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MEDIA TECHNOLOGIES IN EDUCATION, SCIENCE AND PRODUCTION

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The manual deals with the educational material, which will facilitate the formation of the knowledge and skills necessary for the successful use of media technologies by teachers of technical disciplines in their professional activities, as well as scientists and workers in different sectors of industry. An important place is given to outlining the practical aspects of the use of media technologies, since they play an essential role in people's lives in general, and in the educational process in particular.

The publication is intended for undergraduates, master students, graduate students, and pedagogical and scientific-pedagogical workers of higher educational institutions of Ukraine.

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INTRODUCTION

«The increasing spread of computers in offices, factories, shops, schools and the home is changing the way people live, work and play», UNESCO.

Though the term «media technology» was presented to the public a few years ago, many of us still do not know what it really means and how the use media technologies can be contribute for success in our professional lives. In the manual, we will try to provide an overview of the entry level of the application of media technology in the learning process.

Topicality of the issue is determined by the need to adequately comprehend the scientific environment for innovation in the education system and the need for an open discussion about the long-term crisis in the field of transfer of knowledge from a teacher to a student in Ukraine.

Actually, the term «media» comes from the Latin «medium» and is used in the modern world as an analogue of the term «mass communication» (MMC). The basis of media technologies is the materials of mass communication – television, cinema, video, the Internet. The screen itself becomes a new learning tool that contains either text or image, or sound and animation.

The use of media technologies in solving problem situations helps to increase the number of types of educational tasks (tasks for simulating different situations that introduce a student to a particular situation, tasks for planning, search for an optimal strategy for solving and control, etc.); one gets access to the information which was not available before. Media and technologies are a unique means of forming critical thinking and development of creative abilities, a method of stimulating the desire for self-education, self-training, the constant desire of students to deepen the level of their knowledge.

Unfortunately, in many higher technical educational institutions, «reproductive learning» prevails; the influence of computer technologies, in particular, media technologies, on learning activities is underestimated. The educational process is often a transfer of information from a teacher to a student. The teacher provides knowledge, students passively remember them, and the more accurately they can reproduce in the next lessons, the better the success of those studying is considered.

Study, description and critical review of the practical features of the dissemination of media technologies, taking into account the scientific analysis of curricula of media culture and media technologies subjects, examination of various documents, results of sociological surveys and expert interviews with representatives of professions, whose activities aim at using media technology, media and improving media law, show that one of the central problems of media technologies use in teaching at Ukrainian high schools is the separation

between media and education. Further, a few aspects will be highlighted, which prove the statement above.

Modern education is involving more multimedia, becoming more interactive, the distance between a student and a teacher varies depending on the «consumer qualities» of educational materials. For example, according to the publication «The Year in Education: Seven Innovations Changing The Way The World Learns», it is possible to outline the dynamically developing trends: the active use of computer games in the practice of teaching, the use of digital format in the practice of libraries, writing school blogs, increasing the possibilities of technological literacy, on-line education in high schools, discussions in classes according to tweet hashtags. At the same time, the initiative «from below», from teachers and students is considered as a signal about the need to introduce information technology. Not an experiment «in general» and «for a long time», but an experiment that provides flexible support for one or another part of the educational process. The main purpose of the changes that arise in this process is to create a supportive environment for individual development and the formation of civil society.

For example, on the Internet one can find a game which is permitted in the practice of teaching an American school. Learning strategy at this institution is reflected in the Curriculum & Assessment – «Game Design and System Thinking» – during the lessons, it is allowed to use different computer devices and mobile platforms as they let you play special training games and achieve the expected result.

What is the US high school doing now? It actively develops the ideas of free education by introducing into the practice of training on-line courses by the best professors of top universities in the United States, opened for the webinars participation (web workshops) and other forms of communication and knowledge acquisition. For representatives of scientific communities, information networks and databases have been created that allow developing academic mobility and enriching their knowledge in on-line discussions.

The task of higher education institutions is the education of a good citizen as stated by Soviet propaganda – today has no reason to exist because it is based on utopian statement that the efforts of teachers is enough to withstand all the difficulties of adult life surrounding the student.

1. MEDIA TECHNOLOGIES AND BASIS OF ELECTRONIC EDUCATION

1.1. APPLICATION OF MEDIA TECHNOLOGIES AND MULTIMEDIA IN THE EDUCATIONAL PROCESS OF HIGHER EDUCATIONAL AGENCY

1.1.1. Characteristics of Media Technologies

The growth of data needs and the increase in the flow of diverse information in human activities necessitates the development and application of electronic means. Information technology, which now serve a global computer network the Internet, multimedia computer systems, IP-telephony, digital television, satellite and cable TV etc., led to radical changes in all segments of social interaction. At the moment, the exchange of information provided by media technology exceeds 11 hours a day, the TV is included in apartments/houses on average 7 hours 38 minutes daily, while children from two to twelve years on average watch TV 25 hours a week.

As you know, media (English media, means) are channels and tools used to store, transmit and display a particular set of data. The term is often referred to as a synonym for mass media or news media, but in the broadest sense, means a single medium used to convey any data for any purpose and acts as an intermediary in the transfer of data from one addressee to another. In pedagogical literature, this notion applies to auxiliary scientific and technical means used in teaching.

The term «media» is often used as a global concept, which covers both didactics, scientific support, and mass media. Thus, the media-are objects, equipment and carriers that transmit certain data (Communique) through words, images and sounds, with the possibility of further processing, storage and advanced chi.

One of the types of media data is dynamic media data, representing stream data that varies at any given time. Dynamic data includes three sources of receipt: text ribbon, web camera and microphone. Due to widespread WWW (World Wide Web) hypertext technology is known or at least used by those who work on a computer. The basis of the WWW is hypertext technology is a non-linear form of writing text data and the designation of references to fragments of text of any document located in the automated information system, and the ability to quickly transition to these fragments. References may include not only text data, but also graphic, audio, video, etc. Hypermedia is already used for such documents, providing a link between multimedia objects.

Media technology is a combination of various «media» to report the required data to others, while a variety of means (oral, technical) and methods (educational, psychological).

Media technologies have been in existence for a long time and are divided into five types: early (written), printed (printing, lithography, photography), electric (telegraph, telephone, sound recording), mass media (cinema, television), digital (computer, the Internet).

Historical Reference

Media technology should be considered as an art, where a special place belongs to visual means of information transmission: computer graphics, animation, video and so on. Some scholars believe that the beginning of media technology was put by the first person who made a picture and inscription on the stone.

The next stage in the development of media technology, researchers believe the cuneiform of ancient Sumerians, whose civilization was one of the most advanced. Approximately, from 1750 to 1670 BC In ancient Greece there is a linear script, similar to the modern graphic reproduction of verbal information. Later in China, hieroglyphic writing is actively developing, the feature of which is that every word, concept, and sometimes the whole expression is reproduced by a special, rather complex sign.

The revolutionary stage in the development of media technologies was the invention of paper in the 105th century A.D. in China, where after 625 years and founded the first printing in 853. The first published book was published in the first half of the year. This was a significant step forward, the importance of which for the development of media technology cannot be overestimated.

In 1450, the first books were published in Germany by the printing method. The German typographer Johann Gutenberg has quite successfully upgraded Chinese technology. Pre-cast a certain number of lead letters, which then consisted of words, sentences, pages. After printing, the cliché had to be disassembled for the next book. After some time in Europe with 'appeared to hundreds of printers, which literally changed the European civilization. In 1500, over 20 million books circulated in Europe with a wide variety of content.

The next stage in the development of media technology began in a few centuries. In 1822, Niepce (Niepce) conducts the first experiments with a photographic image. After 19 years, Englishman F. Talbot (Talbot) improved the technology of Niepce, suggesting to project a negative image on a surface covered with silver salts. The photograph has gained popularity among artists and academics, but journalists began to actively use it only after 1871, when technologies appeared that allowed the insertion of photographic images into newspapers.

On September 1, 1794, the first messages were transmitted from Lille to Paris by an optical telegraph, and in 1837 an electric telegraph and the Morse code were introduced. Quickly, with the help of a telegraph, he learned to convey not only words and simplest drawings, but it was impossible to send a voice or music, although the microphone was already invented in 1827 by a

resident of London, Wheatstone. On February 4, 1876, in Boston, at about 2 p.m. Graham Bell, a teacher of the Boston Shelter for deaf people, applied for a patent for a device capable of transmitting sound at a distance. On the same day at 16:00, another inventor, an electrician from Chicago, E. Gray applied for such a request. After the trial, the patent was issued by G. Bella

Already in 1881 in the US there were 400 telephone stations and 132,000 subscribers. Nearly the same time, the technology of mechanical recording was developed. In 1877 Edison in the United States and Charles Gross in France invented a sound reproducing apparatus is a phonograph. On the mobile cylinder, covered with a thin foil, a popular American song «In Mary's Little Lamb» was recorded. Soon Edison perfected the phonograph model, replacing the cylinder with a flat disk.

At the same time, the preconditions for the emergence of a technology for transmitting an electromagnetic signal at a distance without wire have developed.

In 1865 Faraday discovered the existence of electromagnetic waves, Maxwell and his students put forward a hypothesis that electromagnetic disturbance move in space. In 1887 G. Hertz confirmed this theory by concrete experiments. In 1895 – 1896 he carried out the first experiments on wireless signal transmission, the authors of which at the same time became Russian scientist O.S. Popov and an Englishman of Italian origin Marconi.

The processes of industrialization and urbanization in the late nineteenth and early twentieth centuries, which radically changed Europe and the United States, were based to a large extent on new technologies, including media technologies. New communication systems, such as telegraph and telephone, have attracted enthusiasm, and each invention immediately found the introduction – first in business, and then in other social spheres.

In 1906, American Lee Forest received a patent for a device that enabled the transmission of a comprehensive signal. On April 12, 1908, for the first time in the airspace, a human voice began: «Hello, Hello, the radio station from the Eiffel Tower in Paris with you.» These broadcasts were made by radio amateurs in Marseille. Two years later, about 50 people heard sound transmissions within a radius of 30 km from New York.

In the world of sound broadcasting actively began to develop after 1920 Inventor of these areas and tollgates were the United States, where in 1928 more than 578 radio stations aired daily. Before the start of the Great Depression in 1929, there were more than 10 million radio receivers in the world.

In the evening of December 28, 1895, in Paris, on the Boulevard of Capuchin, 14, the first mobile images were shown in the cellar of Grand-Duke. Photos on the screen have been able to design for a long time, but this evening, Lumière brothers showed 30 entertainers to the audience, «Workers Out of the Gates of the Factory» and «Baby Bathing». So the «seventh» kind of art arose. The film developed very rapidly: in the USA in 1905 – 1909 more than

10 thousand cinema halls were built. It can be argued that the cinema was a kind of multimedia, especially after 1927, when it became sound. Cinema is the very first mass media available to the majority of the population, as evidenced by such facts: in 1930, with 122 million Americans, 95 million visited the cinema weekly.

Given that radio and cinema evolved synchronously over time, it is logical to gradually combine these technologies into a single device capable of transmitting images at a distance. This is about a new stage of development – the era of television, predicted by many scholars back in the middle of the nineteenth century.

The very word «television» was proposed in 1900 at the World Exhibition in Paris. But only in 1925, the introduction of relatively complete systems of transmission and reception of television image began.

Until the middle of the twentieth century, the foundations of the latest media technologies were laid. As a result of the development of print, cinema, television and radio broadcasting, knowledge, information, and culture became available to the widest sections of the population.

The beginning of the era of media technology can be considered 1981, when the official presentation of the first personal computer at a press conference IBM in New York. It was a 16-bit processor and with an operating frequency of 4.77 MHz, 64 kilobytes of RAM, driven floppy disks to 5.25 inches.

In the 1990's, the development of media technology is moving to a new stage. Appear electronic telegraph, mobile phones. MPEG – data compression, digital and satellite DST (digital satellite television), DTT (digital terrestrial television) become a reality of the beginning of the new millennium.

In 1995 – 1996 rr. Generation of «techies» in Intern ETI changing generation «humanitarians.» A global network becomes available th to many living in urban design – «national sport» and taking care of the server – profession. Since that time the majority of media- technological innovation were related to the Internet.

Modern Stage of Development

A distinctive feature of modern media technologies is their ability not only to display a product, but also, more importantly, to indirectly influence the person, changing her perception of herself. This is the result of the achievements of IST equipment as the invention «virtual reality» and transform the Internet a global computer network. New design and processing of information (HDD, other electronic media), the new TNI ways to access information (the Internet technology «virtual reality», etc.) can make a variety of our culture, and this, in turn, promotes a global exchange of moral, cultural, social values, information and knowledge, and more intensive communication between people.

Communication is the central link of the digital future. Instead of a physical presence – digital, electronic, which creates new forms of social interaction that does not win is ARE laws of any state is not limited as language or social barriers. New types of communities are emerging – micro: small associations of people outside geographic and other boundaries, new forms of exchange of ideas, new forms of control and accounting of information, the «disappearing» of space, the time is «highlighting «. The multimedia computer technology and media technologies of the era of electronic digital communications cease to be rigidly divided and to some extent merge and integrate.

Computerization and Internationalization of society take place in parallel with the adoption of new styles of labor, new values, information diversity, and these changes are not reduced to the technical sphere, they are global in nature, penetrating all spheres of human activity.

Various media technologies include:

- linear media technology is a simple form of presentation of many multimedia elements, when the user can perform only passive viewing of multimedia elements, and the sequence of viewing is determined by the script;
- non-linear (interactive) media [interactive (multi) media] is a form of presentation of many multimedia elements, in which the user is given the opportunity to select and manage elements in the dialogue;
- hypermedia [H-media] – interactive media technologies in which the user is provided with the structure of related multimedia elements that can be sequentially chosen, that is, the extension of the concept of hypertext to multimedia types of organization of the creation of data records;
- Live video – «Real / live video» is a feature of the media technology system in terms of its ability to work in real time.

It is known that in the process of learning, students are mastering no more than a quarter of the material. Media technologies can increase this indicator 2-3 times, as it provides the opportunity for synergetic learning, that is, both the visual and auditory perception of the material, the active participation in the management of its filing, the return to those sections that require re-analysis. Today's media technology offers users many options for individual tuning, mastering the training material, the student himself constantly establishes the speed of study, the volume of material and the degree of its complexity. The saving time required to study a particular material is 30% on average, and the acquired knowledge is stored in memory much longer.

In this context, it is appropriate to mention the MOOC system. Wikipedia offers the following definition for MOOC: «A massive open online course (MOOC) is an online course aimed at large-scale interactive participation and open access through the web...». Massive open online course is a course that involves a large number of participants and open access via the Internet. In addition to traditional materials such as video, lectures and problem-solving,

MOOC provides interactive forums to create a community for students and teachers. «

Consequently, media technology in education should be understood as a system that includes the design, organization and conduct of classes to ensure multi-channel perception of information by subjects of study interactively through the use of multimedia computer hardware-software and multimedia educational software tools. The overall purpose of media technology is to select and use interrelated media (media) in such a way as to continuously improve and increase the amount of data accessed by users.

1.1.2. Characteristic of Multimedia

The creation of a global informational hyperspace significantly transformed the modern reality. There was an opportunity in the other – electronic submission of information, increased number of means of filing (text, graphics, animation, video, sound), another form of data organization has developed. With the growth of a generation, whose consciousness literally forms the birth of a variety of media technology.

Modern information technologies offer more and more opportunities for education and career changing daily quality second life, and sometimes – replace with different forms of media-activism life itself. Few will be surprised that an eight-nine-year-old child has several accounts in social networks, easily adjusts with the buttons of the iPod, and every day becomes cowardly cyberspace. School and universities can no longer do without information technology, use of the achievements of the techno-sphere to solve educational problems.

Multimedia (multimedia) in literal translation are «multiple means of data transmission», this is a cultural phenomenon, due to its emergence historically – postindustrial society, technically – the development of communication technologies. Multimedia has new features, the specific manifestation of which is:

- storage, processing and presentation of information in digital form;
- broadcasting various types of information (text, graphic, audio, video, animation, etc.);
- synergy between sound, images and text;
- interactivity is active interaction of the resource, program, service and person, their mutual influence and co-creation;
- hypertext availability.

The term «multimedia» was introduced by M. McLuhan, and he also for the first time determined the pattern that the type of society is significantly determined by the type of communication dominant in it, and human perception is the rate of transfer of this information.

A traditional view of the multimedia problem arose in the 70's of the last century, when the computer in training was not yet an essential component. At this time, the concept of «multimedia» concerned a specially selected set of didactic materials is an audiovisual package. That is, you can talk about multimedia without a computer, when the main carrier of information is often a television and video recorder.

The connection of multimedia elements to a single project is done using software tools. The results of presenting the multimedia elements on the screen and the multimedia management tool are called the user interface. Hardware and software that provides multimedia playback is called a platform or multimedia medium.

In addition to dynamic multimedia information, static information is being used at present. It is a multimedia file (audio, video, image) created with the appropriate software and stored on a computer's disk. The file can be edited and edited, but its reopening will reproduce the same information until the file is changed again. Accordingly, static information is divided into audio, video, image and combined.

The multimedia information also includes combined information that can include three types of multimedia information: audio, video, and images. The main types of this type of information are presentations, video films and structured documents.

Methods of using multimedia on the lesson:

- illustrative. The visual series illustrates the traditional teacher's story. The same visual range can then be used in the survey I or generalization I;
- schematic. The basis of the study is the construction of reference notes or structural-logical schemes. Using multimedia expands the ability to build such schemes. They melt more vivid, bright;
- interactive. The most complicated. Combines elements of illustrative and schematic approaches. The difference lies in the fact that the use of various visual material, schemes and animations combined, complemented by the involvement of documents, excerpts and from a variety of sources. Both documents and «pictures» should be vivid, to create a certain image, to be distinguished by a certain «symbolism». However, the most important thing in this approach is the high level of methodical processing of the material. It is given, in fact, in such a combination, to provoke students' activity, provoke them in comparison, reflection, and discussion.

1.1.3. The Difference Between Media Technology and Multimedia

To date, there is no single concept and therefore the terminology of the media, there is a certain mix and uncertainty of the terms.

Not only national scientific schools, but some researchers suggest their options interpretations of concepts such as «media technology» (media

technology), «media» (multimedia), «media wasps vita» (media education), «media-literacy» (media literacy) and» media-culture» (media culture).

Let's try to understand what the difference between the terms «multimedia» and «media» (under the media we will understand the media technology). Often these concepts are confused or applied, in the sense of the same thing. Sometimes the facet is really very blurry, but it is still present. Both words are used very often, in absolutely different cases and in different versions. They can be found as part of compound words or phrases such as media-server, media and others. Also Intern ETI lot of information that tells how the story of the origin of words and their meanings.

Let's try to figure it out. Start with what these words are of English origin, their values are easy to determine by the revision of the translation is in the dictionary. To do this, we use ABBYY Lingvo Online Dictionary and choose the most important meanings.

Media:

- Universal Dictionary: Mass Media, Mass Media;
- Computer Dictionary: media, media;
- Marketing Dictionary: media (media);
- Dictionary of the Economy: means of information;
- Scientific Dictionary: press, environment.

In addition, very often, «media» is explained as means of audiovisual information, media.

Now consider what the term «multimedia» means. Note that multimedia is a noun, and multimedia is an adjective. Often we can find spelling is a multimedia file. As far as it is understood, there is no big difference.

Multimedia:

– You use multimedia to refer to computer programs and products which involve sound, pictures, and film, as well as text.

– In education, multimedia is the use of television and other different media in a lesson, as well as books.

– In art, multimedia is the use of different kinds of material in a painting, sculpture or performance.

