked to choose tools to create a didactic video among Power Point, Word, YouTube, Movie Maker, SMART Notebook, WeVideo, Office Mix, One Note. The colleagues mostly mentioned YouTube, Movie Maker, and WeVideo. Additionally offered by Cyberlink Powerdirector. However, no one mentioned Office Mix.
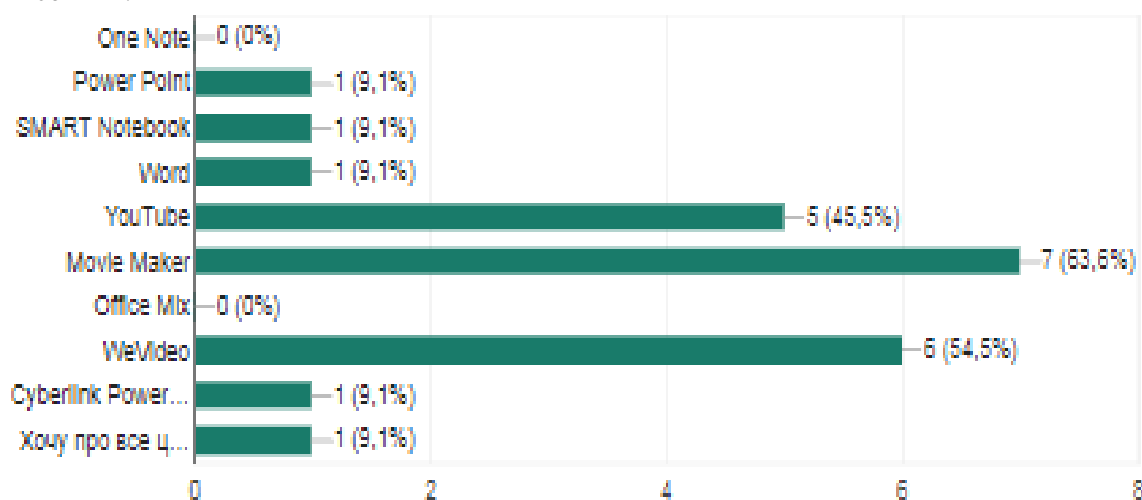

Fig. 1. Survey results "Smart University"

This article provides some solutions for creating a method, selecting tools for recording and editing video. Didactic videos are important education instruments today. Nevertheless, there are recommended good practices to make them. Let us reflect about it.

Video presentation is best suited for the presentation of theoretical material. Students - young people, choose video to get information as one of the most convenient forms of online learning.Online courses, thanks to the bright and original videos that can be viewed many times, are becoming more and more popular. In this article we offer you to get acquainted with the methodological approaches to creating high-quality video collections, tools for their writing and editing.