If we take a look at the dictionary, we can see that the meaning of a term «media» does not happen even once the word computer or a variation. Also, as we know from the previous section, media technologies have been around for a long time and we will remind you once again that they can be divided into 5 types:

- early media is writing;
- printing media-for example, printing of newspapers, photography;
- electric media-for example, telephone connection, sound recording, etc.;
- mass media-television, video;
- digital media-the use of computers and a global network the Internet.

It turns out that media acts as an intermediate link, the intermediary between communication of people, dissemination of information and news. Media is something like the way people communicate. In addition, for today, media is more tied to television, radio, printing. That is, in media technologies, more attention is given to the way of interaction and communication of information in society.

Multimedia is, in turn, pays more attention and closer to the IT (information technology), computer images, video transmission via the Internet, games, interactive user interaction. In addition, media can include 2D and 3D – technology. That is, multimedia, tells how to technically make the transfer of data in the society.

Previously, media technology and multimedia-this was one concept and was called one term – «media». But now is the time when these two terms begin to gain more and more different meanings. There are new specialties, and the moment comes when companies are already looking for workers with one or another specialization. For example, with media knowledge, you can work on television or radio stations. With the knowledge of multimedia – in the IT company.

Both concepts often use somewhat different approaches. In the media, for example, work is done with devices such as cameras, radio equipment. In the media, as a rule, most of the interaction takes place by means of a computer and the Internet.

In either case, these two terms or directions also cross each other to some extent. Today, IT and computer technology are present in both directions.

The development of literary sources, which cover this issue, and the above-mentioned judgments, led to the conclusion that in media technologies, more attention is paid to the ways of interaction of communications, psychological peculiarities of obtaining, memorizing and transmitting information. While the media is, in turn, pays more attention and is close to the concept of information technology, computer images, video transmission via the Internet, games, interactive user interaction. In addition, media can include 2D and 3D – technology. That is, multimedia, describes how to technically make the transfer of data in a society, covering ways of presenting various types of data is a udio, text, graphics, video, animation, and possible in one system or in combination.

1.2. MEDIA-EDUCATION AND MEDIA-PEDAGOGY

There are no generations of humanity for such conditions of upbringing and development that are present: children know a lot about the world, people and nature, therefore they are actively involved in all processes. The computer

carries with it freedom from reality, it can simulate it in it. The Internet provides to limitless opportunities for communication and each (some better, others worse) may be the manufacturer, and consumer information. Media technologies play an increasingly important role in the lives of people in general and in the educational process in particular. Removing local constraints for globalization of communication is, of course, one of the most interesting topics of research in the coming years.

The development of the country and its entry into the world of information space prompts the introduction of new areas of education, among which media education is not the last place. It is worth to note that the appearance and availability of necessary resources and facilities (computers, the Internet et al.) Took place later than in leading s countries. Therefore, the majority of publications today are aimed, first, at studying the boundary experience.

Let's pay attention to the fact that education is one of the main categories of pedagogy, and media education is an integral part of it. This is not denied by most authors, they even use the term «media-pedagogy», which is a new branch of pedagogical knowledge. Try to explain what we mean by the definition of «media-education» and «media Education» and «media-culture» and «media-competence», because often they can be found for the interpretation of events, related with the use of media technologies.

Active development of pedagogy as a science, its differentiation into an increasing number of different branches, specialties and disciplines (each of which has a separate, specific subject of scientific and pedagogical research), on the one hand, and the rapid development of mass communication, new information technologies, on the other hand, the on led to the emergence abroad, particularly in Germany, the new teaching profession, entitled media – pedagogy.

The main task of the media-pedagogy is to deal with the major changes in the information society, to determine which basic skills are needed in order to remain able to learn, interact and seek the necessary information with the help of media technologies in the future.

Media-teachers currently in Germany preparing for university faculties communication technologies (direction « media-culture») along with such experts as theater, music, museum, dance (dance) teacher and biblio-teacher. According to the recognition of German specialists, they have this specialty quite exotic.

The structure of media- pedagogy is depicted in Fig. 1.1.

Now the media-education in Germany has gained such widespread existing research institutes that perform research in this area. There are doctors of pedagogical sciences in the field of media-pedagogy. The first professor in this field was Bernd Shorb (University in Leipzig), according to Prof. B. Shorba, media-education primarily rooted in the after-hour Rob VTI and that is where it has the best prospects for development. It is also necessary to make greater

use of the skills of the advanced training system for the growth of the media-the competence of pedagogical staff. Prof. B. Shorb believes that the time has come for the introduction into the educational process of media-pedagogical and media-psychological courses, along with courses in computer technologies.

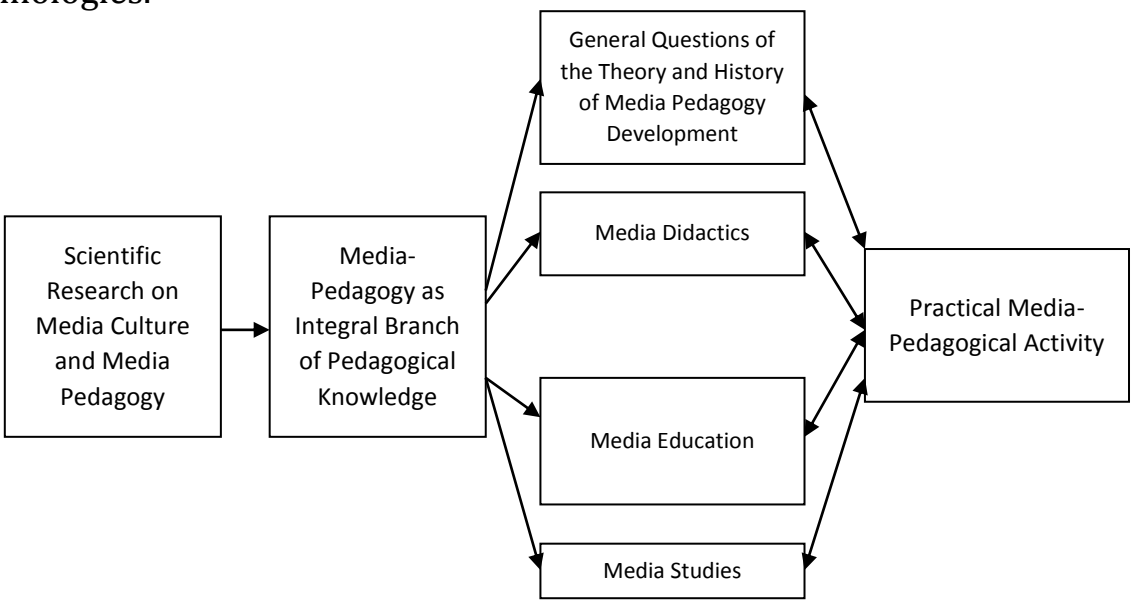


Figure 1.1 – Structure of media-pedagogy and its links with theory and practice

Another specialist in this field is Prof. Stefan Aufenhanger agrees with the opinion of B. Shorba. He believes that media-pedagogy, as a scientific branch, has undergone significant changes, since it has become a comprehensive science, which contains information from many disciplines (general psychology, philosophy, educational technologies, developmental psychology, etc.). Helga Toiner, director of the Munich Institute of Media Education, holds a similar view. She argues that media-pedagogy is an interdisciplinary field that is relevant to all sciences. However, it is worried by the fact that part of the media-educators reduces their work only to the management of technical means, and this is clearly not enough. Dieter Shpanhel (professor of educational sciences at the University of Nuremberg) notes that the media-education is an important aspect of pedagogy. It needs to develop its own «kernel», which today is still not very prominent.

Prof. R. Funch (director of the Institute of Communication Sciences and Adult Education (andragogy) believes that in the media-pedagogical context, the school must fulfill at least two tasks. The first is the illifabacy of students in the sphere of medial culture (i.e., literacy training in the field of multimedia use), and the second is the teaching of methods and methods of work with the content of text, image and sound.

Media-pedagogy is an organic part of the broader field of knowledge – media culture. The interrelation between its separate components can be represented as a scheme (Fig. 1.2). In turn, media-culture – this production, resulting in new media tools, media technology and media-products in the

form of books, periodicals, radio, television, documentaries, feature films, pictures etc.

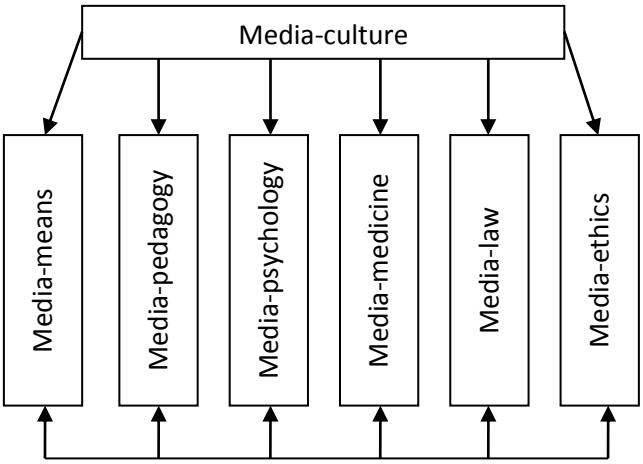


Figure 1.2 – Structure of media culture as a scientific direction

As can be seen on Fig. 1.2, individual components of media culture (media-psychology, media-medicine, media-the right media-ethics) resulting from the process of integration between computer science and modern communication technologies, on the one hand, and the relevant humanities, with another actually and the media itself the pedagogy can be regarded as an integral branch of knowledge, although in its structure one can identify the components that are characteristic of pedagogical science.

Media culture is considered as «a set of information and communication tools developed by humanity in the process of historical development; it is also a collection of material and intellectual values in the media, a historically formed system for their reproduction and functioning in society.

N. Konovalova emphasizes that students of higher educational establishments should have media culture. Media-culture rights researcher understood as an interactive way to interact with the information society, including the values, technological, personal, and creative components and in with the lead actors in development cooperation, and media-culture university students, in its view, integrates common and professional media culture. She also emphasizes that the success of the student's media culture is ensured by the following pedagogical conditions: in the process of media education, the student's subject position is deliberately developed; technologies of media culture development of students of higher educational institutions are based on self-centered approach; the process of media culture development is carried out step by step: from the general level of media culture to professional; the technology of the media culture of university students is used, which is the process of dialogue between the students and the teacher in the decision of the media-education chain of the hi – tech tasks.

Banner didactics is part of the media-pedagogy that explores the application of media technology in the learning process and dealing, primarily, the development of information and educational technologies, features of

distance education, development and testing of new media teaching tools (training programs, manuals and textbooks). In addition, the relationship between the media and the realization of goals, content and forms, methods and means of training are analyzed.

The object of media-pedagogy is media education. The fact that the media is related to the pedagogical industry even indicates the first definition of the phenomenon proposed by the UNESCO Council in 1973, where the media is defined as «teaching the theory and practical skills for mastering modern media, considered as part of specific and autonomous field of knowledge in pedagogical theory and practice».

The terminology of media- physics is one of the first quite well generalized by A. Fedorov. The Oxford Encyclopedia, published in 2001, defines the media as learning through media. Media education (media education) is associated with knowledge of how media texts are created and distributed, as well as the development of analytical abilities for the interpretation and evaluation of their content; whereas media studies are usually associated with the practical work of creating media texts. Similar to pedagogy, where education is defined as the process and the result of training and education, media wasps vita – the process and the result of media-education and media-education.

As media wasps Vita and media-education aimed at achieving the objectives of media-literacy and Media-competence. These two terms are identical. In particular, in Europe and the United States to issues relating to education competence approach is commonly used because the term «media-competence» (Ger. – medienkompetenz). Under the media-competence means the ability to «qualified, independent, creative and socially responsible action in relation to the media.»

1.3. ELECTRONIC EDUCATION

1.3.1. What is eLearning?

If we talk about education, until recently, the model of education was quite straightforward – in the classroom, there were students with a teacher who conducted classes. The physical attendance of the teacher was compulsory and any other type of study was questionable at best. At the end of the twentieth century. The computer revolution took place and the approach to learning changed radically.

In fact, E-learning on the computer basis is an educational tool or system that allows you to learn at any place and at any time. Today, E-learning mainly takes place via the Internet, however in the past «it arrived to us» by the using of a mixture of computer methods, for example, such as a CD-ROM.

The newest technologies are so much that there is no tangible geographic breakdown, using the tools that make us feel as if the students are inside the class.

E-learning provides the ability to share educational material in all types of formats, such as video, slide shows, text documents in PDF format. Conducting webinars (Live online classes), chatting with teachers through chat and forum posts, an option that is also available to students.

There are many different E-learning systems (known as Learning Management Systems or LMS for brevity) and methods that allow students to create courses that are accessible to students. With a good tool, various processes can be automated, for example, such as testing (testing) or creating attractive content. E-learning provides students with the opportunity to attend training, linking it to life, which allows even the most busy person to continue to make a career and get new qualifications, and therefore, to study throughout life.

Some of the most important events in the field of education have occurred since the advent Internet. Today students are well versed in the use of smartphones, text messages and, in general, to use Internet, and create and online-course quite simple. Classified ads, social media and various other means of communication Intern ETI allow students to be aware of and discuss issues related to the course at the same time providing a sense of community.

In the rapidly changing world of E-learning available technologies to make fun course with the ability to constantly second updates, and provide students with optimal information. This is especially important if E-learning is given attention in the sector, where to be aware of current industry developments is a priority. This is one of the reasons why many businesses currently offer E-learning, on the other hand, it is a low cost and an opportunity for students to study anywhere and anytime.

IN in general, traditional learning is expensive, takes a lot of time and the results may differ from the ones you want. E-learning offers an alternative that is faster, cheaper and potentially better.

1.3.2. History of E-learning

The term «E-learning « exists only since 1999, when it was first used in the CBT (Computer Based Training) system workshop. Other definitions also began to appear in search of a precise description of the system, such as «on-line learning» and «virtual learning». Nevertheless, the principles of E-learning have been well documented throughout history, and there is even evidence that early forms of E-learning existed in the IXX century.

1.3.3. E-learning – the Timeframe

Long before the Internets were introduced, distance learning courses were used to teach students specific subjects or skills. In 1840, Isaac Pittman taught his students in a shorthand by correspondence. This form of symbolic writing was designed to increase the speed of writing and was popular among secretaries, journalists and others who have done a lot of writing in writing. He, being a qualified teacher sent task by mail, and then the students doing it should sent the result back using the same system.

In 1924, the first test car was invented. This device allowed students to take part in the test. Then, in 1954, B. Skinner, a professor at Harvard University, invented a «learning machine» that enabled the educational institutions to manage their students' «programmable learning.» The idea was not introduced until 1960, when the first educational computer program was created. This CBT (Computer Based Training) program was known as PLATO (PLATO -Programmed Logic for Automated Teaching Operations) (Fig. 1.3). Initially, it was designed for students studying at the University of Illinois (USA), but eventually began to be used in educational institutions throughout the United States.

The first distance education systems were really geared only to delivering information for students, but in the 1970s, in the era of E-learning, they became more interactive. Open University in the UK is interested in E-learning . Their education system has always been, in turn, focused on distance learning. In the past, educational materials were sent by mail and correspondence with teachers was done via mail. With the Internet Open University began offering a wider range of interactive learning opportunities and faster correspondence with students via e-mail, etc.

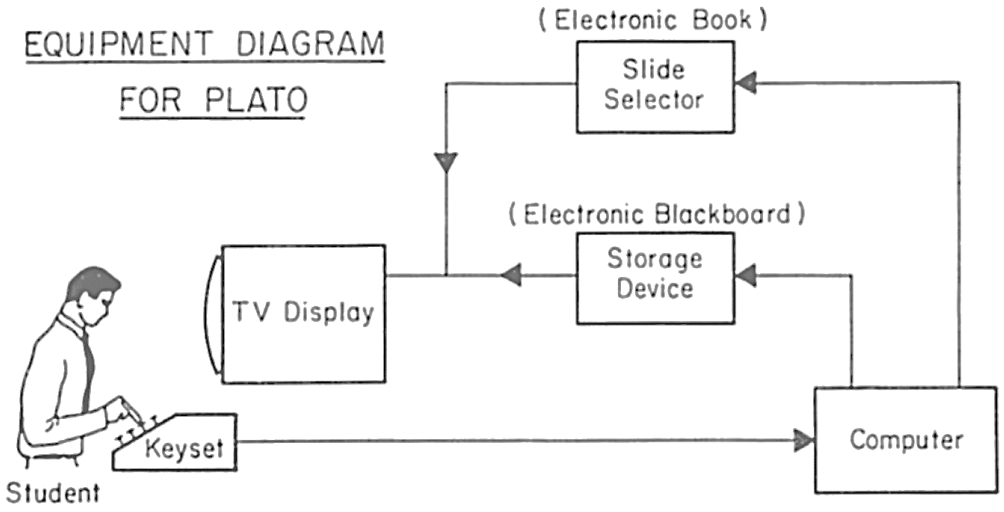


Figure 1.3 – The schematic of the main elements for the system «PLATO»

1.3.4. Internship Training Today

With the invention of the computer and Internet late 20th century, electronic learning tools and methods for delivering information expanded. The first MAC in the 1980s allowed individuals to have a computer at home that makes it easier for them to perceive and develop certain sets of skills. Then, in the next decade, in a virtual environment began to truly flourish training, access to a wealth of information on the Intern ETI and opportunities of E-learning has become very easy.

By the early 90's created several institutions that conducted courses only online, through Intern is one and educate people who previously could not get into college because of geographical or time constraints. Technological advances and helped schools reduce the costs of distance learning, savings that students felt and helped to educate a wider audience.

In the 2000s, businesses began using E-learning to train their employees. New and experienced employees have the opportunity to improve their knowledge in a particular field of business and expand their own skills list. A large number of people accessing the programs that offer them the opportunity to earn Intern ETI money and enrich their lives by expanding knowledge.

1.3.5. Advantages and Disadvantages of E-learning

No matter whether you are a teacher, which seeks to transfer knowledge to students more interactive way, or corporate coach hired by the company, E-learning has a positive side, when it comes to the benefits that make the creation and delivery of training materials easier and no problems with them. Important benefits are listed below:

No limits, no restrictions

Together with location-related constraints, time is one of the challenges faced by students and instructors in learning. In the case of contact (personal) training, Miss This placement limits the participation of a group of students who are not able to attend this place. In the case of time, it limits the number of those who may be present at a certain time. E-learning, on the other hand, facilitates learning from the point of view of the organization, «where and when» anyone interested in the course may be present.

More curiosity

Designing the course in a way that makes it interactive and interesting through the use of multimedia, or even the newly developed methods of gaming (gamification) increases not only your «factor of participation», but also the relative demand for the course materials developed.

Profitability

This applies to students, and to the teachers, because there is a high probability that either one being, or otherwise you drove here to pay a hefty amount of money for some time to buy updated versions of textbooks for school, college or university. When textbooks often become obsolete after a certain period of time, the need for constant acquisition of new editions is not present in E-learning .

Just what you need!

As companies and organizations using new technologies to improve the efficiency of transactions every day, using Internet becomes a necessity. Once transnational corporations have expanded worldwide, the chances of working with people from other countries are increasing, and training all of these workers together is a challenge that E-learning solves successfully.

Let's mix it all together and apply it in real life

In order to improve the quality of the teaching material, teachers often call the classmates to give them a lecture that relates to a certain topic of the course. In the traditional model of education, professor invited to the expert to lecture at direct sense and nose to the cost of moving it to a place in learning and stay there for a time in.