The demand and effectiveness of the course is influenced by the quality of the video material, so it should be high. Who tried to shoot a video, he encountered some difficulties both technical and methodical. Components of successful didactic video (Fig. 2) are based on choosing the type of lecture, on good methodology and comprehensive technical execution.
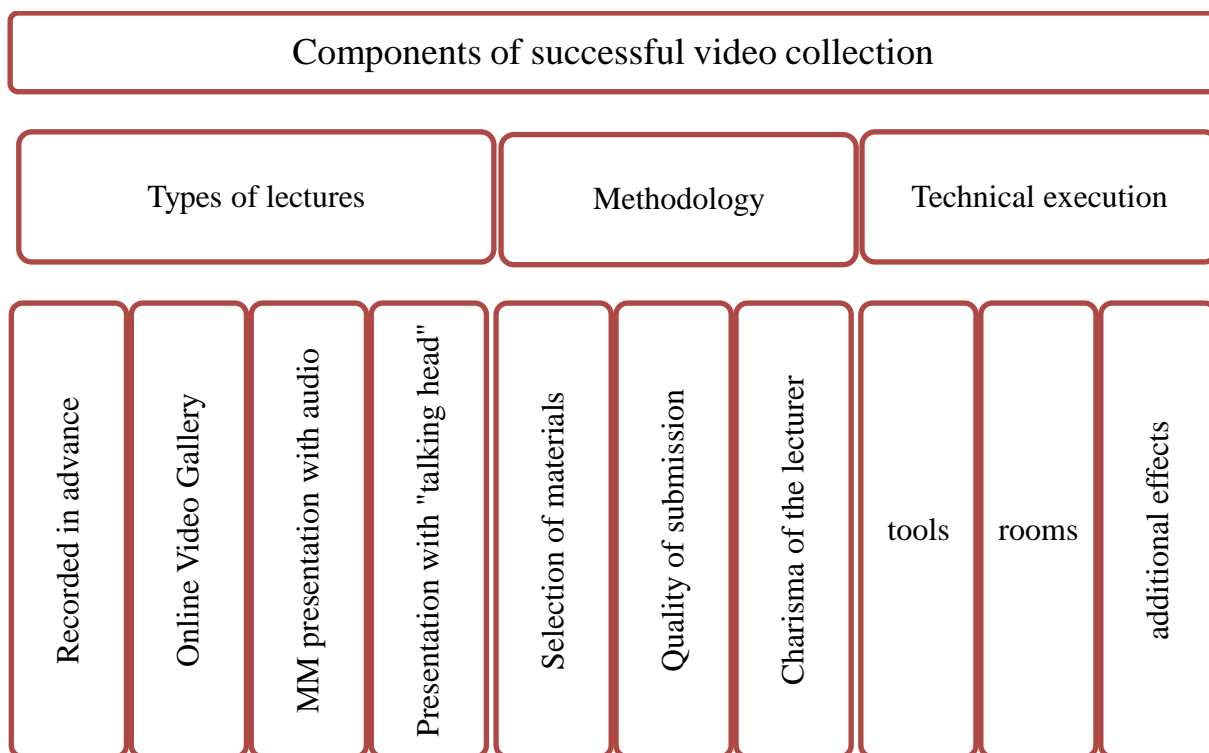

Fig. 2. Components of successful video collection

Didactic videos may be different types: dissertate type, step by step instruction about activity, tool, aplication; meeting report, may be group work`s report; students motivation like gaims, some other activities; students work etc.

This differences is 5 different types of videos as different methodology, different requires, technics and tools. It`s impossible to make a good didactic video without having a good preparation and good presentation before.

To create an educational didactic video, you need to have certain skills of an expert, scriptwriter, narrator, designer, etc. It is necessary to have a knowledge, skills and abilities. First of all knowledge are about the basic methods of informatics and information and communication technologies. Skills to use the available knowledge to solve applied problems use of computers and communication technologies. Abilities to present information in understandable to all form and expressed in the aspiration, ability and readiness for effective use of modern means and computer technologies for create an educational video.

Should be an **expert in the area** or discipline on which the didactic video is being prepared. It is the presentation of the material professionally, at the appropriate scientific level, valuable to the educational process. The expert skillfully drops information, chooses the style of presentation according to the age range of the audience and the level of preparedness. In addition, it is very important to recreate the situation of transfer of experience. Of course, you need to be a **skilled narrator** so that the student / student gets in a dialogue. It is important to adhere to the requirements of literary language, scientific, as well as to use **non-verbal communication**. It is important to use music background in some cases.

In order for the didactic video to play the role of a learning resource, it must be clearly planned and accurately thought out, without excessive detail (except when precisely the details are the purpose of the training video). The material must be submitted in full, enough to reach the educational goal of those who review it. Particular value will be added by the intrigue that provokes, in the good sense of the word, the student for further search and the desire to learn more about the topics of the pre-defined video ("Create a digital story", 2015).

A short video for 5-7 minutes, or a few such videos, is more interesting than watching long movies. The storyteller has to engage the audience in collaboration with an idea and emotion. Put rhetorical questions, pause, invite to think and formulate your own personal vision or attitude to the problem.