From E-learning

With E-learning, the professor has the opportunity to take a lecture with a guest without having to spend a lot of money. This can be done practically, with cameras, both for lecturers and students, as well as using microphones to obtain the same level of interaction that would be possible if the lecturer is physically present in the hall. An additional advantage is that there is the possibility of repeating the lecture and getting even more useful information from it. Students who have missed classes can view the recording, and students who have visited can view it again to deepen their understanding.

1.3.6. Fear of Electronic Learning

Even taking into account all the benefits of E-learning, nobody can deny that there are some disadvantages. Practical skills a bit harder to get out and help the Internet resources. For example, the process of developing a web- site – this is something that can be easily explained to divide the information recorded video. However, practical experience is important. The development and repair of radio, computer technology are examples of skills that require practical experience.

Insulation

While E-learning offers simplicity, flexibility, and the ability to remotely access an elementary student audience or laboratory in their free time, students may feel a sense of isolation. This is because studies in Intern ETI is primarily a single phenomenon, and as a result the students you can look into

feeling that they are in solitude. But since technology is progressing and there are clear benefits from E-learning, students can now more actively collaborate with teachers or other students through tools such as video conferencing, social media, discussion forums, etc.

Health communication

E-learning requires the use of a computer and other similar devices; this means that visual acuity, improper posture and other physical problems can affect the student. When launching the on-line course, it is advisable to send recommendations on correct sitting posture, table height and regular breaks.

1.3.7. Future of E-learning

E-learning will remain in the future. In parallel, as my computer skills are growing all over the world, E-learning becomes more and more viable and affordable. Connection speed Internet growing and yet, there are more opportunities for multimedia teaching methods. With the enormous improvement in mobile networks over the past few years and the increase in telecommunication distance, the reality is the E-learning with smartphones and other portable devices. Technologies such as social media are continually transforming education.

In general, learning is expensive, time consuming and the results may differ from expectations. In Cheney endeavoring ARE for many years to understand how the process of learning to make it more efficient, and knowledge assessment correct. At the moment, there are a number of tools that can help create interactive courses, standardize the learning process and introduce informal learning elements in the case of a formal learning process. Several offensive E-learning trends will give us an idea of how E-learning and learning tools will be shaped in the future:

Micro-learning focuses on the development of micro-learning activities through micro-steps in the digital media environment, which are already everyday reality for the training of students and employees of the present. These activities can be included in the day-to-day learning process. Unlike «traditional» E-learning approaches, micro-learning often uses inductive technology through inductive media, which reduces cognitive load on students. Thus, the choice of micro-educational facilities, as well as the pace and timing of micro-educational activities, are important for didactic constructions. Micro-learning is an important paradigm that avoids the need to have separate training sessions, so I'm learning the «built-in» in everyday life. It is also great for mobile devices, where long courses may be superfluous.

Gamification (Gamification) is a system for using gaming thinking and gaming mechanics in the context of a game to engage users and simultaneously solve tasks.

A personal approach to learning is the principle of pedagogy that transforms teaching and learning environments is to meet the needs and aspirations of individual students. Personalization is a concept broader than just individualization or differentiation; it enables the student to choose what to learn, when to find out and how to find out. This may not indicate unlimited choice, as students will, as before, to have goals to be achieved. However, it can provide students with the opportunity to learn the required information in a way that satisfies their individual learning styles and intelligence capabilities.

Far future: automatic learning

In the famous stage of the movie «The Matrix,» Neo falls into a high-tech armchair equipped with electrodes that load the skills of a series of martial arts into his brain. After this, he opens his eyes and begins to quote from the moment : «I know Kung-Fu».

This type of automatic learning may sound like a bleak future, for most of us, but that is the way we go. Despite the ethical issues that may arise, the benefits may be substantial at different levels, if used properly. Here's how it works: A task that requires high performance from your sight (visual memory), such as how to catch a ball, is selected. Then find a professional in this case, placed in the fMRI machine (MRI) (functional magnetic resonance tomography) and recorded what was happening in his brain when he catches the ball. Then you have a program that describes how to catch a ball and you are ready to learn. The next step is to place yourself in the machine of MRI (fMRI machine), to falsify the process of catching the ball with images and write to the brain a program that describes the process of catching the ball that you recorded before. You do not even have to pay attention to how it happens. Your brain, however, is familiar with this model – it and is essentially learning, the brain becomes familiar and new knowledge.

Studies have shown that such a reproduction of a MRI scan may result in long-term improvements in tasks requiring visual reproduction. In theory, the type of automated learning is quite potent and E-learning in the distant future may look like this.

1.4. SEMANTIC WEB

«What is Web 2.0, Web 3.0?» Is a question we have been asking repeatedly and probably has as many answers as people use this term. However, after the conversations started about Web 3.0 and even Web 4.0, a new situation has come. To help people understand the ideas of such clever words as Web 2.0 and Web 3.0, we will try to understand what exactly these terms mean.

These terms are used as an attempt to provide a general idea of the constantly changing environment of the Internet. To identify and explain the

concepts of Web 1.0, Web 2.0, Web 3.0 in Intern ETI, to borrow W3C Director Tim Berners – Lee (Tim Berners – Lee) concept of reading – post in Intern ETI.

1.4.1. Web 1.0

The concept of Web 1.0, according to Tim Berners- Lee, can be regarded as «the Internet only for reading.» In other words, before the Internet let us find information and read it. There were very few ways to interact with users or to engage in content creation. However, the first phase of the network the Internet it was exactly what they wanted and most website owners: the purpose of the site was to mark its presence in Intern ETI and make information about themselves accessible for everyone all the time.

Web 1.0 is a retronym of the concept that relates to the status of the WWW and any style of website design that was used before the term Web 2.0 appeared. This generic term was created to describe the Network before 2001, which has been seen by many as a turning point for the International. The simplest formulation of Web 1.0 is most likely to be considered «that Web that was before Web 2.0» It is a common practice to compare sites by the type of technology used to build them.

1.4.2. Web 2.0

Currently, there is stage Web 2.0, or the stage of «read-write» the Internet if will stick to the statement described is Berners-Lee. Introduced on the Internet ability to make content and interact with other users will soon significantly change the global network. To understand the enormous potential of these changes, just look on YouTube, Facebook and Wikipedia that are based on publishing content users. Web 2.0 seems to be the long-awaited response to the demands of network users, Web 2.0 allows users to be one more involved in the process of creating information available to other network users the Internet.

1.4.3. Web 3.0 is a semantic web

By expanding Tim Berners-Lee's explanation, Web 3.0 represents the Internet as a stage of «reading-writing-execution» (Fig. 1.4). However, it is hard to imagine in abstract form, so let's take a look at two things that will be the basis of semantic markup and web services Web 3.0.

Figure 1.4 – Interaction of information technology in the era of web 3.0

Web 3.0 – the concept of the Internet technologies formulated Netscape.com head Jason Calacanis as an extension of the concept of Web 2.0, Tim O'Reilly. Its essence is that Web 2.0 is just a technology platform, and Web 3.0 will allow its professionals to create high-quality content and services on its basis.

The definition was published in the personal blog of Calacanis March 10, 2007. «Web 3.0 involves the creation of high-quality content and services created by talented people using Web 2.0 technologies.» He noted that Web 2.0 allows you to quickly and practically free use of a significant number of powerful Internet e-services with high consumer qualities, which led to the emergence of a huge amount of monotonous resources, and as a consequence, the devaluation of the value of most of them. The idea is that on the basis of Web 2.0 there should be a new platform – not so technologically, as socio-cultural, which is used by professionals to create interesting, useful and high-quality content. As an example of the tendency to transition from Web 2.0 to Web 3.0, Calacanis leads the German section of Wikipedia, which, as content fills content closes on editing articles of inexperienced participants, introduces a review of articles by the professional editors.

One of the interpretations of the term Web 3.0 is its correlation with the semantic web. The main idea behind this concept is based on the introduction of a Meta tag that describes the content of the sites for organizing the automatic exchange between servers. The descriptive mechanisms of semantic web have been really developed (RDF, DAML, OIL, OWL), however, a number of problems are encountered at the stage of making and displaying information:

- It is a necessity for additional expenses to create a semantic version of each site, which makes the technology much less accessible;

- lack of a guarantee of an adequate description of the webmaster own resources (similar to the history of the use of the tag «keywords»);

- the impossibility of adopting a single format for describing the properties of resources in the conditions of existing competition through commercial corporate policy of the creators of the resource and the availability of a wide field for manipulative descriptive mechanisms.

By the term as «Web 2.0», Tim O'Reilly proposed to define Web 3.0 as «interaction Internet with the physical world,» he also has spoken and criticized the identification of semantic web and the concept of Web 3.0.

As you can see, there is no specific interpretation of WEB 3.0. Maybe it will be such a phenomenon about which still has no idea. Personally, our opinion about the generation of WEB 3.0 is partly the same as Wikipedia's interpretation of the fact that people will create high-quality content, since they have already learned how to create resources, we now need to learn how to create quality information. The main skill of the generation of WEB 3.0 is the creation of high-quality information, especially video content. IN including, suggests that when WEB 3.0 era held the rapid development of information products and almost everyone as well to refer to WEB 3.0 Generation will own and information products will be sold through Internet.

Semantic web (Eng. *Semantic of web)* is a new concept of «World Wide Web» and network the Internet, created and implemented by World Wide Web Consortium (Eng. *World Wide Web Consortium,* W3C). Other names are semantic web, semantic network. Although the notion of a semantic network that arose before, gave rise to the concept of **semantic web,** they should be separated.

The concept is to implement common, standard data formats on the Web. To encourage the implementation of semantic formatting of the pages, it is proposed to change the structure of existing, non-structured or partially structured pages into the «data network». Creating a semantic Web is to use a resource description environment (RDF).

The term was first introduced by Tim Berners-Lee in May 2001 in the journal Scientific American.

The semantic web is a superstructure over the modern World Wide Web, which is designed to make information on the web more understandable to computers. We know that almost everything in the Intern ETI is in text form and. It is no secret that progress in the natural language processing (NLP) goes very slowly. Computers cannot perceive and comprehend verbal information placed Intern ETI, and soon, perhaps, will not. Then n is the question – how to make a computer ' Do they understand the content of the information on the web and teach them how to use it? This question is intended to answer the concept of semantic web. The word «semantic» in this case means «comprehended», «understood».

Today computers are very limited part in forming and processing information on the Internet. The functions of computers are mainly reduced to

the preservation, display and information retrieval. At the same time, the creation of information, its evaluation, classification and updating is a ll this is still in the iconic person. How to turn on your computer in these processes? If the computer cannot yet be taught to understand the human language, then you need to use a language that is understandable to the computer. That is, ideally, all information in Internet shall be displayed in two languages: human language for humans and computer language for understanding by computer. The semantic web is the concept of a network in which every resource in human language would be supplemented by a description, understand the meaning of the computer.

«Semantic Web will allow machines to understand the semantics of documents and data, but not human speeches and written messages.» – Tim Berners-Lee.

As we can see from Figure 1.5, 10 times, compared with the Web 2.0 model, the number of sites increased and the number of users increased by 8 times, provided that they create the same amount of content.

The evolution of the Web is not just the evolution of web-technologies, but the evolution of user interaction with today's web-technologies.

As possible:

1. You need to create a web-based platform where users could:

- independently choose moderators for a certain period of time from their number;
- influence the portal's policy, its design, financial costs, and the conduct of new functions through voting, that is, to implement the principle of direct democracy;
- have a dedicated address on your page and on your page, that is, to own part of the portal;
- change the design, functionality and program code of your page;
- choose where to store your data and downloaded materials – in your computer or on the server;
- develop new plug-ins and platform-based services for the platform itself, while retaining the right of joint ownership (shared between the developer and the portal as a legal entity) and financial rewards for using their own designs and ideas (for example, the development of Android and iPhone applications);
- own a website that downloads content and to bear full responsibility for its content. That is, if the author decides to remove his photo, a link that has been copied and posted by other users in the form of a graphic image (but has not acquired the right to use), the link will automatically disappear from the entire site;
- stratification of user statuses by the number of rights and obligations. Realization of the principle of status democracy;
- the ability to install this platform as an application, application, mobile OS or just OS, and have the ability to fully work in off-line mode.

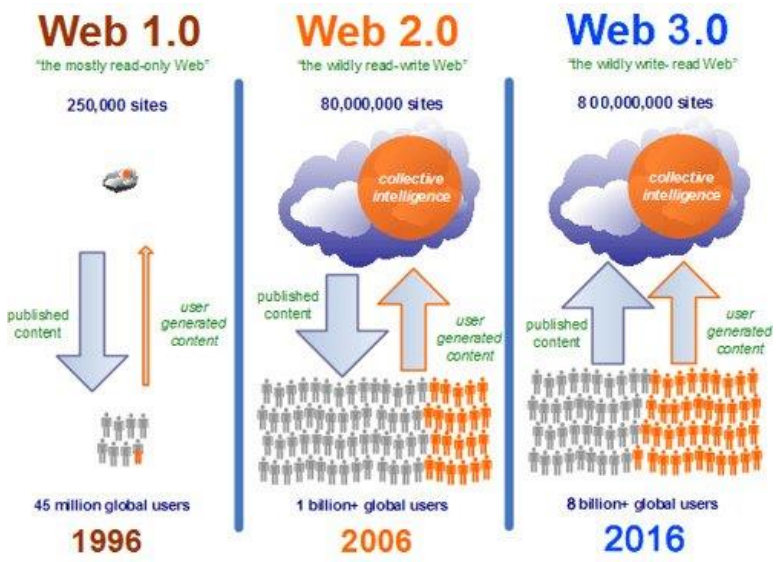


Figure 1.5 – Schematic representation of the development of technologies web 1.0, web 2.0 and web 3.0

Thus, by the end of the second decade of the XXI century. The following stages of network development can be considered (Figure 1.6):

Web 1.0 – Content (content) the Internet resources forms a relatively small group of professionals, the vast majority of network users the Internet appears as a simple «readers» In the first decade, the Internet network or Web 1.0 has been designed very foundation the Internet that allowed giving access to huge amounts of information wide count of network users (Web 1.0 – Content generated by the administrator).

Web 2.0 – network users are actively involved in creating content. Now we are at the end of the second decade – Web 2.0 – various interfaces have been developed that allow users to control the contents of the Internet and interact with each other (Web 2.0 – the content is generated by users of the site, but is moderated by the site administration).

Web 3.0 – on the verge of the third decade – Web 3.0. Semantic Web (Semantic Web). Semantic Web (Semantic Web) – «part of the global concept of network the Internet whose purpose is to implement the possibility of computer processing of information available on the World Wide Web. The main emphasis of the concept is on work with metadata, which uniquely characterizes the properties and content of World Wide Web resources, which is currently used in document analysis «(Wikipedia). Namely, it is a network over the Network that contains metadata about the resources of the World Wide Web and exists in parallel with them (Web 3. 0 – the content is generated and moderated by users of the site).

Figure 1.6 – Evolution of technologies «WEB»

Obviously one thing: the Internet does not cease to develop and the future of Internet-technology is extremely interesting!

Humor

In Intern ETI prevalent joke that reflects the stage of development Web:

- Web 0.0 – the user dreams of law-making with someone or something;
- Web 1.0 – user receives content;
- Web 2.0 – user creates content;
- Web 3.0 – collective creation of content;
- Web 4.0 – the content thinks for the user;
- Web 5.0 – content communicates with content;
- Web 6.66 – the content removes the users, realizing that they do not make sense.

Control questions

1. Describe media technology and multimedia.
2. What do you mean by media education and media-pedagogy?
3. Describe E-learning .
4. Define the term as «semantic web».
5. What are the differences between web 1.0, web 2.0 and web 3.0 technologies?
6. Tell us about the history of media technology development.
7. What is the difference between multimedia and media technology?
8. Give the character of the development of media education and media-pedagogy abroad.
9. An Explanation The Difference Between Internship Training And E-learning .
10. What are the positive and negative aspects of E-learning you know?

2. SCIENTIFIC AND THEORETICAL PRECONDITIONS OF APPLICATION OF MEDIA TECHNOLOGIES IN EDUCATIONAL PROCESS

2.1. EDUCATIONAL THEORIES, CONCEPTS AND PRINCIPLES TO BE KNOWN BY EVERY TEACHER

Are there too many educational theories, concepts, principles, so it is difficult to identify the exact boundaries between them? We share your opinion, so consider it necessary to offer a list of the main and most popular educational concepts related to information technology. The following is a simple attempt to help, and in completing a fuller picture of what constitutes these concepts, spending between them a clear boundary.

The Consortium of New Media, commissioned by the European Commission, has prepared a report on the prospects for the introduction of new educational technologies into the educational process. There are three sections in the work: trends, technologies and changes. Each characterizes the near future (1 – 2 years), medium (3 – 5 years) and distant (more than 5 years).

So, in the coming years, according to the forecast of European experts in education, social networks, tablets and cloud services will increasingly be used in education, which will change the role of the teacher, as well as solve the problem of young people's digital illiteracy. The next step should be the widespread introduction of Open Educational Resources (OER) and gamification, along with a gradual merger of formal and non-formal education. In the most distant future, educational institutions will switch to personalized learning and assessment using the Big Data tools.

The report on innovation in pedagogy was also developed at the Open University of Great Britain. British experts have identified ten existing innovations that will have the most significant impact on education in the world in the coming years.

From the beginning of the 80's of the XX century. Scientists have developed and substantiated a large number of educational theories, concepts, principles, teaching methods and tools that are based on the direct or indirect application of media technologies and are described in various books, manuals, scientific articles, etc. Some of them are already well known, and some are quite new and, in our opinion, very promising. Next stop on Main s of them.

The theory of social and joint learning has developed with the advent of information technology. IN In this perspective, joint education is an approach where students have the opportunity to socially interact with other students, as well as to be instructors. By day bye, students work together to

expand their knowledge of a particular topic or get some skills. This is usually done through chat rooms, bulletin boards or instant messaging.

Mutual study is based on the principle that students can enrich their knowledge by interacting with others and getting the best from each other, more necessary knowledge and skills. Such training can be performed either offline, or Intern ETI and can occur either in asynchronous mode, or simultaneously. It allows students to learn the ideas, skills and experience of those who are already included in the course. Participating in common tasks (whether it is a project or a class), students are given the opportunity to gain group analysis and teamwork skills.

The theory of adult learning, also known as andragogy, is based on the understanding that adults and teens are learning differently, and these differences must be identified and taken into account. Malcolm Knowles, the main developer of this theory, argued that adults, as a rule, have different motivations for learning and a significant life experience; both of these factors have a significant influence on the learning process (1970). Because of these key differences, Malcolm Knowles offered the following adult education principles:

- adults should be involved in the planning and evaluation of their tasks;
- experience (including errors) provides the basis for educational activity;
- adults are most interested in studying subjects that are directly related to their work or personal life;
- adult learning problem-oriented, not content-oriented.

The theory of mixed learning is based on the combination of offline (traditional learning) and on-line learning (interactive capabilities) in such a way that they complement each other (Figure 2.1). A distinctive feature of mixed learning is the combination of individual learning with any other methods and techniques of teaching. In the past, media technology played an additional role in helping a real teacher, the situation is changing now. For example, a student can attend classroom activities in a real audience, and then continue it with on-line courses. Thus, the student must physically attend lessons only one, twice a week (instead of five), and the other students will take place in his own pace. All activities in the study of material that previously took place in the classroom can be conducted on-line. The tools and platforms that complement the mix of learning include LMS and mobile devices, such as tablets and smartphones.