Incidentally, each lecture should disclose only one topic. The text should be concise and, at the same time, excessive. Be sure to look after him as a prophet, because pauses and the selection of words in the educational video look unattractive.

Very important in the video is not only the presence of the teacher in the frame, but also illustrative support - visualization in the form of associative drawings and logical generalization schemes. To do this, all material should be collected logically in one file – presentations. So, one of the key steps in creating an educational video is to prepare a quality presentation (Fig. 3) that should be short, precise, understandable, involve your audience, simple, concise and multimedia.
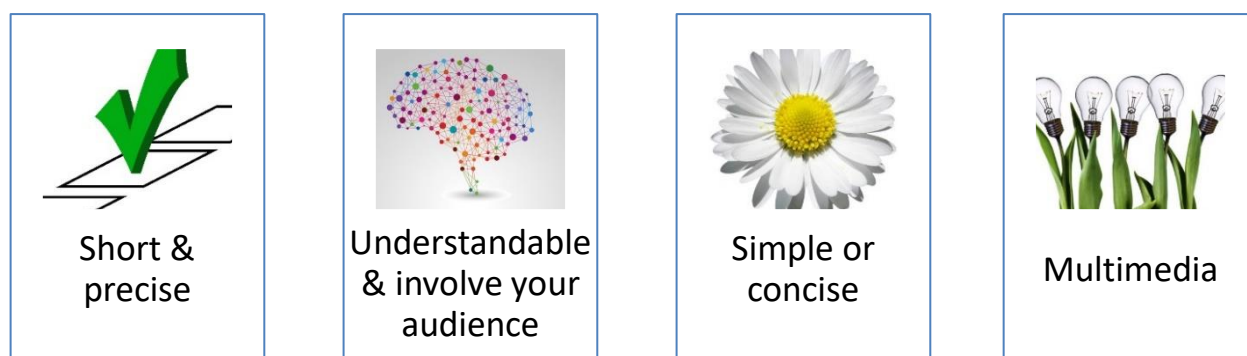

Fig. 3. Requirements for high-quality MM-presentations

Didactic video are different according to content presentation – 10-15 m, step-by-step instruction – 3-5 m. Do not overload the slides with text information. Only where it is necessary, in cases where the presentation of the text itself is a goal, to give about 7-9 lines, to use markers, the font is preferably not less than 20 pt.

Choose didactic drawings, charts, graphs or gifs to enhance or confirm your expressions, not decorations. Include links or insert video or audio recordings, such as professional singing, recite poems, commentary on sporting events, and more. Keep an eye on copyright while using videos, photos, pictures, and more.

Think of the slides so that they change at least every 2 minutes. Adjust the animation of slide transitions using the Conversions tab (Fig. 4).
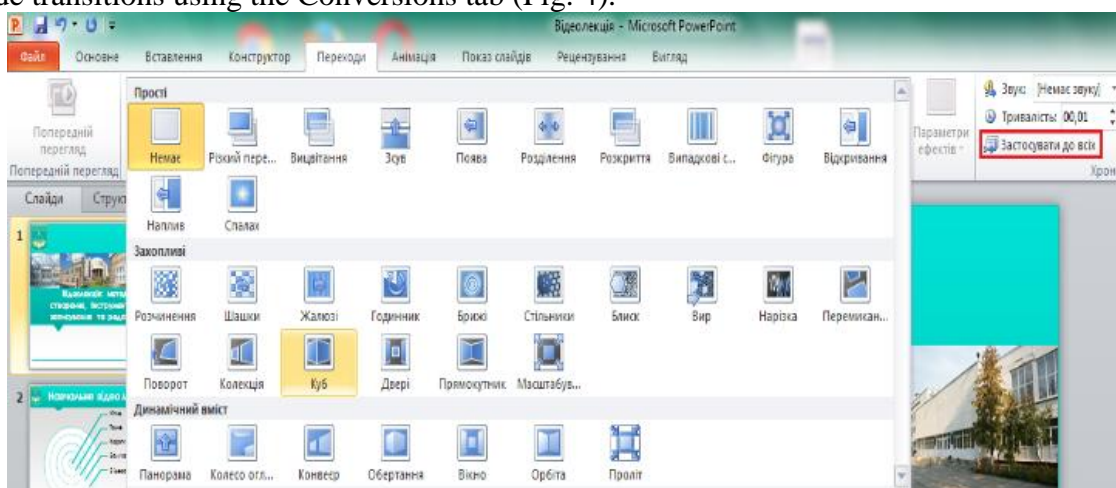

Fig. 4. Adjust the animation of slide

We formulate the stages of creating a video collection in logical sequence and in significance.

First. Preparation of the presentation for the above recommendations (Dementiievska, Morze, 2006). You can also use the mock rating criteria developed on the basis of Intel. To prepare a quality presentation, you can use a variety of software applications, such as MS Power Point, SMART Notebook, MS Publisher, and online tools like Prezi, Google Presentation, PowToon, Slide Share, etc.

Second. Video recording by available means. To begin with, you should determine whether you will work independently or use the services of a professional / semi-professional studio. It depends on the choice of tools. This can be a mobile phone, a webcam, a laptop, a camera, a music player, studio tools, etc.

If you have selected an independent record, you can make a video clip in the form of a movie or record screen. Video-film, such as Create a digital story, is more likely to be used for video collections for creative, artistic courses. However, it can be removed for any discipline. Record Desk Top or laptop can be done using several tools, such as Power Point, SMART Notebook, Office Mix, Movie Screen Capture Studio, etc. This can be the recording of slides with audio and save them in the form of video, for example, T. Liakh`s YouTube video "The prince and loved princess" ("The prince and loved princess UKr", 2017).

Separately, we present algorithms for creating a didactic video.
Using your own gadget and MS Power Point 2010 software:
1. Creating a MM presentation in MS Power Point software - 2010.
2. Record individual short videos available by their own gadgets, as video footage to a separate slide of MM presentations.
3. Adding video clips to slides of MM presentations in MS Power Point software.
4. Preservation of the MM presentation in video format.

By the Office Mix for Office 2013
1. Install the Office Mix for MS Power Point-2013 (or 2016).
2. Create a MM presentation in MS Power Point software.
3. Launch and record video in the Office Mix add-on and save video.
4. Converting a MM presentation with recorded video clips into a video file.

The Office Mix (Fig. 5) allows you to burn a PowerPoint pre-prepared presentation in a presentation or video of a "talking head". You can edit each slide, make a video window larger or smaller, move it to a specific place on the slide, leave only audio on certain slides, overwrite

comments, and then save with changes as again in the form of Power Point presentations. or a video of "talking head".
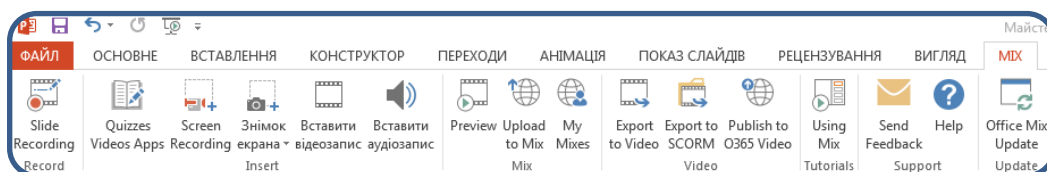

Fig. 5. Tab "Office Mix"