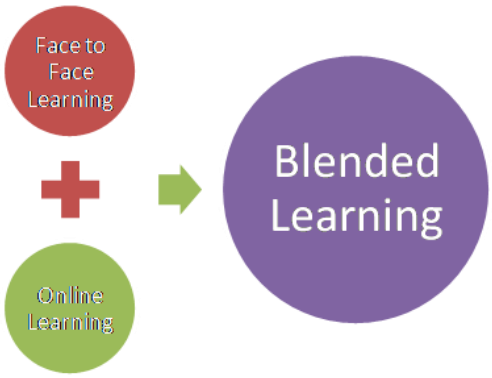


Figure 2.1 – Schematic representation of the theory of mixed learning

The theory of open learning interprets the educational process as a perception of experience that is open, transparent, common, and social. Teachers – supporters of a free and open society, knowledge is synthesized from the general, jointly developed by all teachers of the network. The theory of open learning may include some or all of the following postulates:

- promotion and use of free educational tools, open source software where possible and beneficial for student learning;
- integration of free and open content and media technologies in teaching and learning;
- creation of individual training networks for joint and continuous education;
- development of a learning environment that includes humanistic, personally oriented approaches that are based on a variety of learning strategies;
- modeling openness, transparency, connectivity and responsibility for copyright;
- promotion of participation and development of a common culture in the field of education and society, etc.

One of the types of open learning environment is MOOC, the abbreviation, which means «massive open online courses», by Canadian researchers Steven Downs and George Siemens (Figure 2.2). In other words, it is the Internet-classes, created for a great deal of participants. Generally, MEPs listen to video lectures, usually 10 to 15 minutes long, and take part in on-line forum discussions with teachers and other listeners. Some MEPs require students to take control tasks and tests that suggest a choice of answers from the ones proposed, and some – to accomplish assignments that are evaluated by several people, which include the listeners themselves. Some MEPs use both options for verifying knowledge.

Figure 2.2 – Logos of the main MOOC systems

Massive open social learning is a continuation of history with mass open online courses (MOOCs), but now the focus is on video collections and the transfer of knowledge to a huge number of people, on how to form communities in the process of passing MOOC to organize networked collegiate learning. After all, communication is an integral part of any training.

One of the new and promising, in our opinion, is the **theory of Connectivism,** developed by George Siemens, a writer, theorist, lecturer and researcher in the field of training networks, analytics and visualization technologies, openness and organizational effectiveness in the digital environment. IN In particular, he is known as an inventor in the field of research on mass open online courses (MOOC) from the University of Athabasca, Canada.

According to the theory of Connectivism, a person truly learns only through social contacts. Connecticism is based on theories of the network, chaos, social constructivism, difficultly organized and self-organized systems. Learning, by Siemens, is a process that occurs in an uncertain and varied environment in which the main elements are constantly shifted. This process cannot be completely controlled by the individual. Training can be supported from the outside and is a combination of information sources. This association and information nodes allows you to ascend to a higher level of understanding. Connectivism emphasizes the unsteady, dynamic nature of learning. Our solutions are based on ever-changing grounds.

In his «Theory and Practice» interview, George Siemens acted as a philosopher and visionary, explaining how the modern educational system should cease to be a system of duplication of knowledge and become a system for producing knowledge. «It is necessary to create specialists who could find people who have deep knowledge in their subject and bring them together so

that they can move forward and create something new. – The modern school, unfortunately, does not cope with this task. «

For a better understanding of the theory of conjectism developed by Siemens, a comparative table (Table 2.1) of theories of behaviorism, cognitivism, constructivism, and concjectivism, which reflects the basic principles of each theory, was developed.

Thus, having become acquainted with the main ideas of the theory of Connectivism, it can be argued that an enlightened person of the future will be able to combine separate, unrelated fields of knowledge and to successfully operate the Internet space for the exchange of information, to unite in professional groups while applying the media- technology. In our opinion, these skills are the basic and most important of the necessary skills that need to be developed by current students – future skilled professionals.

Another theory, which, in our opinion, based on the use of media technologies is the theory of **continuous training.**

At a professional level, we are talking about further expanding skills in response to environmental changes and new developments. This is very important because we are called to respond to changes every single day. For example, the introduction of computers in the workplace leads to the need for people to train on computers to more effectively perform tasks.

Table 2.1

Comparative Table of Theories of Behaviorism, Cognitivism, Constructivism and Conneetivism

	Behaviorism	**Cognitivism**	**Constructivism**	**Connectivism**
How do I study?	Passive follow-up of the teacher's instructions. The main action is playback. The main focus is on the behavior of the student (student)	Structurally, but consistently, predictably.	Socially, that is, it is carried out on the personal participation of each student	Distributed inside the network, socially and technologically equipped, through the recognition and interpretation of information nodes
Factors of influence	Encouragement, punishment, incentive	Existing scheme, previous experience	Attraction, active participation, social and cultural factors	Various networks, bond strengths, inclusion context
The role of memory	Leading memory role	Encoding, saving, finding	Preliminary knowledge in conjunction with the current context	Adaptive models that reflect the current state of the network
What is the	Situation –	Copying the	Designing	Independent search

transfer of knowledge (skills)?	reaction – reinforcement	constructs of teacher's knowledge	knowledge based on their own socially meaningful experience	for meaning (meaning) in a variety of facts. Connection with information nodes and network expansion
Type of study	Learning built on tasks	Learning based on reflection, clear and clear goals, problem solving	Social education	Comprehensive training in a fast changing environment, with a variety of sources of knowledge

On a personal level, it is about continuing education and the continuous expansion of knowledge and professional life skills. After all, life is changing and there is a need for constant adaptation and professional growth. Also, the introduction of computers made us rethink how we communicate with people, and allowed us to stay in touch with people from around the world with just one push of a button.

Continuous learning is determined by the daily practice of gaining new knowledge. Example:

- is appeal for help when something is not clear;
- observing the work of more experienced employees;
- is a n attempt to use new ways of doing business and studying alternative methods;
- practicing what has already been learned;
- search for ways to improve, such as passing a training program or on-line seminars out of work.

In an organization, continuous learning refers to the formation of a team that can adapt to changes in the business environment. This is very important, as ever-changing economic conditions require that any team be up to date with the latest knowledge, and be flexible and adaptable to any possible changes that may occur.

The theory of lifelong learning is inextricably linked with the theory of social and common learning. News on social networks (Facebook/Twitter/LinkedIn) play an important role in learning, communicating and sharing knowledge. Usually spending the whole day between social media and work, we are always learning something new. For example, people working in the field of finance should be aware of new trends, market movements and environmental changes that may affect stock prices. The «learning» method without the use of a separate platform serves in this case a social network with a constant stream of fresh news filtered out by the sphere of interests and the possibility of reviewing the activities of colleagues

in this field. In addition, all this, in turn, can contribute to the constant acquisition of knowledge.

The **E-learning** Theory **(eLearning)** describes a wide range of applications and processes designed to provide students with learning materials. Usually this theory means Internet-learning, but it can also be used for DVD or video conferencing via satellite, etc. Therefore, «eLearning» encompasses much more than just on-line learning, learning through the Internet or learning using computers.

Adaptive learning is an educational theory based on the use of technology as «interactive learning devices» and the use of media technologies to adapt them to the needs of students. The task of this method is to create an optimized model of learning that transforms students from simple listeners into active and ready-to-learn collaborators.

The «interactive learning devices» use a computer with the appropriate software installed. Computer adapts the idea of training material to the needs of the student; it often comes in the form of answers to questions and challenges. The meaning of such training is that using the computer, the interactive capabilities of the student and the teacher's mentorship with which the student can communicate is combined. The theory includes aspects derived from various fields of knowledge, including information technology, pedagogy and psychology.

It cannot be said that adaptive learning is a completely new theory. It has been around for almost 100 years. For the first time, it was developed by the Italian teacher theorist Maria Montessori (Maria Montessori). Relying on the idea that each student is unique and different from the other, Mary developed a pedagogical theory, which was later called the Montessori system.

The method of **personalized approach** to teaching is the pedagogical principle of pedagogy, which is aimed at satisfying the needs and styles of teaching individual students. The personalization of the concept is wider than just individualization or differentiation; it gives the student the opportunity to choose what to learn, when to find out, and how to learn.

In essence, the personalization of learning activities allows students to customize various elements that are involved in the learning process using media technologies. This means that they can set their own goals, learn at their own pace, and communicate with faculty and students to personalize the learning process. Ideally, students are placed at the forefront of management with their own learning process and with the ability to influence the content of learning.

The basic elements that are customized in personal training are: the pace of learning, teaching approaches, occupations and activities that are customized depending on the student's experience and interests. In a truly personalized learning environment, students are given the opportunity to find out what they want and when they want to choose the necessary teaching methods. This, as a rule, leads to improved learning outcomes.

A significant part of the personalization implemented using media technology is based on feedback. The feedback can be either explicit (in the form of a written proposal) or implicit (in the form of actions in the system). The feedback can be executed either manually or processed automatically, and ideally it should be an integral part of the training platform. Convert personalized feedback system modifications, mainly through artificial intelligence subsystem.

Some of the history of adaptive and personalized learning

The idea of adaptive and personalized learning originated in the 50's and roots reaches the «educational machines» of psychologist B. Skinner, founder of behaviorism, at the time a professor at Harvard University. Based on the principles of training that he developed during experiments with pigeons, scientists created a mechanical device that resembles a box, which «feeds» questions students (Fig. 2.3). Correct answers were rewarded with new academic material; wrong answers led to the repetition of the previous topic. «The student quickly learned to answer correctly,» said Skinner.

Figure 2.3 – Educational Machine by B. Skinner

The movement became popular in the 70's on a wave of interest in the technologies of artificial intelligence. Then, scientists believe or that sooner or later the computer cannot worse human adapt to the external environment. The use of mechanisms of machine learning in education has become a popular topic in the scientific community, however, the cost and size of computers at that time deprived it of the idea of some practical meaning.

Knewton's Technique

It was only by the end of the 2000s that the idea began to gain real outlines, and adaptive learning was once again in vogue. Systems like Knewton today have a wide range of features, such as challenging skills development, instant feedback, personalized hints, and something that was not available to Harvard students – Skinne’s computer-like interface.

Knewton is aware that one of the first to actively apply technology data analysis in education. IN As a result of this work, an adaptive educational platform was created that can be connected to any modern learning management system (LMS).

Methods of Knewton can «guess» that the next material should be offered to students studying or testing (Fig. 2 4).Popularly explaining the principle of the adaptive platform, developers compare it with what is used in the online music service Internet Radio Pandora, which can predict what next music will be heard by the user, making a prediction on his previous musical preferences. According to developers, students who use the Knewton platform textbook do not have to look for two students who study the same material at the same time. The volume of paragraphs in the textbook varies in greater or lesser proportions, depending on the results shown by the students in the testing process, organized in the form of quizzes and games. If, for example, a student is better at math based on visual material, this factor is also taken into account and much of the mathematics training will be based on video. Or, for example, if the study of chemistry is better on the basis of the game, it will also be taken into account during compiling a course for this student.

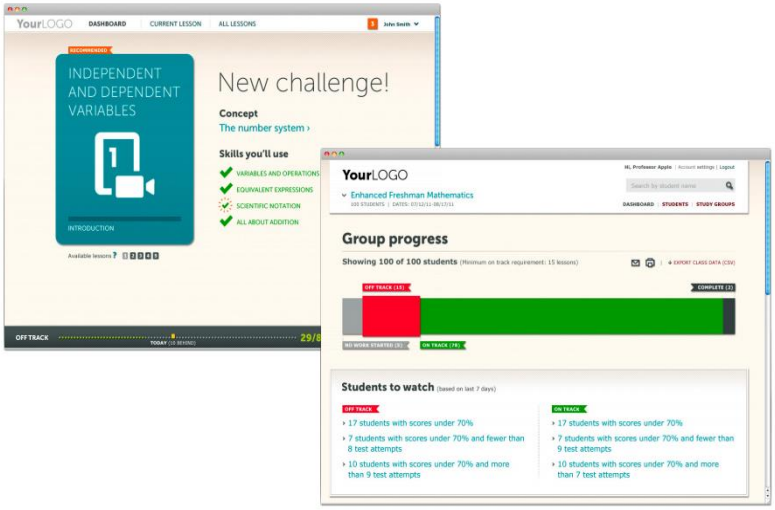


Figure 2.4 – Knewton Interface

A ready platform that allows each institution to introduce personalized learning is a big step forward in the development of educational technologies.

As the head of the London office of Knewton, Charlie Herrington, writes: «Imagine that a teacher can, with a pair of mouse clicks, evaluate the student's individual knowledge of his subject at any given time. This will help the teacher to easily and quickly identify topics in which the gap in knowledge just begins to emerge and change the learning process in such a way as to eliminate this gap. In teachers remain more time doing what comes in their best – inspire and teach. «

The Knewton methodology is built around two main concepts: the technology of planning the educational trajectory and the complex model of student assessment. This approach is fundamentally different from most

«adaptive applications» that essentially apply an adaptive approach to a single point in which students' knowledge is measured. An example of such a «poorly adoptive» approach is a diagnostic test, based on which computer computers determines which content will be shown to the student in the future. Data mining and personalization technologies are used here minimal or not used at all.

Adaptive learning in the understanding of Knewton should respond in real time to the results of an individual student and his actions in the system (Figure 2.5). This approach increases the likelihood that the student will receive the correct educational content at the right time and achieve their goals. For example, if a student misses a certain set of questions, then Knewton will be able to guess which topics raised in this list of questions were unclear and offer him content that would help raise awareness of these topics.

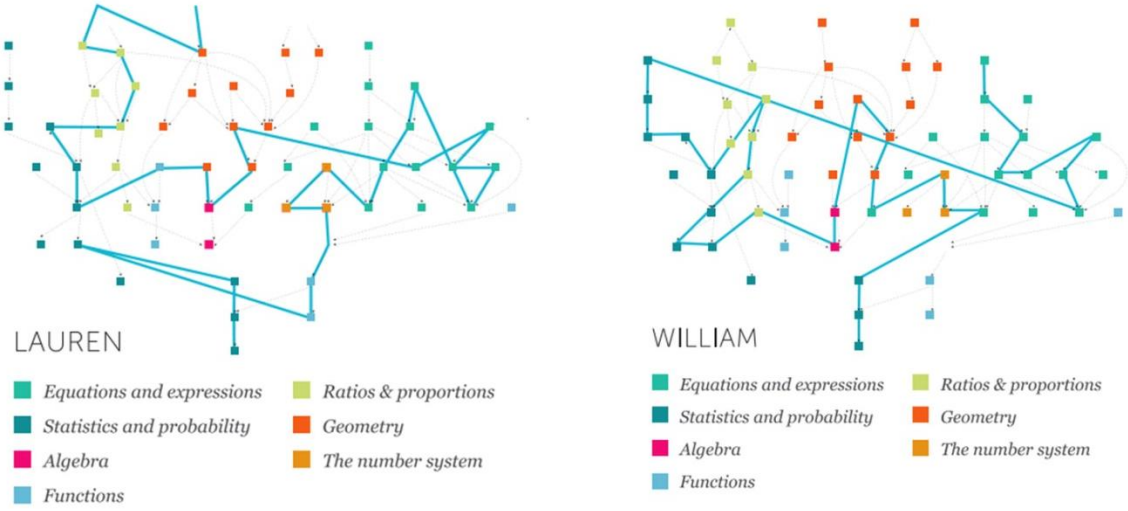


Figure 2.5 – Individual educational trajectories of two students

Knewton calls itself the added value of an educational application that analyzes data. That is why any educational institution or project can work with Knewton. Data collected using adaptive platform by educational application and transmitted to the server using Knewton API. To start collecting a certain type of data, for example, when a student started watching a video or the answer to a question, it is enough to add one single code ribbon that will transfer these Knewton data. The adaptive platform analyzes the data collected and returns them with an application in the form of recommendations to the teacher or guidance on which content block should show the student the following.

Micro learning is an educational concept that can provide a wide range of benefits for students as well as teachers. This related primarily to the fact that micro learning activities can provide educational benefits without overloading the student. Micro learning is quickly becoming one of the most popular new learning trends.

Micro-education includes training, consisting of small steps and goes side-by-side with traditional training. The training and activities of micro training are usually based on short-term classes, projects or coursework that are designed to provide students with not large volumes of information. For example, instead of trying to teach the student all at once, a certain topic can be broken into smaller exercises.

Typically, such exercises are best applied at a place where the student will actually need information or when the student will be most receptive to obtaining this information. For example, during the course of various types of training and production training.

In fact, we are faced with micro instruction daily. Even reading a newsletter that is posted on work on workplace safety, reading twits, with the details of the latest news can be considered a micro cognitive activity.

Micro learning gives students the opportunity to gather information and «feeds» it in a form that can help absorb it more effectively. This is an ideal solution for those who do not have enough time to devote to their learning, given that you can acquire knowledge at your own pace and avoid the risk of overloading too many data at the same time (part-time training).

Micro learning can also take place outside of the university, which means you can take less lessons that will help you advance your goal of learning even when you are waiting for a bus or sitting in a traffic jam.

Micro training can be carried out in a variety of forms. Letters, online messages, short multimedia videos and even short chat session can provide students with small blocks that are needed to achieve their goals in education and expand their overall knowledge base.

Gamification (gamification) – the concept of the use of game basics of mechanics, aesthetics and game thinking in order to attract people, motivate them to act, facilitate learning and solve the problem. Basically, it is the use of gaming technology to solve educational problems outside the scope of the game. Many experts called gamification and one of the most important trends in the IT industry.

A study conducted by Tracy Sitzmann (Associate Professor of Management at the University of Colorado Denver Business School) found that «staff trained by video games learned more from the actual information, reached a higher level and saved the information longer than workers who have learned this information in a less interactive environment.» She found that the game provides a higher level of training, but it does not just depend on the game itself, but on the interactivity or the elements that make the game attractive.

Shravan Goli, a Forbes journalist, calls on the government to provide support to businessmen working in the field of gaming. After all, private developers in their products touch upon those aspects of learning that are

often ignored by traditional techniques: for example, the importance of communication, effective interaction, or leadership.

Dr. James Paul Gee, a renowned researcher in the field of education, speaks of this phenomenon: «You will not learn anything unless you have a motivation. And motivation always takes the form of a reward. You can have fun playing time by earning gaming points, but at the same time, the game will help you to better understand such abstract subjects as, for example, algebra. « Doctor Gee gives an example of 3,500 Chinese students learning English using videogames. 95% of the teachers who observed this experiment admitted that such a form of training significantly increased the motivation of students.

Thus, summing up these and other studies it can be argued that the student's activity in the game leads to learning.

The concept of synchronous and asynchronous on-line learning. Synchronized on-line sessions involve simultaneous participation of students and teachers. Lectures, discussions and presentations take place at a certain time. All students who wish to take part in it must be online at this time. Asynchronous on-line classes are held on a different principle. Teachers teach materials, lectures, tests and tasks that can be accessed at any convenient time. Students may be given time interval – usually a week – during which they must use the Internet for training once or twice, but students are free to choose this time.

Video training on the right can be considered one of the most common in our time. After all, practically every one of us at least once participated in an online webinar or conference, or just browsed a certain cognitive video. Fast the Internet-out connection and the widespread use of mobile phones and tablets with the possibility of video playback means that the use of video in learning has become commonplace.

We are more accustomed to learning with video than ever before. If you want to watch a video on how to connect a plug-in, plant a tree or bake a pie, you just have to visit YouTube and there are hundreds of different videos available that will show you step-by-step sequences of tasks to complete the task.

The video brings an entirely new dimension to teaching methods. If the content of your course involves acquiring practical skills, this can be demonstrated. Anyway, a lecture on PC architecture (compilation of a computer) or chemistry (conducting a chemical experiment), these aspects of the course will be most profitable, from the pedagogical point of view, to get from the review, not just from the explanation in the text and static images.