In addition, there are a number of online tools, such as Movavi Screen Capture Studio (Fig. 6), etc.
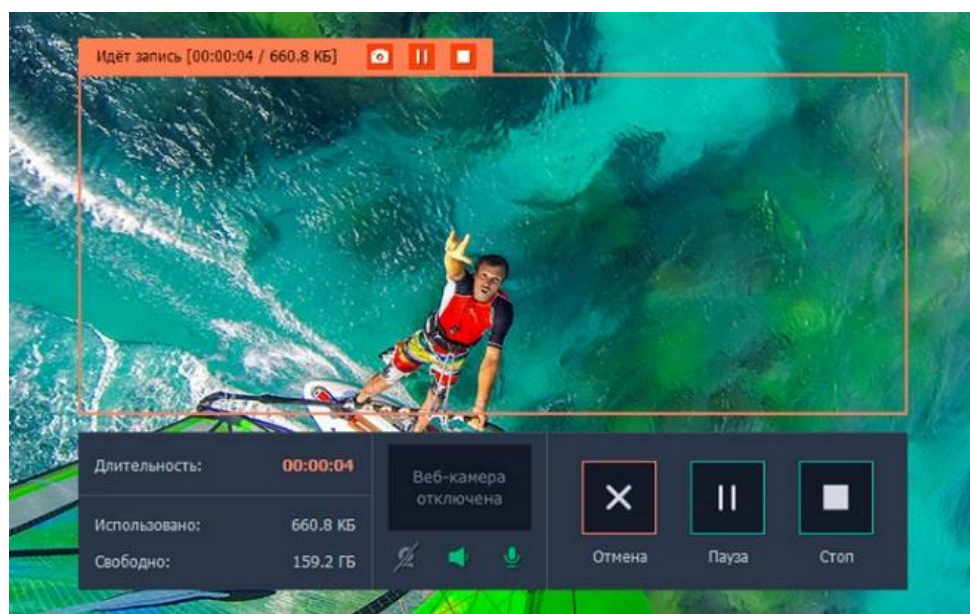

Fig. 6. Recording window "Movavi Screen Capture Studio"

Note that regardless of the recording tools you select, carefully prepare a presentation, timetable, and text for the receiver.

The methodology for creating educational didactic videos is presented in the video of Antonio Dos Reis Thinking about Y.O.U. Your Online Utilities to make your didactic videos. This video is an illustration of a recording with a combination of narrated / lecture video and a screen that illustrates slides.

Also, think over the recording room for a video lecture. It should be well lit, the background is neutral, light (if you shoot at home, it's best to do it against the background of a light wall without unnecessary décor elements so as not to distract students).

The third phase of creating a training video is optional, but may be needed. This is **editing a video**. The above was about editing directly in the process of creating a video library using Power Point or Office Mix. If the file is saved as a video, it can be edited by the following tools: add slideshows of the screensaver, with questions during the narrative for molding or feedback, ending, imposing unobtrusive melody, delete part or merge some fragments if necessary etc. To do this, you can use the installed software or online tools.

For example, Windows software, depending on the version:
– Movie Creator: Free Video Editor for Windows (Fig. 7);
– Windows Movie Maker for Windows XP - Windows 7;

Fig. 7. Window "Movie Maker"

Among the online tools, you should pay attention to Google's creative studio (studio.youtube.com) if you have a Google Account or LIFE.FILM (LIFE.FILM, 2018), you must to log in on the site.

LIFE.FILM (Fig. 8) - A video editor that automatically installs parts of the video allows you to add audio or music support.
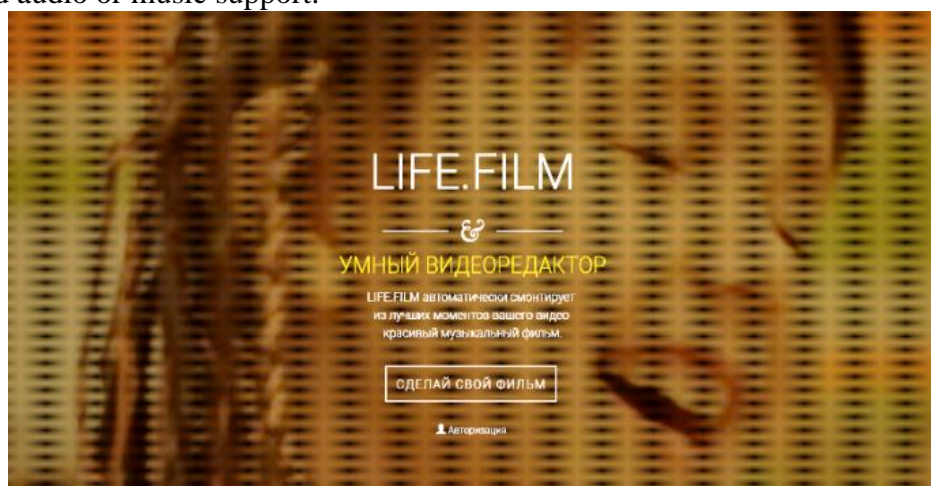

Fig. 8. Website "LIFE.FILM"

The fourth stage is the distribution of video clips in the cloud. This is a fairly standard procedure.

The introductory lecture - acquaintance - is of great importance to the success of the courses you offer to students. In it, you can show yourself as a charismatic lecturer. To do this, appear in the frame! Students are curious about whom they will learn. Your personal greetings directly from the monitor screen will facilitate further viewing of the proposed training videos. Pick the suit that suits you the most, avoid colorful fabrics and small details.

If you plan to use documentaries or recordings of other lecturers, announce it in advance, please explain why this video is offering for viewing.

Contact your students personally. Look at the camera, create an illusion of dialogue. To break the barrier between the course lecturer and students, do not allow impersonal appeals, such as "students" or "course attendees." Involve the student, pointing to the benefits of the course. Perhaps instead of enumerating the proposed course (practical tasks for creating

websites), convince the student, for example: "Following this course, you will be able to create a complete website on your own." Add examples of life or professional practice that illustrate the positive changes in the lives of your other students who have already completed this course. Suggest tips for comfortable passing the course, this will help your students plan their time and identify priorities.
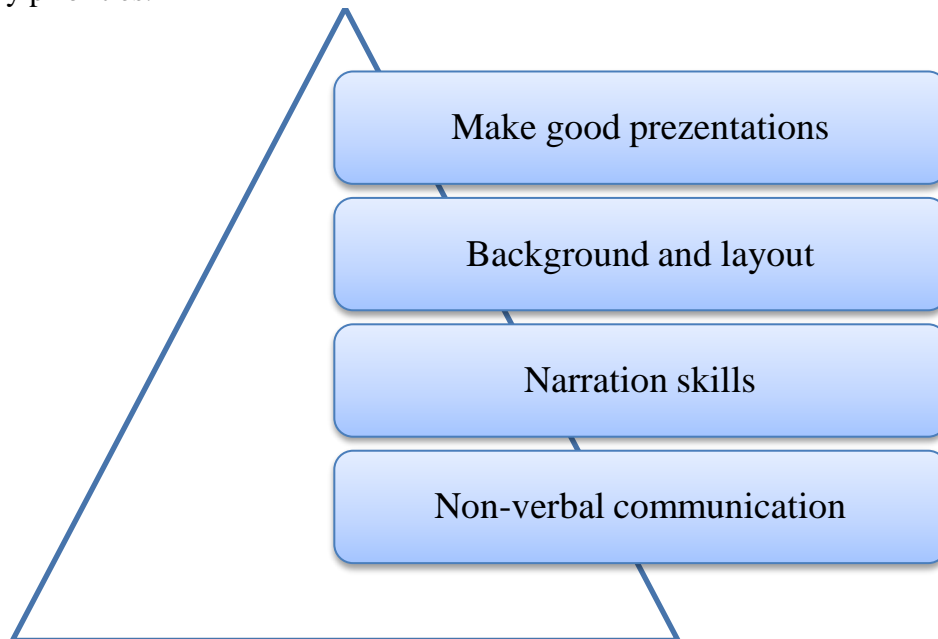

Fig. 9. Tips for comfortable creation didactic video

Conclusions. This article presents the result of the study of the importance of visibility, visualization of educational materials and how its modern means - the creation of didactic video (Fig. 9). The urgency of the development of the method of creation of didactic video and the description of the process of choosing instruments for writing and editing created by the teacher has been proved.