The video also helps to add feelings of personalization of the course. By enabling video on lectures, the instructor denounces students to feel connected, «face to face», and, in addition, you can always talk with a specialist

on a particular issue that is being considered by conducting an Inter - conference with him.

Course Management System (CMS) is a set of tools that allows the teacher to create training materials and teach them on the Internet without using HTML or another programming language.

A Learning Management System (LMS) is a software product or website that is used to plan, implement, and evaluate a particular learning process. Typically, a learning management system gives the teacher the ability to create and present students with training materials, monitor the participation of students in the learning process and evaluate their participation. The learning management system also allows students to engage in interactive processes, for example, in video conferences, discussion forums, discussion of certain issues with the use of webinars.

Virtual class is the online learning environment, which may be based ETI to web access through a portal or created software, which will need to download files. Just as in a real classroom, a student in a virtual classroom takes part in a synchronous discussion, which means that the teacher and students enter the virtual learning environment at the same time.

The «inverted» class is a reciprocal learning method, when lecturing and studying the subject is done on-line, and the homework is done in a real class.

«Cloud» training. In fact, the «cloud» is the original and fictional name that allows a group of computers together in a network – usually through the Internet to work as a unit and use shared resources. In addition, «cloud» is a model that allows you to scale up various sources of information storage in accordance with the needs of the AMI. The more users use the system, the more sources will be involved.

«Cloudy» learning uses a perpetual, universal, accessible, expanding computer network and uses the capabilities of media technology for education – from on-line classes of accredited universities to small training modules used by private companies.

Mobile learning is a concept in which students are given the opportunity to receive teaching materials using personal devices – smartphones, mobile phones, tablets, e-books, etc., as well as special applications for mobile devices that make educational material available to them for certain funds or free of charge (Figure 2.6).

The «1: 1» principle involves providing each student with a laptop or tablet for individual training, increasing independence, and increasing the number of academic hours outside the audience.

Bring your own devices (**BYOD**) is a principle that actively uses smartphones, laptops, tablets and anything else for classes. However, these spells are not provided by the state or anyone else. What about the different phones and computers that already exist among the students of the audience. So why not use them?

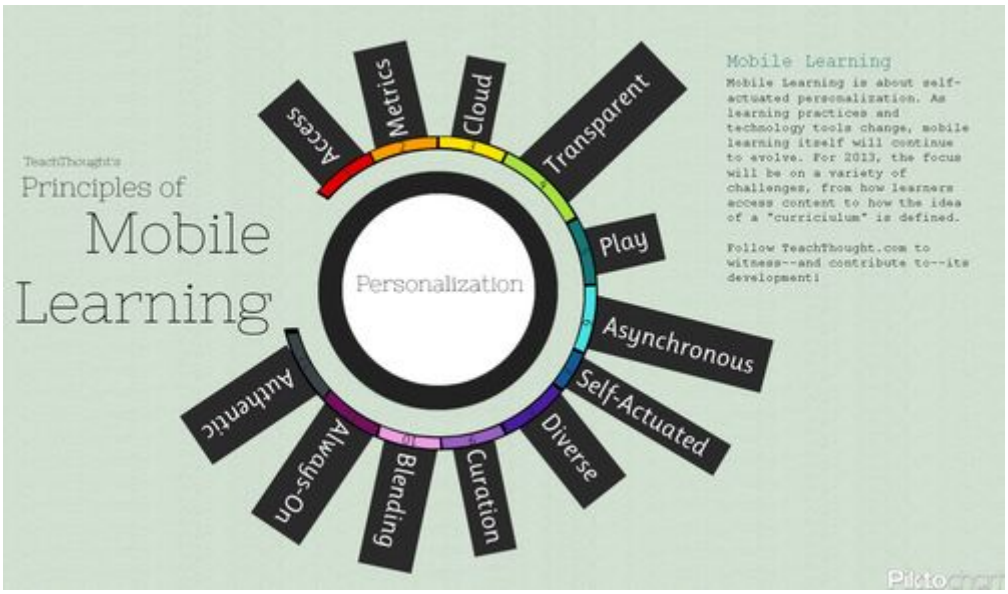


Figure 2.6 – Concept of mobile learning

The purpose of learning is the process of obtaining knowledge, in which the training itself is reflected. Metalanguage is a system used to describe a system (for example, linguistics). That is, students are increasingly reflecting on how they learn, how to study better and what they need to do. All kinds of on-line tools like Quora help them out.

George Siemens Ideas about Future Knowledge

Wikipedia calls George Siemens a writer, theorist, lecturer and researcher in the field of learning, networks, technology, analytics and visualization, openness and organizational efficiency in the digital environment. In his interview to Theory and Practice, he acted as a philosopher and visitor, describing how a modern school system should cease to be a system of duplication of knowledge and become a system for producing knowledge.

In the implementation of distance learning forms, not only is it financially beneficial for educational institutions, it also saves time for students or businessmen who cannot get away from work for a long time. Also, this form of training allows you to actively participate in the educational process for people with disabilities. The boundaries of universities now expand almost to planetary scale, as students are able to join the training from any place where there is Internet.

However, the emergence of this form of education is related not only to economic and other benefits. This is is a sign of the interaction of people in different fields becomes more intensive. According to George Siemens (a researcher in education, networks, technology, analytics and visualization, openness and organizational efficiency in the digital environment), the International will change the very structure of society is a nd education in the

first place. Increasing interactivity in a variety of areas of knowledge will make collective research available, for example, in medicine. « From my point of view, this particular type of work – distributed, network, interconnected – would solve these problems that humanity ever dare think « – George Siemens says.

That is, the education system must be ready for a thorough reboot: there is no longer a need for duplication and the mechanistic reproduction (learning and transfer) of knowledge – the student must be able to be able to produce new knowledge based on already obtained and work on general collective knowledge.

«It is necessary to create specialists who could find people who have deep knowledge in their subject and bring them together so that they can move forward and create something new» – Siemens says. «Modern schools, unfortunately, do not perform this task yet.»

From a qualitative point of view, the learning process will become more and narrower: according to George Siemens, ways to self-development and the opening of their own potential will lie through constant interaction with other members of society, who also have profound knowledge in their fields. Decision of unsolved problems will not lie on the shoulders of an intellectual who understands a bit of all fields of knowledge immediately, but on the shoulders of those who have a deep knowledge of his subject and understanding which experts to enlist for collaborative deciding of the problem. An educated man of the future will be able to combine the individual, interconnected areas of knowledge and successfully operate spaces for the exchange of information, unite into professional groups – today it is one of the most important skills.

«The concept of the universal man of the Renaissance is not relevant anymore: every field of knowledge is so great today that even professors, who devoted all their lives to the study of only one discipline, not able to constantly stay ahead of the entire planet and track the entire amount of information that appears « – George Siemens says.

An educated person of the future will be able to combine separate, unrelated fields of knowledge and to successfully operate simple frameworks for the exchange of information, to join in professional groups – this is what seems to me today the most important of the necessary skills. This is «searching for meaning» and «searching the method» in one bottle.

Under the **PLE – Personal Learning Environment,** an individual learning environment is understood as tools, communities and services that are based on individual educational platforms designed for use by students who provide self-directed self- instruction and self- defined learning objectives.

Often, the term «PLE» is used as an antonym to «LMS» is a n educational management system, in the sense that the first is concentrated on subjects of learning, and the second – in training courses. IN, at the same time, individual

learning environments may intersect with learning management systems, and students can use these or other LMS components by constructing their own learning environment.

The basis of the typical PLE may be educational blogs in which students tell about the progress of their learning process; YouTube and similar sites; RSS feeds. In other words, PLE is a collection of resources needed by the student to find answers to his questions, create the context to study and illustrate the processes being studied. Thus, an individual learning environment is not a specific application or service, but a special approach to the implementation of training.

An example of an individual learning environment can be the experience of some British and American universities. The University of Bolton (UK) developed the PLEX application is a platform for students to access the entire network of learning resources. And at the University of Mary Washington (Virginia, USA), students and teachers are eager to use **blogs,** talking about their work, sharing ideas and collaborating on learning and research projects.

That is, in essence, in creating the basis for PLE, the matter remains small – just have to provide students with a platform on which they could communicate, post their own content, discuss it and share the impressions of learning. It is not necessary to create such a platform specifically, but simply to adapt for this purpose any well-known free service that allows users to download content, exchange and communicate with each other.

Then you need to create a certain learning context and provide the starting points of learning, that is, you must give the students a set of tools, reference resources and sources of necessary information. With the development of the learning environment, they themselves will complement the list of these resources and offer new teaching tools. New ideas appear, discussion, new content will be created and contacts with colleagues and experts will be established. It will become a real personal learning environment.

The concept of PLE can be shown using Figure 2.7:

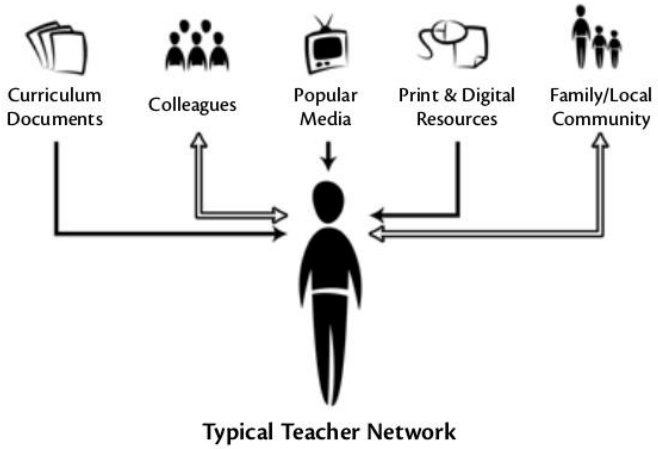


Figure 2.7 – The concept of PLE

The idea of PLE is that students should not just passively consume information obtained from a limited number for the proposed sources, and use the right set of information resources, organize and compare the knowledge and even, create new sources of knowledge. For such an approach, the responsibility for learning falls on the shoulders of the students themselves, and they themselves manage its course – which, ideally, makes learning more meaningful, enjoyable and interesting.

However, this, of course, does not always happen. Not all people are able to learn without external goals and external control, and not all, even if they have the desire, can effectively organize their own learning without the help of others. And without the enthusiasm and interest of students in the PLE, there is simply no chance of existence. In addition, unfortunately, far from being able to independently select the trustworthy and relevant information from the general flow. Therefore, individual learning environments, of course, are not a universal approach – but they are very interesting and promising.

As part of the PLE, learning from simple data transfer is transformed into collective work, which is based on collaborative work, on the analysis and synthesis of knowledge, on the creation of new ideas and representations. Students not only accumulate knowledge, they learn to build information links, independently extract and transfer knowledge, finally, to use them. Education inevitably becomes more conscious and eventually turns into a person's personal value.

Examples of PLE systems are CLIX, Moodle, iGoogle. The concept of PLE was taken and further developed as part of the European Responsive Open Learning Environments (ROLE) project. Users can freely receive, join, develop and expand the system. The Independent Group in the US has created a pre-consortium for PLE and is currently seeking motivated people to better define standards and procedures for implementing PLE.

Individual Learning Network (PLN – Personal Learning Network) is a formal learning network that consists of many participants, connected with a purpose. The student interacts with them and acquires knowledge through an individual learning environment (PLE). Communication with other people takes place in order to find answers to the questions asked and thus to gain new knowledge.

An important part of this concept is the theory of Connectivism, developed by George Siemens and Steven Downs. Students create connections and develop a network that promotes the growth of their professional knowledge. A student does not necessarily have to know these people personally or ever to get along with them.

«For the first time in history, we know how to preserve virtually the most important information for all humanity and make it accessible, practically instantaneously, practically in any form, practically on everyone on earth.»

An Individual Learning Network (PLN) is closely linked to an Individual Learning Environment (PLE). Martindale Trey and Michael Dowdy describe PLE as «manifestation of informal learning processes for a student through the Web.» It is possible to expand this statement: «PLN more clearly include human relationships that are mediated through PLE.»

Based on these statements can be summarized that the PLE was a subset of PLN (Fig. 2.8). We will define PLN as follows: Individual network learning is the sum of all social relationships that lead to the development and simplification of the individual learning environment.

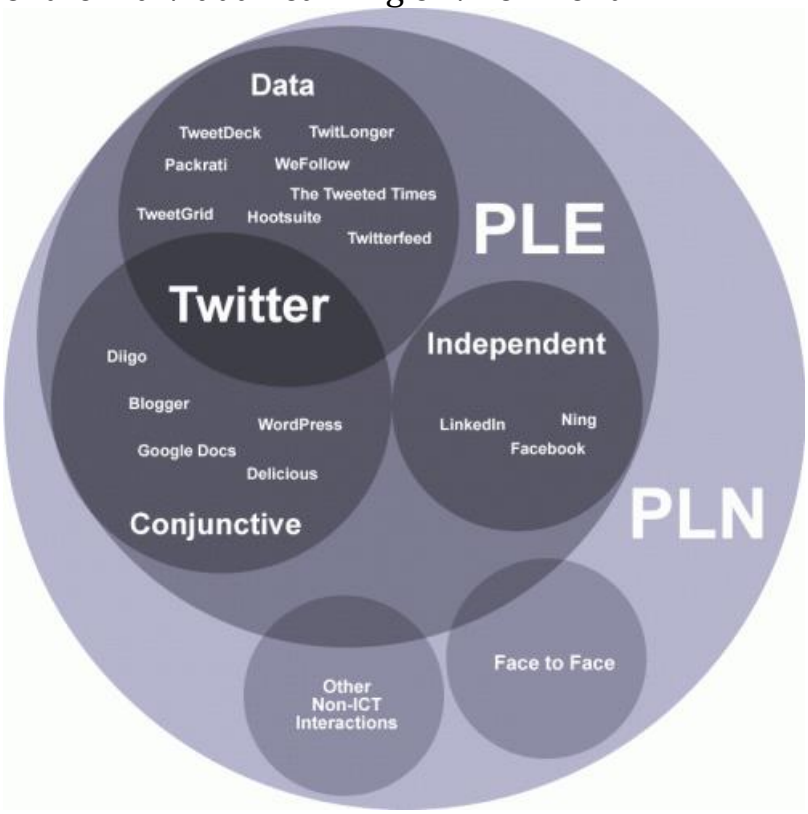


Figure 2.8 – The relationship between PLE and PLN concepts

One of the main aspects is that the student contributes and gets the knowledge in the individual learning environment through different nodes. Thus, the student chooses which nodes he needs to build his own individual learning network. In particular, the student chooses who to interact with, in what environments and to what extent. The teacher is assigned the role of a consultant who, on a par with other participants, perceives a variety of information from the individual learning environment and takes an active part in developing content and providing professional advice to other participants in the individual learning network (Figure 2.9).

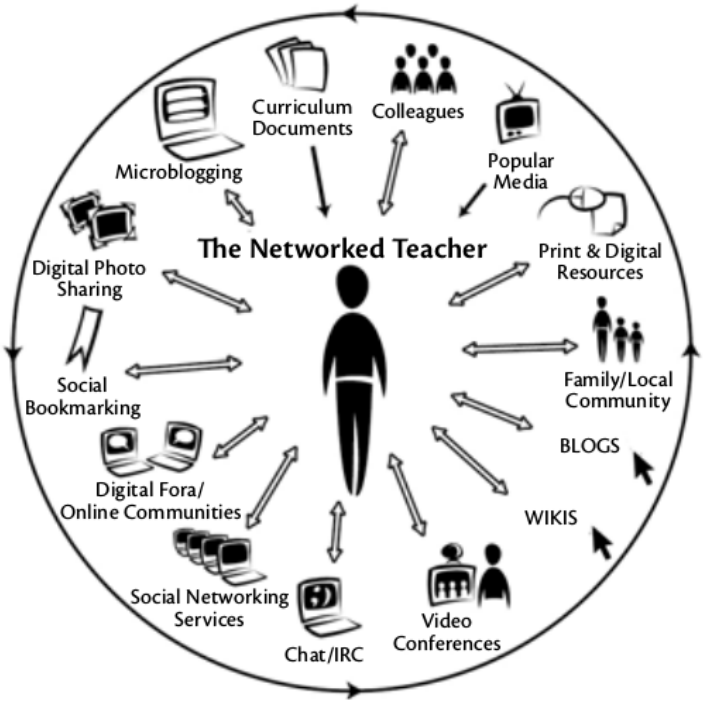


Figure 2.9 – Teacher's place in the PLN concept

Individual training networks are becoming an important part of professional development in various fields, and some organizations develop an individual learning environment for their employees.

Electronic Education 2.0

Under e-education, as a rule, they understand the teaching methods used by the computer as a training intermediary. It is a focused educational activity, which includes both learning and study, and, for communication with the audience, uses mainly IT-technologies. The European Commission and the Action Plan on e-Education (2001) define it as «*the use of new multimedia technologies and Internet for improving the quality of learning by facilitating access to resources and services, as well as through remote exchanges and collaboration.»*

One of the foundations of electronic education was the process of adapting traditional methods of distance learning to the computer environment. From the time of its emergence, distance learning was an excursion, an alternative to traditional forms of education, and therefore had to fight for recognition and worked out appropriate procedures to demonstrate its quality. The convergence of traditional and computer-based methods developed organically through the parallel evolution of the primitive on-line world to the so-called Web 2.0, providing the life of the concept of E-learning – E-learning 2.0. Terms such as «wikis», «blog», «social network», «podcast» and «stream» is now known to millions the Internet users who are now themselves create, use, distribute and mix content, changing their former passive role to a new one – hyperactive.

In recent years, the Internet has changed radically, and with it has changed the average user. The democratization of the on-line world has opened a cultural environment for users, in which they, irrespective of their interests, can find places to communicate with their fellow friends from around the world. They took on the creative role that previously belonged to university professors and developers who have been able to communicate with each other in a similar way for decades. These changes can be interpreted not so much as a technological revolution, but rather as a social one.

The distribution of files, open source and free software, *Creative Commons* content licenses are already considered not only as necessary but also as an integral part of the creation and development of existing and future educational networks. Famous institutions such as MIT (Massachusetts Institute of Technology) have taken enormous steps in this direction by providing access to training materials through the Open Courseware Project, which, incidentally, uses Creative Commons licenses. This project is a network storage materials or not each of the courses of all faculties of MIT, taking the path to the open sharing of teaching materials with teachers, students worldwide.

Compared with the traditional E-learning offers significant benefits and some unique features, such as moving classes in space and time, flexible schedule, greater access to more materials and their diversity, improved communication and feedback much faster connection. On the other hand, the complete exclusion from the learning process of a social element that is considered fundamental is probably the greatest danger of individual E-learning.

Since we are social beings, human participation must always remain a fundamental factor in educational practice. Therefore, the key word here should be «mixing». All the strength – in the mix, is to find the right balance between the students' needs to communicate with other students and faculty, not only with the help of new technologies of web 2.0, but also in the old-good real world. Speaking separately about language learning with the help of e-education, many models of «mixing» were invented here.

So, a rather interesting approach was proposed by Daniela Munka (Daniela Munca), who considered the task of creating test-oriented grammar study techniques using Wiki technology. She followed the idea of Chappelle, believing that language learning through exercises should, first of all, provide opportunities for subconscious perception, rather than for conscious recollection. Thus, it combines syntactic and semantic methods in order to obtain the lexical result required by the student by solving problems that arise in the course of communication. For example, she advises students to share their comments in the discussion mode that exists in the Wiki. Since all comments relating to a grammatical problem are posted on the same page, each class student has access to the entire group of work – this creates an excellent atmosphere of collaboration, feedback and interactivity.