REFERENCES
Marshik, T. (2015). Learning styles & the importance of critical self-reflection || TEDxUWLaCrosse
https://www.youtube.com/watch?v=855Now8h5Rs
Measurement of the Information Society (2012). Forced to Connect the World, http://www.itu.int/dms_pub/ITU-D/OPB/IND/D-IND-ICTOI-2012-SUM-PDF-R.pdf (in Russian)
Morse, N. & Smirnova-Tribulskaya, Y. (2014). Ways of Formation and Assessment of the Formation of ICT Competencies for Future Teachers
https://depot.ceon.pl/handle/123456789/9039
Create a digital story (2015).
https://www.youtube.com/watch?v=LVKeO5IIR_A
Dementiievska, N. P. & Morze, N. V. (2006). Design, creation and use of educational multimedia presentations as a means of developing students thinking. Informatsiini tekhnolohii i zasoby navchannia. Elektronne naukove fakhove vydannia, 1 (2). ISSN 2076-8184 (in Ukrainian)
Liakh, T. (2017). The prince and loved princess UKr
https://youtu.be/NjUMw-fHsus (in Ukrainian)
LIFE.FILM (2018). March 04, 2018.
https://life2film.com/#life-film

СТВОРЕННЯ ДИДАКТИЧНОГО ВІДЕО ЯК КОМПОНЕНТА РЕАЛІЗАЦІЇ МЕТОДИЧНИХ КОМПЕТЕНТНОСТЕЙ ВИКЛАДАЧА XXI СТОЛІТТЯ

Антоніо Дос Рейс
Доктор педагогічних наук, директор Інституту Грааля, науковий координатор, икладач та консультант у пов'язаних з дистанційним навчанням проектах
Університет Естрамадура, Іспанія
antoniodreis@gmail.com

Морзе Наталія Вікторівна
Доктор педагогічних наук, професор, член-кореспондент НАПН України
Проректор з інформатизації навчально-наукової та управлінської діяльності
Київський університет імені Бориса Грінченка, м. Київ, Україна
n.morze@kubg.edu.ua
ORCID: 0000-0003-3477-9254

Василенко Світлана Василівна
Заступник завідувача з питань змісту та дослідження НДЛ інформатизації освіти
Київський університет імені Бориса Грінченка, м. Київ, Україна
s.vasylenko@kubg.edu.ua
ORCID: 0000-0002-5790-572X

Анотація. Ця стаття присвячена результатам дослідження доцільності розробки методики створення дидактичного відео для використання у освітньому процесі закладів вищої освіти. Автори здійснили опитування викладачів щодо наявності досвіду створення відео, знання принципів та етапів, інструментів для створення та редагування відео. У статті обгрунтовано вибір теми з огляду на переважання візуального стилю сприйняття інформації молоддю, що навчається. Перелічено необхідні для створення дидактичного відео IT-компетенції та методичні компетенції викладачів. Пропонується певний перелік інструментів, що можуть бути використані для створення дидактичного відео з алгоритмами застосування цих інструментів при підготовці якісних навчальних вдеоматеріалів. Надано деяку інформацію про онлайнові та стільникові програмні застосунки для редагування відео. Крім того атоври наголошують, що якість дидактичного відео визначається якістю мультимедійних презентацій, опис вимог до яких також наводиться у статті.

Ключові слова: дидактичне відео; Презентація ММ; стиль навчання; IT-компетенції викладачів; методична компетентність викладачів.