After this stage, Daniel Munch offers students «goals» with a different methodological effect that differs from the initial stage so that students can learn the multimedia information provided, using each wiki element as the basis for finding additional resources for a more detailed acquaintance with the subject. The final stage is considered by Munch as a «routine» through which students truly use their knowledge – it requires the use of several skills at once, reinforcing the learning effect by consolidating the newly acquired knowledge.

As you can see, a rather primitive method – the simplest educational software, which differs little from the board and chalk is replaced by the content creation mechanism, where the learning process itself is born: instead of reading the training materials prepared in advance by the course developers, the students create themselves.

How to ensure the quality of E-learning is another in an inalienable issue, which involves filtering excess information and poor quality materials. Ehlers thinks that of all dimensions and aspects of E-learning the most important is directly the figure of the person who is studying. Education differs from other services by the fact that learning is not the product that the consumer buys, « *learning is more likely to be the process that students have to do with their own.»*

The basic principles of «Education 2.0» have coalesced students with the main principles of the Web. 2.0:

1. The Principle of Subjectivity: the content of education is always subjective – formed not sponsored programs, and actually is, students «here and now», during their personal movement in the world of individual culture and education and trajectories and.

2. The Principle of Redundancy: enlivening the educational space with knowledge carriers; students of different age groups; availability of diverse literature; the possibility of working with experts, with Internet – resources; organization of subject-practical activity (work with laboratory equipment, real productive activity).

3. The Principle of Cooperation:

- equal rights of teacher and student;
- the teacher is now not the only source of information;
- the presence of all the participants in a constantly changing status: the visitor (visitor, client, permanent member of the group for classes, expert), (in different groups, the student and the interpreter may have different statuses);
- replacement of «assessments of success» by monitoring personal educational achievements in the form of open resume, portfolio, and others.

Electronic Education 3.0

Derek Keats (Derek W.Keats) and colleagues: Education 3.0 «characterized by rich, cross-organizational, cross-cultural educational

opportunities within the framework of which the students themselves play a key role in the quality artifacts creators of knowledge that they share, and where social conn The tricks and social benefits beyond the immediate sphere of activity play an important role. «

In the Education Model 3.0, teachers, students, networks, communications, media, resources, and institutes create a unique object that has the potential to meet the individual needs of students, teachers and society.

Derek W. Keats and J. Philip Schmidt give the following description of the separate components of education 3.0:

As for education itself. It is characterized by:

- Broad dissemination of E-learning.
- The growing interest in alternatives to teacher-centered approaches, such as constructivism, resource-based learning, etc.
- Local, regional and international cooperation to create a repository of educational content.
- Awareness of the need to recognize previously obtained education.
- Increased use of Internet search information and training during this period.

Education 3.0 is based on three C:

- connectors – interconnected;
- creators – creators;
- constructivists – constructivists.

Dr.Ruben Puentdura, in his model of SAMR, describing the introduction of technologies in the educational process, described the educational content of education 3.0:

1. On-line presentations and videos: Students use them as multimedia collages (mixes), create friendships and share them in communities.

2. On-line games: commercial games are used by students in a special way, they create their own games with the help of Scratch, Gamemaker, Minecraft.

3. Letter: electronic means are used – blogs, Google tools, etc. Achievements are divided into social networks and their global audience comments.

4. Reading: Students create their own thematic collages on the basis of the read, with online resources and personal notes.

5. Networking: Students are encouraged and helped to create their own PLE is a personal learning environment based on personal interests and abilities.

Reigeluth's words say, «We need to reorient our education by refusing to sort students by helping each student realize their potential.»

Education 3.0 brings to the point of learning through a socially contextual and updated experience. The submitter is still in the submitter. However, they are also students.

Indeed, in education 3.0, teachers who teach are as important as teachers who teach their students. However, the role and responsibility of teaching on this does not end there. Instead, they apply to everyone and everywhere, using social media. Now, instead of the system of education that prepares students for a particular role, education 3.0 prepares students for lifelong learning that are considered as content entrepreneurs.

Students in education model 3.0 build conn bandages, create personal meaning and builds on the experience of learning, rather than simply receive information, answer questions, related topics, and to transfer it.

«Principles of Education 3.0» are based on the theory of Brunner constructivism. This theory of learning is based on cognitive psychology, the meaning of which is to create their own knowledge based on previously acquired knowledge. According to the experts, the distinctive feature of the modern system of education is the transition from the «knowledge paradigm» – learning as a ready-made knowledge to a «value-semantic and person-developing paradigm» – the development of personality, individual abilities, cognitive activity, autonomy of thought. «If before the main activity of the students was» consumer knowledge «drawn and the books received from the teacher, but now the focus has shifted to» knowledge management «: searching, editing and content creation.»

Thus, we can talk about the partial transformation of the industrial society into information, where most people are engaged in operations with information, its production and consumption.

Several examples of learning in the model «Education 3.0»:

1. The world's largest publisher of electronic books and paper company Pearson became a partner in the development of Knewton platform that provides adaptive setting material classes and textbooks, based on the collected information about what a student knows, and what else needs to know to learn quickly. The Knewton technique allows you to «guess» which next material should be offered to a student for study or testing.

2. The Asana application https://asana.com is one of the most convenient on-line tools for planning and managing tasks and organizing the educational process during the teamwork of a teacher and a student.

3. Engrade.com is an on-line tool created for helping a teacher to manage a group of students, post markups, journal entries, classes, homework assignments, and student tracking statistics by their students and their parents.

4. Edmodo https://www.edmodo.com/ and the new Google-Oppia product https://www.oppia.org/about as smart environments for student and teacher interaction.

2.2. PSYCHOLOGICAL AND PEDAGOGICAL FEATURES OF APPLICATION OF MEDIA TECHNOLOGIES IN EDUCATIONAL PROCESS

2.2.1. Synchronous E-learning in comparison with asynchronous E-learning

Today's E-learning learning environment is usually divided into two categories: synchronous and asynchronous. Both strategies have their pluses and minuses, and the technique that suits the student depends to a large extent on the way information is perceived.

What is Synchronous Learning?

Examples of synchronous E-learning are on-line chat and video conferencing. Any learning tool that is in real time (such as instant messaging), which allows students and teachers to ask and respond promptly to questions, is a synchronous training. Instead of studying on their own, students participating in synchronous training courses are able to interact with other students and faculty during classes.

The main benefit of synchronous learning is that it allows students to avoid isolation because they are in contact with others throughout the learning process. However, synchronous learning is not so flexible in terms of time that students need to allocate to participate in a live lecture or on-line course in real time. Therefore, this is not always suitable for those who already have a tight schedule of study and work.

What is Asynchronous Training?

Asynchronous training can be carried out even if the student or teacher is absent. Translation and tasks posted on public forums, delivered via Internet or email – fine examples of asynchronous E-learning . In these cases, students tend to perform exercises independently, and Internets are used as an auxiliary tool.

Student performs tasks at a certain pace. This may be an ideal option for students who are planning their own time. However, those who lack the motivation to do the job on their own can find that they do not receive significant benefits from asynchronous training. Asynchronous learning can also lead to a sense of isolation, as there is no real interactive educational environment.

Ideally, effective training should include as asynchronous, and synchronous learning. This allows students and faculty to use a variety of formats, regardless of their schedules or desirable teaching methods. This

approach gives students access to immediate care when needed, while at the same time giving them the opportunity to learn at their own pace.

2.2.2. Loneliness and Isolation in E-learning

Cronje co-authors (Adendorff, Meyer, Ivan Ryneveld) found that social interaction plays heads well role in encouraging students to participate in the training course and, ultimately, to its end. Students use all available communication tools to get the help they need or share news. Challenges with remuneration so intensified the intensity of the course that some students noted in their so-called «steady state.» This concept was introduced by Csikszentmihalyi (1990), in order to denote such a psychological state of the subject when he is enthralled with his activity, and time for it unfolds imperceptibly.

In addition, to understand how students can cope with the lack of physical contact during the implementation of distance course «CyberSurfiver» (Cronje et al., 2006) conducted research based on analysis of linguistic expressions students. It turned out that many participants experienced a feeling of loneliness and isolation. Loneliness was the reason for the increased level of uncertainty and anxiety; this condition was particularly aggravated at night, especially when there was a problem and it was impossible to get help right away.

The participants of the course felt that e-mail is an indirect link that does not allow for the detection of sudden reactions. The joint experience of emotions connects participants to the group, binds to each other; through this, they develop a sense of closeness to each other, even to a certain extent, a sense of responsibility for each other. Lack of personal contact is a participant and try to compensate for the emotions of the cones.

Directly related to the psychological comfort is also this inner urge, as fear of «express» themselves (Cronje et al., 2006), show somewhat incompetent or that spoiled his image (especially, in their eyes, though, usually, it seems, that of others: people tend to attribute to others their own vision of themselves and somewhat exaggerate the role that they play in the lives of others).

Incomplete communication between students and teachers often leads to frustration caused by a sense of loneliness and dissatisfaction. Man, as a social being, seeks to be part of a large community. Acting on student attitudes towards the subject and, loneliness can quickly turn to frustration exclusion. According to one student (Wegerif, 1998) – «It is a cold instrument. Unlike face-to-face communication, there is no direct feedback. You do not know how people react to your comments: they just keep silent. It is nervous and makes you feel lonely. Such a method does not provide heat and support. «

Time delays in the process of interaction are quite acceptable in asynchronous communication. It is inherent in this type of communication – the tendency to eliminate any feeling of communication between a teacher and a student, as well as the inability to communicate freely with other students, does not contribute to the relief of student's moral suffering. Isolation, detachment from the reference group, exacerbates the discomfort for a person's loneliness. This, in turn, does not create a favorable environment for effective learning. This emotional problem is one of the main reasons why a significant proportion of students stop participating in a distance learning course. Educators on-line courses who understand that a safe, caring environment is an important factor that causes the student satisfaction, feelings of comfort and eventually leads to high rates of success, put the need forming community on one of the best in its list of priorities.

This need was confirmed by experimental data. Researched attempts to identify characteristics that are crucial for successful distance learning, gave interesting results. One study identified six critical elements: honesty, responsiveness, relevancy, respect, openness, and the provision of advanced capabilities (Palloff and Pratt, 1999). In the other, four dimensions of on-line learning are indicated : moral spirit, trust, interaction, expectations of learning (Rovai, 2002). In another work, oppositional emotions are allocated, and Emotional complexes are important for virtual learning and are important for their success: anxiety – confidence, boredom – enthusiasm, frustration – euphoria, depression – inspiration, horror – enchantment (Lehman, 2006). As you can see, none of these characteristics is related to technology or technology: all of them have a personal or interpersonal character (and, let's all, all are related to the feeling of psychological comfort or discomfort experienced by the student). It follows logically that the essence of distance learning is not a technology, but a community (Palloff and Pratt, 1999). Consequently, the success of the distance course requires the conscious formation of the virtual community, «build» which is called media technology.

A virtual learning community is a group of people «formed within a structured learning environment, an on-line training course» (Wilson, Ludwig-Hardman, Thornam and Dunlap, 2004). It can be considered as a subset of a practical community (which can sometimes be considered professional), uniting people who «share interest in a certain topic, have the same problems or the same enthusiasm and deepen their knowledge and competence in the field during continuous interaction» (Wenger, 1998; Wenger, McDermott and Snyder, 2002). Hands covering community people and with different organizations, uniting them in a network shared knowledge and the ability, and the availability of communication through computer networks allows you to join these communities and people remote from each other. Learning communities, unlike spontaneously formed practical communities, are created purposefully «under the direct guidance of a teacher» and with the support of accumulated resource base. They are formed as part of the training course and

have a specific focus and subject of study (Wilson, Ludwig-Hardman, Thornam and Dunlap, 2004). Creating a virtual community should take place consciously and be a deliberately designed component of the learning environment.

Learning communities promote collaborative forms of training, exchange of information and opinions, research, group work in a decentralized learning environment « (Wilson, Ludwig-Hardman, Thornam and Dunlap, 2004). They «support in-depth learning, because they emphasize not the study of the fragments of knowledge, but the quality and depth of communication, dialogue, discussion of the content of learning and the formation of relationships that contribute to learning» (Smith and Trayner, 2006); that is, a psychologically comfortable situation is a prerequisite for effective training.

When designing learning community should be aware of the existence of three components, «section» which forms the educational experience of students: social presence, cognitive presence and teaching presence (Perry and Edwards, 2005). The cognitive presence reflects the ability of students to find meaning through interaction, while the pedagogical presence concerns the design and facilitation of educational influences (Rourke et al., 2001). This issue has been given much attention in research and publications.

However, the most important in terms of psychological comfort, and hence the effectiveness of learning, is the provision of social presence in the learning environment. It is defined as «the degree of awareness of another person in the process of interaction and the corresponding assessment of interpersonal relationships» (Savery, 2005), «the degree to which an individual experiences access to other people» (Xu, 2005), this is a feeling of interconnection with their student singing we are in a virtual environment, in spite of the physical spatial distance from each other. Students, having overcome physical separation, «perceive» and «feel» their presence «in one room», and there is a warm, friendly atmosphere of collaboration that provides students with motivation and support (Xu, 2005; Lehman, 2006).

The role of the teacher is to create an atmosphere of social presence in which students would perceive each other as partners in communicating and cultivating a sense of community formed by them. Although in such an everyday life such connections are largely established through non-verbal signs that are not in the on-line environment, one can free the participant of the course from the feeling of loneliness due to the awareness of the existence of other students in the community with whom he can communicate. The lack of a sense of social presence can lead not only to social frustration and stress, but also significantly impair the effectiveness of training (Savery, 2005), even make students stop learning, as mentioned, on the sense of isolation and loneliness is one of the main reasons for the high level of dropout students in distance learning, which sometimes reaches 70% (Meister, 2002).

One of the effective ways to initiate social presence already on the initially course is to use so-called «icebreakers» (Duchastel, 1994), i.e, the

rituals of dating in the informal style. Instead of the usual procedure in early studies finding a student of his name, level of education, year of study, the reasons for choosing the course, it is necessary to create an atmosphere of friendly cooperation in a virtual learning environment, use more personal and lively approach: can hold group games adapted to the virtual environment, or Invite students to share their hobbies or talents with whom they are proud. Initial acquaintance can be held on an anonymous forum so that a person who has fallen into a new and unfamiliar environment does not feel exposed to strangers (Ascough, 2007). You can also offer a list of educational styles or characteristics of students who are successful in virtual learning. By comparing their results, students will be able to see all the diversity of strengths and weaknesses, hopes, fears and approaches that collectively form the living organism of the «group» – the learning community. The opportunity to see and understand that they are not alone in their fears and doubts about distance learning, encourages students and increases their opportunities.

It is advisable to create the so-called «social zones» within the framework of the distance course is areas of informal, often confidential student communication between each other, discussion of topics not included directly in educational content or completely outsiders (Palloff and Pratt, 1999) – that in the traditional classroom education It is considered unacceptable to divert attention from the learning process, to deviate from the educational material and strictly forbidden. For example, in a single on-line course there is a discussion area «Coffee-house on the corner», where there is a free exchange of opinions in a relaxed atmosphere, the opportunity to better understand each other, humor, and where there are clear ideas; according to students, this is very important, because it allows you to form a sense of community (Ascough, 2007). Here, a person can raise issues of interest to him, and anyone who wants to join the discussion, or two students with common interests can establish a relationship and then communicate with each other privately, without informing anyone, including the teacher. Such confidentiality creates a sense of trust and confidence between people, can create friendship between them – on an individual level. The role of the facilitator here is to track the manifestation of similar interests from individual students and bring them together so that they can continue to discuss interesting issues for them in private correspondence. Although in a traditional study, this kind of interaction is not considered acceptable, but a virtual educational environment facilitates the development of such relationships. They are important for the psychological comfort of learning, since it is important that the student understands and feels that they are perceived and accepted.

Initiating the process of forming a virtual community, the facilitator stimulates students' activity through a variety of interesting activities (Berge, 2006). First of all, it is important to help formulate common goals for participants in the course. In a virtual environment, unlike traditional class,

the teacher can and should ask for some educational goals, but then students should independently modulating their manipulation and embracing, ultimately formulate the objectives of the training course (of course, refers to the next learning goals in interpreting Y.Mashbitsa). Of course, such an activity entails discussing the expectations of students from the course. The facilitator can also take on the initial formulation of expectations from the course, both in terms of learning success and in terms of online behavioral standards. However, the students feel stronger they will attract to their course if they do contribute to the formulation of what they expect from the training. It is also a way to help students feel their social presence in the group.

The main tool that helps to create a virtual ripe notes, is a direct part in the count of laboratory training. Techniques such as small group discussions, paired interaction, controversial discussions, help students engage each other in the learning process. Through such joint activities, all kinds of presence: social presence, personal presence and academic presence – merge, providing conditions for in-depth learning (Ascough, 2007, 2002).

It is possible to achieve deep learning of learning material, in particular by establishing students' interrelationships between what they are studying and their own life situations. In addition, here the facilitator can help, creating «such realistic tasks and situations that will provide the educational content of personal content for students» (Hoorstein, 2002). Its mission – «to encourage interdependence ' bandages between the parties (community), the study of knowledge, an interest which participants (area) and practical activities that encourage further training (practice)" (Trayner and Smith, 2006).

Students may have different reasons to undergo remote learning, and the role of the facilitator is, in particular, to identify their reasons and agree with them the form and content of the course. Open to students called « the link between the educational process and the challenges they face – that is, what they study these things is a challenge. In addition, the facilitator cannot only help students see how the training material correlates with their expectations and expectations, but also show the other reasons from which this subject course is presented has practical value and worth exploring.

One of the strongest stresses for participants of electronic training is an absence of clear and informative feedback, meaningful responses to the ideas that they publish in the network (Palloff and Pratt, 2003). This is a special case of the social deprivation, the sense of isolation and loneliness, which we have already mentioned and which often lead to the exit from the distance course, is one of the most important reasons that adult students, practically motivated to study, drop out studies without completing the course. In a virtual environment, the facilitator not only has to provide an operative and meaningful feedback call. The task of the student is fulfilled by the student, but also to provide regular means of feedback on the students ' published thoughts, their posts (messages) in the discussions. For this purpose, in particular, it is proposed at the end of each unit to provide the student with an

in-depth assessment with comments on his work on a number of criteria, such as relevancy, timeliness, practical applicability, etc., considering the strengths and weaknesses of his work (Ascough, 2007).

Student feedback can also be built into the project system so that each one is a respondent for another (Palloff and Pratt, 2001). In the communication process will naturally splitting students into groups, and this grouping can be cut to them basics: in some cases work well groups where students with similar slope views, in other situations is effective groups in which students demonstrate opposing views. In general, it is believed that a group of mixed characters is good, because the collaborative training requires vitality tons and enthusiasm that abounds in the clash I thought.

There are several methods proposed to unite students in group learning and greater interactivity that are being built in E-learning may enable the creation of a virtual community, feelings of unity and students contribute to productive social interaction. These methods include:

- more active application of synchronous communication (in addition but not instead of asynchronous tools) (Wang & Newlin, 2001);
- intentional design and give the structure a training course important component – «formative» stage, the period of «warm-up» (Wegerif, 1998);
- emphasis on ensuring and adhering to clear guidance on effective online communication (McNnerney & Roberts, 2004);
- the careful observance of all the rules of hospitality during design and construction and on-line training (from greetings and friendly hospitality to farewell) (Ascough, 2007);
- projects on the site with interaction with other sites (Duchastel, 1994);
- «Question of the week»;
- etc.

According to Cronje (Cronje et al., 2006) factors that contribute to the student's interest in the course include the metaphor of the game, the skill of the facilitator and the emotional care of students about each other, despite the lack of physical contact. Mostly, students continued to learn because they enjoyed the game, felt the caretaker's concern about themselves and emotional and other support from colleagues. The game's metaphor supported motivation through the use of such characteristics as setting complex and interesting problems that require resolution, human curiosity and fantasy. Although very competitive conditions of the game can cause participants excessive stress, but those who still passed it to the end, enjoying their success is particularly strong. The reverse side of this metaphor consists in a sense of discrepancy between the goals of the game and the learning objectives.

Separately we must say about the role of facilitator in the system of distance learning.

Students often complain that they cannot control their educational environment. They have difficulty of computers meters or connection or trying to work together with their co- students, we, when each and one has a learning

style, a routine action, their personality traits. This creates some discomfort. The main causes of conflicts in the group are the inaccessibility of group members, the lack of dedicated and active participation, as well as the clash of individuals and strong will. Even if the motivation for learning is reinforced by the use of the learning system of the metaphor of the game or other techniques that stimulate curiosity, fantasy or the desire to solve a complex problem (and these characteristics, along with control, are prerequisites for internally motivated learning – Malone, & Lepper, 1987), students usually still need « direction «and support from the facilitator.

Bligno and Trollipp have identified five roles in which the facilitator acts (Blignaut, & Trollip, 2003): administrator, social assistant, instructor, guide and mediator. For these roles, at least, two are aimed directly provide psychological comfort to students learning: social assistant provides emotional support, acknowledgement and positive feedback, which require students and mediator settles conflicts in the group and dysfunction in regulating communication. However, in other roles, the result of the facilitator's activity, albeit indirectly, is to increase the comfort of the student's emotional state: he organizes training ensures the completeness of the information in those administrative supports their motivation and much more. Creating a social environment in which learning support in an atmosphere of trust and mutual care is required from facilitator. That is why «the visible role of the teacher is absolutely necessary» (Savery, 2005).

2.2.3. Interaction of modern educational systems with media technologies

Modern media and communications have a variety of opportunities to use them in the educational process. However, there are many problems in this area. First, media technologies are developing and improving so rapidly that pedagogical research and recommendations in this area are as quickly obsolete as possible. Second, due to its possibilities, the use of such technical tools is so diverse and multifaceted that there are constantly new ways of using them in the educational process, and before the teachers – new tasks, problems related to the competent use of media technologies.

In scientific researches of recent years various variants and models of further development of the system of education are considered. An interesting concept offers S. Aufennaher describing three scenarios of how could the educational system to respond to the future demands of the media-society. The first scenario offers a conservative variant, the second one – proceeds from the idea of integration, but considers it in the aspect of assimilation in the traditionally methodological and didactic approaches. The third scenario is intended to show how can be done educationally accompanied by the integration of new media technologies in education, and in the process of

media competition – market educational system must be more critical approach to its consideration.

Scenario 1: Conservative Competitive Model

According to this model, the educational system is unlikely to focus on the possibilities of using media technologies in the educational process. Teachers have little interest in technical progress and the capabilities of electronic media. The training is based on traditional curricula and knowledge reserves, and the teacher believes that it is thus possible to prepare the younger generation to the unknown future in an appropriate manner. This inertia is a conservative element of the script. But the competition between different media technologies attracts students with their colorful multimedia offerings. As a result, education is even more losing its significance, provoking an aggravation of social conflicts on the basis of growing student demotivation.

Scenario 2: Assimilation model

This model describes a somewhat different development. Media technologies are used in the learning process, but are based on a series of didactic concepts. Computer, internets and multimedia are included in traditional forms of teaching. Instead of using the unique creative potential of new media technologies and improving the pedagogical process with its help, such software is acquired for the educational process and the following settings are used that give the students a passive role. Externally it may seem that the school integrates well with new media, but the consequences may be the same as in the above-described conservative competition model.

Scenario 3: Progressive Integration Model

In the future media technologies will play important role in the educational system: they will present a communication form of education (for example, e-mail projects, studies using in World Wide Web, software) and serve as a basis for independent modeling of many educational processes that are necessary for counteracting the challenges of a modern information society. The training will be carried out mainly with the help of self-organization of training sessions and the use of author's products. The preparation of materials will be carried out with the help of the media (hypermedia), and the educational processes will be stimulated independently. Higher educational institutions of the future, respectively, will be use new forms of work that will give students the opportunity to freely organize the learning process. The role of the teacher will be transformed from the «transmitter of knowledge» to «activity mentor, coach, teacher»; students have a great deal of initiative and autonomy characterized by such educational

forms as tutorial systems or peer-to-peer learning. Active mastery of knowledge within the framework of this model is provided through individualization of learning, the development of creative potential of each individual due to the interesting work with the provided information resources. Classes will be problem-oriented and will be conducted in project form. In addition, a high school of media outlets should also not be able to cite under traditional didactic models, but based on adult education models, known from the field of continuing professional education and advanced training. If all these aspects are taken into account then we can talk about pedagogically balanced integration of new media, which simultaneously provides further progressive development of education.

Obviously, from the proposed scenarios the latter is more acceptable and can serve as a normative model for further pedagogical research, a benchmark for the organization of the school in the modern information society.

2.2.4. Psychological and pedagogical aspects of the application of media technologies in education

Modern information and communication technologies allow to individualize and intensify the educational process even in the framework of collective learning, which is based on the presentation of a teaching material oriented to a certain «average» student. The methods of the traditional educational system receive new development through the capabilities of the media and communications. Media technology introduces fundamental changes in the content of teaching, qualitatively different presentation of educational subjects. There is a possibility on a mass scale to use a special type of tasks aimed at the reflection of students by their activities, its self-regulation, which is difficult to implement, even under the conditions of individual learning.

Psychological problems related ' connected with the computerization of training, rather multifaceted. This problem places most media technologies in the learning process, the role of the teacher in the implementation of training systems, interaction student media technologies, especially their dialogue (being actively investigated features of reactive, active and interaction between student and computer ' computers, but the main types of existing computer training programs). Scientific substantiation of problems of protection of people from manipulation by media technologies getting more actual.

Accounting pedagogical aspects of the use of media technologies in the educational process is extremely important for the restructuring of the entire education system in accordance with the requirements of the modern information society.

Some peculiarities of the use of media technologies in the educational environment can already be deduced from the very understanding of the essence of electronic media technologies, which are as follows:

- interactivity (from the English «interaction») or dialogue – it is interaction (alternate statements, in the broad sense – from the issuance of information to the produced action);
- multimedia-presentation of objects and processes is not a traditional text description, but with the help of photos, videos, graphics, animation, sound, that is, in all known forms;
- the ability to model – first and foremost, is the simulation of real objects and processes for the purpose of their research;
- communicative – it is an opportunity of direct communication, efficiency of information representation, control over the state of the process; all this is achieved by combining computers into global and local networks;
- productivity, that is, automation of non-creative, routine operations, subtracting human strength and time.

A. Osin, considering these new possibilities offered by the education system for media technology, said on n ' Five new pedagogical tools. For example, interactivity for the first time allows you to organize self-certification without the participation of a teacher. Communicativeness solves the issue of information delivery as soon as possible, allows you to remotely manage the learning process, provides advice with qualified teachers, wherever they are.

However, these possibilities are also legitimate to consider in the context of pedagogical aspects of the use of media technologies in the educational process. Multimedia creates psychological conditions that promote perception and memorization of the material. During use new information technologies in education there is a so-called psycho-physiological orientation of training, which involves increasing the effectiveness of learning through the creation of optimal functional states that increase the ability of the brain to assimilate information. It relies on the use of known neurophysiological mechanisms that underlie the brain's processing of information, thus providing a more complete realization of the potential of the brain to learning. Multimedia provides the simultaneous operation of several feeds and creates conditions where different environments complement each other. Before the students open enormous opportunities in the creative use of many sources of information, each of which has its own language. Some of these languages are spatially oriented (text, graphics), other time-oriented (sound, animation, video).

One of the most important features of media technologies as a means of learning is its ability to visualize various processes, phenomena, under it, numerical relations, etc., to use visual-image components of thinking that play an exclusively important role in learning, including the explanation and assimilation of many theoretical concepts.

Modeling with the help of media technologies allows you to study an object or phenomenon in different conditions, from different points of view. The use of multimedia allows you to engage the whole body of human senses in order to comprehend all of the human senses and forms a colorful, objective image of the research object, associative relationships that contribute to a better assimilation of the material. Hypertext technology can be used to enhance the knowledge acquired earlier, promote the development of logical thinking, allows you to strengthen the creative component of educational work.

Modern means of presenting information can significantly improve the degree of accounting ergonomic requirements for educational materials: choose the size and type of font, place in the text not only pictures, but also sound or video. There is a new situation in terms of ergonomics: the student himself selects the most ergonomic personally characteristics of the material under investigation. A modern student can, at his own discretion, illustrate the research material, making him more personal. He can independently convert information obtained from the network by selecting the necessary arguments, building them into a certain logic of evidence, which will reflect his own point of view, the image of his thought. IN Students delve deeper resulting in the subject matter in them 'is interest in the subject, they are active and with educational literature.

The use of media technologies is focused on the individualization of learning in a collective activity, within the framework of a single educational process. Here, di-technologies act as an object of study and as a means of learning. When individualizing study, every student is attracted to an active, focused on his activities. At the same time mental activity is excited, cognitive needs are more fully realized, creative activity is stimulated. Media technologies make it possible to choose the optimal pace of learning, to control and correct the progress of material mastering.

In the conditions of individualization of education, it is necessary to take into account the principles of person-oriented learning, which means recognition of the individual's self-worth as an active subject of knowledge; reliance on student's life experience; orientation on self-development, self-education, self-education; accounting of individual psychophysiological features of the person; development of its communicative abilities.

Media technologies also have many educational opportunities: they are accustomed to precision, attention, and organization. Graphics, musical fragments relieve tension. Working with a computer develops the ability to plan your business, make responsible decisions. Modern information technologies open up new opportunities for studying aesthetics. Psychological and pedagogical researches of modern information technologies show that the computer included in the structure of intellectual activity of a person actively stimulates productive, creative functions of thinking.

Information resources of a global network Intern o provide a unique opportunity to implement a virtual tour of the world famous treasury of Fine Arts, the Hermitage, the Louvre, the Prado, the Uffizi Gallery, the Metropolitan Museum and see the brilliant creations of great artists. Multimedia encyclopedias and telecommunication technologies help to study the work of outstanding masters of the past and present, which have had a huge impact on the world of artistic culture. In this case, the computer is also an instrument for mastering the theoretical foundations of painting, the formation of artistic taste, the development of fantasy and creative abilities.

If the traditional learning system stimulates the motivation for an achievement (getting a good score, successfully passing the exam, etc.), the use of information and communication technologies is focused on the formation of cognitive motives of the student, which promote sustained activity and increase the efficiency of knowledge acquisition. Formation of such motives is carried out through specific and nonspecific influence on the cognitive sphere of the student in the form of methodological help, directions, interesting tasks, the possibility of choosing the pace and options of learning activities depending on the level of preparedness (while working in the network – through an interactive dialogue between the student and the system, student and teacher, system and teacher). Thus, media technologies enhance the psychological motivation factor for learning.

Along with the listed peculiarities of the use of media technologies in the educational process, which reflects mainly the positive aspects of informatization of education, there are a number of points concerning the psychological aspects of informatization of the educational environment and cause ambiguous attitudes.

Illustrations, pictures, graphics, of course, positively influence the assimilation of textual information, however, it should be borne in mind that the simple addition of various sensory perceptions (visual, auditory, tactile) does not automatically improve cognitive processes. A much more important condition for the effective use of media technologies in the learning process is the ability of users to decode symbolic and code systems. Quite often it is possible to observe that the economical, but purposeful use of medial forms of presentation has a better result than a vivid accumulation of various media feeds of educational material.

There is a close relationship between thematic interest and the acquisition of knowledge. A well-organized educational work using media technology may be unsuccessful if students do not show interest in the proposed topic.

The use of electronic means of communication often brings some novelty effect, which can at from lead to motivation and interesting presentation, but the interest over time decreases again.

Applying media technology in the educational process, the teacher must take into account such features. Those new forms that arise under the

influence of media technologies are transferred to the conditions of traditional communication. Studies of psychologists have shown that the requirements for the accuracy of the wording, logic and consistency of presentation are significantly increased, and the significance of reflection increases, however, the role of emotional means of communication diminishes.

The impact of media technologies for personality of a student may be expressed to a greater or lesser extent, from local concerning a limited range of mental waking u (e.g., use of a computer slang), the global, testifying to change the whole person (the Internet – from austerity, hacker syndrome, and so on.). Psychologists, educators, specialists in the field of information technology are paying a lot of attention to the study of the effects of informatization for various types of activities – gaming, educational, and professional. However, the question of global changes in the psyche of the individual is not yet sufficiently studied.

The introduction of any high technology in various fields of activity is often directed primarily at the release of human rights from routine operations and, consequently, the creation of conditions for its development. And the introduction of media technology gradually makes many skills, abilities and forms of activity unnecessary. However, inappropriate use of media technology can lead to serious losses. For example, a widespread and often unjustifiable use of calculators even in an elementary school leads to a loss of oral skills, rapid counting, etc. As a result, this is the reason that students cannot properly operate the concept of number, because they did not feel the basic operations with numbers.

Modern media technologies provide ease of access to a variety of information. *Therefore, the task of the teacher is to direct the students' efforts to independently develop new knowledge, which is the result of the cognitive process, obtained by the student himself.*

The widespread introduction of media technology must necessarily accompany the special measures aimed at the emotional development of the student's personality. The danger of technocratic thinking, which is formed under the direct and indirect influence of information technology, according to psychologists, is that for such thinking is characterized by «the superiority of the means over the purpose, the purpose over the meaning and common human interests, the meaning of the being and the realities of the modern world, technology (including psychotechnics) over man and his values ».

Modeling and further inclusion in different situations, provoking and realization of non-standard decisions promote the development of imagination, creative abilities. However, as J. Hazebrook notes, working with systems of virtual reality, which give the student the opportunity to fantasize in cyberspace, can cause autism, that is, closure, alienation, departure from reality. If there is an unbalanced replacement of real actions by some symbolic models, it is difficult to expect a full-fledged development of the individual. At the same time, it would be wrong to assume that autism is an inevitable

consequence of informatization, including the use of media-technology in education. On the contrary – during treatment autism, specialized computer programs are used, and systems of virtual reality help to get rid of a number of phobias, for example, fear of height.

Thus, the consequences of using media technologies can be either positive or negative, one or another of the technologies cannot be considered one-sided. Planning the use of electronic means in the educational process, the teacher must analyze the possible direct and indirect impacts on the student's personality, which will determine the directions of its development.

Regarding the didactic and educational opportunities of new media technologies, teachers have different points of view. Most of the researchers agree that the use of new information technologies in the learning process can achieve a new quality of knowledge, and this educational potential is laid in the very idea of information tools.

2.3. MEDIA-COMPETENCE AND PROFESSIONAL READINESS FOR APPLICATION OF MEDIA-TECHNOLOGIES IN PEDAGOGICAL ACTIVITY

Media-education and media-pedagogy aimed at achieving the objectives of media-literacy and Media-competence. These two terms are identical. In particular, in Europe and the United States to issues relating to education competence approach is commonly used because the term «media-competence» (Ger. – medienkompetenz). Under the media-competence means the ability to «qualified, independent, creative and socially responsible action in relation to the media.»

The media-competence can be divided into components (Fig. 2.10).

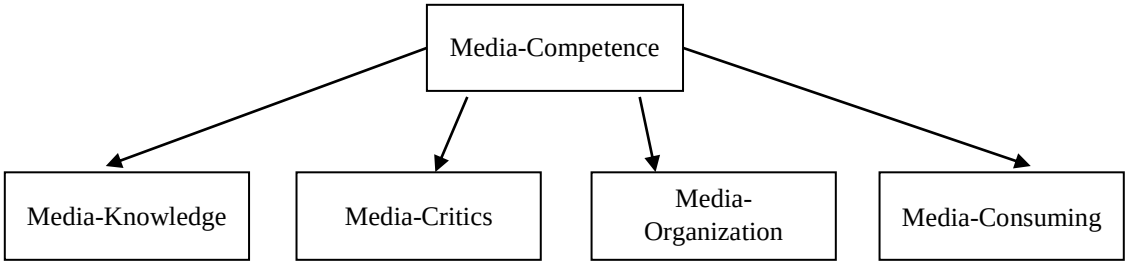


Figure 2.10 – Structure of Media Competence

In accordance with A. Fedorov media-competence personality is a set of skills (motivation, contact, information, perceptual, interpretative, evaluative, practical and operational, active and creative) choose to use critically analyze, evaluate, share and create media-materials in various forms, forms and genres, to analyze complex processes of media functioning in society.

A number of scientific papers (T. Zaharchuk, L. Naidenova, I. Chemeris,) the term « media Education» which echoes the «media-literacy 'and' media-

competence». Thus N. Zmanovska interprets the notion of media as a «set of systematized media knowledge, skills, value attitudes towards the media as a whole».

Under the media-competence of the future teacher of technical disciplines we understand the totality of his motives, knowledge, skills, skills and components (organizational-motivational, cognitive, activity-creative, productive-value, etc.) that promote the use of media technologies in professional activities.

In this case, the formation of the above competencies has two aspects: general education and professional. General aspect related to willingness to use media technologies in various activities. The professional aspect of media-competence associated with a willingness to apply these technologies in the classroom. The professional aspect of the preparation has, in its turn, two facets: methodical (mastering the knowledge about the content, forms, methods and means of media technologies) and technological (formation of skills and abilities of practical implementation of methodological, theoretical and methodological knowledge on the application of media technologies).

The globalization of the economy, science into a productive force of society, intensive development of high technologies, creation of and via the Internet single information space on Earth, fast changing social conditions of the population around the world without leading to the need to revise the educational paradigm in our country, so around the world. In place of the traditional, classical system of education, characterized by the transfer of students to the objects of the pedagogical process of a certain set of examples of experience of past generations, a new pedagogical paradigm came about, in which the purpose of education is to provide, first of all, self-determination and self-realization of the person in the process of education. At the same time, the person, acting as the subject of the pedagogical process, forms the image of the surrounding world, which is determined by the acquisition in the process of creating a set of elements of the subject, social and spiritual culture.

In the new paradigm, education is seen as the most important component of human existence as a condition for its continuous development throughout life. A continuous process of education implemented uninterrupted education system, focused primarily, on the humanistic idea of human self. The traditional scheme of discrete education is abandoned, when human life was divided into certain periods: study, work, completion of professional activity. The central idea of continuing education is the category of sustainable human development as a subject of activity and communication throughout his life. Continuous education system should ensure the variability of the content of general and vocational education, the fundamentalization of its content, the individualization of the process of obtaining education, the replacement of information and reproduction style of education on the active and creative.

Various forms and methods of training a future teacher of technical disciplines for the application of media technologies in professional activities are possible. In particular, such a form of conducting classes as «Pedagogical Studio» has proved quite well. Student training is becoming an integral part of the future training of future teachers and teachers. «The essence of studio studies» is similar to the essence of studios of painters, dancers, singers, sculptors, designers, programmers and. etc. In the studio, students study and learn to develop the ability to think, gain professional experience. The studio type of study is necessary in comprehension of theoretical material in its practical implementation in practice «.

Pedagogical studio is a rather new element in the system of education, the essential feature of which is the interaction and interpenetration of the theoretical, technological, and methodological aspects of the study of pedagogical problems.

Pedagogical studio, according to N. Shkurkova's definition, is «educational and professional classes designed to equip a teacher on the basis of theoretical and theoretical knowledge with practical skills, which gives him professional experience to the stage of independent professional work».

The scientist S. Penzin offers another form of conducting classes, a number of models of clubbing movement – «a collection of spectators in the hall of interests, a kind of school or university cinema optional or amateur association of viewers.» The first option involves the passive role of the audience, while the second and third are designed for its activity. The author suggests moving away from traditional pedagogical methods of conducting classes, arguing that «the film's authors are the same teachers, they give lessons.» S. Penzin argues that «cinema education is a direction in the aesthetic education of the audience,» and the subject of cinema education is understood as the system of knowledge and skills necessary for a full-fledged perception of screen art, the development of artistic culture, creative abilities.»

Based on the analysis of the state educational standards under which the masters' training is conducted, we conclude that there are three possible ways for purposeful training of the future teacher of technical disciplines to the use of media technologies in professional activities and the inclusion of the above forms and methods:

1) the concept of media technologies and their practical application, integrated into the discipline included in the required compulsory minimum content Master training of technical profile;

2) the allocation of a separate course on the preparation of masters for the application of media technologies in professional activities within the disciplines of the university component or disciplines of the choice of the student;

3) students get acquainted with media technologies in the process of self-study.

It should be noted that the second option is the best, because the expansion and deepening of information on media technology in the existing disciplines, firstly, is hampered by the need to redistribute the amount of time allocated to this discipline, of course, to the detriment of other key concepts of this course, and, and secondly, the fact that this option does not include teaching methods of using media technologies in pedagogical activities.

The effectiveness of preparing a future teacher of technical disciplines for the use of media technologies can be defined using the definitions of «professional readiness» and «media competence».

The professional readiness of the future teacher of a higher educational institution is closely linked to such a concept as professionalism in the field of pedagogical and professional activity. In a situation of lack of prestige of knowledge, low education and a lack of professional competence, the problem of professionalism in all spheres of activity becomes particularly acute and important. The development of the problem of forming a value relation to professionalism has a social (forms professionalism as a moral value, value attitudes in all branches of human activity) and scientific (serves as a means of knowing the intellectual and professional capabilities of people) value.

Professional readiness is a subjective state of personality that is considered capable and prepared for the performance of a certain professional activity and which seeks to fulfill it.

Before covering the problem of the professional readiness of masters of the technical university for pedagogical activity, one should outline the concept of «pedagogical activity» define its essence and specifics.

Pedagogical activity is considered as «a kind of spiritual and practical activity, the existence of which is conditioned by the needs of society in the social succession and reproduction of man as a subject of social relations in.»

Pedagogical activities are carried out not only by educators, but also by parents, public organizations, heads of enterprises and institutions, different groups, and also to a large extent the media. This activity is general pedagogical, that is, one that every person carries about himself, his children, his comrades, colleagues, and others like that. Pedagogical activity as a professional is carried out in specially organized societies in educational institutions: pre-school institutions, schools, vocational schools, secondary specialized and higher educational establishments, institutions of additional education, professional development and retraining.

Specific is also the result of pedagogical activity is a person who has mastered a certain part of social culture, is capable of further self-development and the fulfillment of certain social roles in society. We can get such a result only when the specialist is professionally fit and ready for pedagogical activity.

V.Bodrov believes that the professional suitability of a person is determined by «the ratio of the requirements of the profession to the individual capabilities of man; has a concrete scope of implementation – the system «man – profession», that is, a certain category of people, the type of

activity, the stage of professionalization; reflects the state, the degree of development of the aggregate of individual qualities of a person (personality traits, abilities, motivation, physical condition, professional preparedness, etc.); is a dynamic property of the system «man – profession». It should be noted that «professional suitability is determined by a combination of individual properties of a person, affecting the success of assimilation of any work activity and the effectiveness of its implementation.»

Reading psychological and pedagogical literature it can be noted that professional fitness has several levels of manifestation: the first level meets the requirements of normative activity, that is, the maximum effectiveness and reliability with regard to the entire range of its possible options and conditions of execution, extreme conditions, etc.; the second level is the effective implementation of typical staffing tasks in conditions that exclude extraordinary and extreme conditions; The third level is the effective performance of particular tasks of professional activity over a certain period of time.

Let's take a closer look at the definition of «readiness», which is elaborated in detail in dissertation and other scientific studies devoted to this problem. Readiness for any kind of activity is the purpose and the final result of preparation for it. Most researchers consider readiness as a certain integrity, which is characterized by two components: psychological readiness and practical readiness. Psychological readiness is divided into two types: temporal readiness and long-term readiness.

Temporary readiness characterizes the «state of mobilization of all psycho-physiological systems of the person, which ensure the effective implementation of certain actions.» This type of psychological readiness precedes the emergence of conscious psychological processes and can be considered at the functional level as a temporary state. Temporary readiness also determines the views, insanity, joy, concentration, and so on.

The second type of readiness – long-term readiness is defined as a stable personality trait. It is considered on a personal level – views, beliefs, interests, needs, etc. It is the presence of a future teacher of technical disciplines of long-term psychological readiness for the use of media technologies (i.e., awareness of the need for such activities) is necessary for a full-fledged professional activity.

Both of these readiness forms an inextricable unity: temporary readiness determines the productivity of long-term readiness in specific circumstances, but the emergence of readiness as a state depends on long-term readiness.

Thus, psychological readiness characterizes the internal readiness to carry out activities.

Practical readiness reflects the «measure of the external procedural-activity form of the renewal of the corresponding characteristics in the complex and separately» (D. Ilyasov), that is, involves mastering a person's

professional skills on the basis of theoretical knowledge. This provision was developed in the works of S. Rubinstein. He believed that the entire psychological world of man in terms of functions performed by mental processes and personality features, is divided into two categories of psychic phenomena: the inductive, which determines the active attitude to the world, and the performer, which provides the process itself.

In the psycho-pedagogical literature, the problem of person's readiness for activity is widely considered. The most widely accepted concept is the readiness for the work of M. Dyachenko and L. Kandybovich. They define readiness as a professionally important quality of personality, which is a certain integrity and includes the following components:

- motivational (positive attitude to the profession, interest in it and other reasonably stable professional motives);
- orientational (knowledge and ideas about the features and conditions of professional activity, its requirements to the individual);
- operational (possession of methods and techniques of professional activity, necessary knowledge, skills, skills, analysis, synthesis, comparison, generalization, etc.);
- volitional (self-control, ability to control the actions from which the execution of labor obligations is made);
- evaluative (self-esteem of their professional preparedness and correspondence of the solution of professional tasks to the optimal work patterns).

According to M. Dyachenko and L. Kandybovich, «sufficient development and expressiveness of these components and their integral unity is an indicator of a high level of professional psychological readiness of a specialist to work, his activity, autonomy, and creativity.»

A number of works are also considered such a characteristic of readiness as the need for the implementation of activities (L. Veretennikova, D. Ilyasov, B. Utengenova).

Considering readiness for any kind of pedagogical activity, the authors give it different definitions: it is «a stable property of the individual, which represents a certain integrity»; «A rather good development of those qualities (physical, mental, intellectual, etc.) that are necessary during its implementation «, «a holistic personality education»; «Mastering pedagogical skills»; «A purposeful set of qualities, knowledge, practical skills and abilities, relationships, states»; «Integral intrinsic property (integrative ability) of the individual»; «Integral personality formation», etc.

K. Duray-Novakova, readily for pedagogical activity, understands the holistic expression of all substructures of the personality, oriented to the full and successful execution of various roles of the teacher; «A complex structural formation, the central core of which are the positive settings, motives and values of the teacher of the profession. This readiness also includes professionally important features of character, pedagogical abilities, a set of

vocational and pedagogical knowledge, skills and abilities, some experience of their application in practice.

L. Veretennikova gives the following definition of readiness: «Readiness for a pedagogical activity, one or another of its kind, is an integral education of m, which includes professionally significant qualities of a teacher, the set of general and special knowledge, skills and needs necessary for this activity the implementation of this activity «.

The same point of view on the essence of readiness as an integral quality of personality is observed by N. Pletnev. She believes that readiness is manifested in the pursuit of activity and in preparedness for the implementation of this activity at a professional level.

Thus, in most studies, readiness is understood as the internal quality or property of the individual, which is a certain integrity and is a sign of professional qualifications. It is the result of purposeful training and should be considered in development.

Most researchers as part of the readiness distinguish two components:

- is availability of certain professional knowledge;
- mastering the system of professional skills.

The criteria for the formation of readiness in this case are informational and methodological indicators of the teacher's readiness for his profession. In a number of studies, the readiness structure has a three-component composition:

1. Motivational-Relative Component.
2. The theoretical component.
3. Practical component.

Motivational-relative component includes active positive attitude to the chosen activity, formation of internal readiness for implementation of activity.

B. Utengenov in the readiness includes motivational-demand, orientation, content-operational, evaluation components.

In most works (K. Duray-Novakov, M. Dyachenko, A. Kandybovich, S. Nikolaenko, G. Serikov) readiness is considered as a complex multilevel system, which has a holistic character. For example, S. Nikolaenko, having determined the specificity of systemic-structural, functional and genetic links, concluded that professional readiness, being a multilevel system of qualities, properties and states of personality, represents the unity of two subsystems: the long-term and situational.

There is another classification proposed by L. Grigarchuk, according to which integrative qualities characterizing readiness can be divided into three groups:

a) formation of the motivational basis of activity (orientation of the personality, motivational readiness);

b) subject preparedness (theoretical readiness);

c) organizational and methodological readiness (practical).

Analysis of works on this problem has shown that the specific content of the concept of «readiness» is determined by the type of activity that needs to be mastered in the process of preparation.

In order to reveal the content of the concept of «professional readiness of the future teacher of technical disciplines to the use of media technologies in professional activities,» on the basis of the worked out literary sources, four components were identified:

- **psychological readiness** is a sustainable formation that involves interest and a positive attitude toward the use of media technologies by the future teacher of technical disciplines in professional activities;
- **theoretical readiness** is a clear understanding and knowledge of the features and conditions of the use of media technologies in future professional activities, key aspects of the concept of «media technology»;
- **practical readiness** is possession of the necessary skills, skills, processes of analysis, synthesis, comparison, generalization, methods and methods of using media technologies in professional activities, etc.;
- **creative readiness** – the ability, on the basis of the acquired knowledge, skills and abilities, to create own teaching materials with the use of media technologies.

These components should be considered as separate parts of the holistic process of preparing the future teacher of technical disciplines for the use of media technologies in professional activities. Therefore, a positive result of training can be achieved only by ensuring the phased and holistic formation of these components, and on their basis and readiness.

In this foregoing allows us to formulate a definition of **«professional readiness of the future teachers of technical subjects to the use of media technologies in professional activity»** – sustainable integrative and personal formation, characterized by awareness of the need and persistent desire to use media technologies in professional work and the presence of a certain minimum of theoretical and methodological knowledge about their application.

Control questions

1. Describe the media competence and professional preparedness for using media technology.
2. Describe the psychological and pedagogical aspects of the use of media technologies in education.
3. Describe the scenarios of the interaction of educational systems with media technologies.
4. Name the psychological and pedagogical peculiarities of the application of media technologies in the educational process.

5. What are the components of professional readiness for the use of media technologies you know?

6. Tell about the models «Education 2.0» and «Education 3.0».

7. What is the difference between multimedia and media technology?

8. Give character to the concepts of PLE and PLN.

9. Describe the ideas of George Siemens about future knowledge.

10. What do you know learning theories, concepts and principles, where there is the use of technology?

3. MEANS, TOOLS AND METHODS OF APPLICATION OF MEDIA TECHNOLOGIES BY TEACHERS OF TECHNICAL SUBJECTS IN PROFESSIONAL ACTIVITY

3.1. LEARNING MANAGEMENT SYSTEMS (LMS)

LMS stands for a learning management system, a common term for computer systems specially designed for management on-line courses, the distribution of educational materials and the organization of cooperation between students and teachers. LMS will allow you to manage all aspects of the course, from registering students to storing test results, and also allows you to distribute assignments in numerical format and maintain contact with students.

LMS are built on different platforms, usually PHP, .NET, or Java, they use databases such as PostgreSQL, MySQL, or SQL Server. There are many LMSs both commercial and open source.

In a corporate environment, such systems can be used to monitor employees, keep track of training assessments. Regardless of whether your course starts for several students over a long period of time or for many students for a shorter period of time, the control system makes your life easier and helps the course to work smoothly. Good LMS systems also have a reporting system, so you can access information that is difficult to collect on their own.

LMS differ in the features they offer, but most systems probably have some or all of the following features:

Simple Graphical User Interface (GUI)

The GUI is decrypted as a graphical user interface. Most LMS offer a variety of interface settings that allow the user to customize the training platforms according to wishes.

Settings

In addition to the GUI, LMS often offers several different customization options to tailor the system to your needs. Language selection, message settings and other important features can be changed according to how you want your LMS to work. This is good because one LMS can be used by many different types of users, each with its own unique advantages.

Registration

The system can allow students to register online and track details, success stories, and test results. It can also allow students to pay for the course online on-line through credit cards to, debit cards or PayPal.

Virtual class

Your LMS can integrate with virtual classroom systems and help you plan your sessions. This can allow you to send invitations and reminders for classroom and integration with the Internet-calendar system, or Outlook.

Social networks

LMS can integrate with social media so that you can share your content or news via Twitter or Facebook, etc. just by pressing the button.

Connectivity

LMS systems should also have a dedicated functionality for communicating with students, such as e-mail distribution to each particular individual student who is studying on an individual plan. You should also be able to plan automatic mailings that can be very useful for informing students about the upcoming test or the virtual classroom session. LMS can provide you chat or forum features that you and your students can use.

Ways for development

With the help of LMS you also have to specify the details of the course is to guide students in certain «areas of education.»

Reports

Anyway, a good LMS has a reporting system that can be used to generate reports that can be exported to Excel, and offers you a graphical representation of your data to facilitate understanding.

Help with content creation

When working with LMS for the first time, it is good to have, at least, a sample of the course you have to get. An example of how to download, manage, and distribute content within the system can greatly help you.

Testing

Tests are an important part of many on-line courses, and most LMS have many features associated with it. You want a robust test environment with different types of tests available to you and some embedded templates to use as a starting point. It is likely that you will be able to random test questions and set a time limit for testing. In a test environment, you should also be able to rely on the security of your system. The test results will be stored and available to you in the area of your LMS reports.

Types of Learning Management Systems

There are many LMS available depending on your needs and budget. There are even free systems that have open source software that is defined as “open”, which is, the source code is freely available for use and adapted to the needs of the user. The open source LMS can grow fast if they get enough interest. Although you cannot get any official support for open LMS sources, as a rule, There is a strong community of on-line databases from forums or lists of parks where you can ask for and offer your help.

Of course, there are commercial LMS. If you pay for LMS, then you will get a more reliable product, good documentation, and you will have a good level of support. A commercial product can be more stable and have errors less than the free version, but of course, there are always exceptions to this rule, so it is a good idea to read reviews about different LMS before you make your choice. Make sure everything is included.

You should also consider the expediency of using a deployed solution or guest system. The deployed system, as a rule, is installed on your computers. For deployed systems (or internal system), additional costs may be required, such as installing a system on specialized servers. The installed system may also require more maintenance and support than you can provide if you do not have a dedicated IT team that is ready to do this. Hosting solution or SaaS (software as a service) will free you from a large amount of work, the system works on a different server, so you do not have to worry about downloading the server and its maintenance.

Developer's Tools

For Wikipedia.org, Developer's Tools is a software used to create multimedia content, usually for delivery to the Internet. The developer tools can also create content in other formats, for example, a certain course can be delivered to a CD or other formats for different purposes. Developer tools category includes HTML, Flash and many other types.

Many programs can be considered authored and tools, including Flash and PowerPoint. However, only a small program of programs includes standards for the development of electronic courses.

What is SCORM and TinCan?

SCORM (English Sharable Content Object Reference Model, «Model of a Content Object for Sharing») is a collection of specifications and standards developed for distance learning systems. Contains requirements for the organization of educational material and the whole system of distance learning. SCORM allows for the compatibility of components and the possibility of their multiple use: the teaching material is presented by individual small blocks, which can be included in different training courses and used by the system regardless of who, where and by what means they were created. SCORM is based on the XML standard.

In the process of working on SCORM, several requirements have been formulated for all systems that will be developed in accordance with this standard. They are known as «ilities» of ADL. These requirements are as follows:

1. Affordability: the ability to locate and access educational components in terms of remote access and deliver them to many other remote access points.

2. Adaptability: the ability to adapt the curriculum in accordance with the individual needs of the user and the needs of organizations.

3. Efficiency: ability to increase efficiency and productivity by reducing time and cost of delivery instructions.

4. Durability: the ability to match new technologies without additional and costly refinement.

5. Interoperability: the ability to use educational materials regardless of the platform on which they are created.

6. Ability to reuse: the ability to use materials in various applications and contexts.

All these principles can be successfully followed if you first focus on the use of educational content in web environment. LMS systems compatible with SCORM:

- Sakai is an open source (Java) system distributed freely.
- Moodle is a n open source system (PHP + MySQL), distributed freely.
- ILIAS – system open source (PHP + MySQL) is licensed under the GNU.
- SABA is a commercial product of Saba Software Inc.
- SharePointLMS,
- WebTutor,
- etc.

Software that allows SCORM compatible content to be used:

- Adobe Captivate is a product of ADOBE Systems Inc., compatible with SCORM 1.2 and 2004, as well as Tin Can API and AICC. Allows you to develop e-courses, including for all types of mobile devices.
- AdobePresenter is a product of ADOBE Systems Inc., compatible with SCORM 1.2 and 2004.
- Articulate Studio – compatible with SCORM 1.2 and 2004.
- eXE-learning Open Source is a tool that allows you to develop courses that are compatible with SCORM 1.2.

Why use SCORM?

SCORM is a really powerful tool for anyone involved in onlinE-learning . Content can be created once and used in many different systems and situations unchanged. This connection feature can be powerful in the organization, but even more in organizations. The content can be sold and delivered to the user more quickly, more efficiently, and at a lower price.

SCORM is widely used by huge organizations. The US Department of Defense has specified that all of its educational content must be delivered through SCORM.

What is TinCan?

SCORM was developed more than ten years ago. Times have changed and the requirements of teachers have changed, and therefore was developed by TinCan. It is an open source API that adds some of the necessary additional functionality to SCORM and replaces many of the limitations of previous generations.

Additional features provided by TinCan include simplicity, additional security measures, the ability to launch courses beyond LMS, better support for offline and mobile learning and (potentially) more detailed reporting.

The Tin Can API is a specification of distance learning programs that allows learning systems to interact with each other by tracking and recording all kinds of training activities. Information about learning activity is stored in a special database – Learning Record Store (LRS).

Examples of Popular Learning Management Systems

Moodle is an open-source distance learning environment. Moodle (an acronym from the Modular Object Oriented Dynamic Learning Environment is a modular object-oriented dynamic learning environment) – The training platform is designed to integrate educators, administrators and students into one robust, secure and integrated system for creating a personalized learning environment..

Moodle is a free, open source (Open Source) learning management system. It implements the philosophy of «social constructivism pedagogy» and focused, above all, for the organization of interaction between teacher and students, but also suitable for organizations of traditional distance learning courses and support full-time study.

Moodle is translated into dozens of languages, including Ukrainian. The system is used in 197 countries of the world.

History

The main developer of the system is Martin Dougiamas from Australia. This project is open, but it also involves a large number of other developers.

Moodle is written in PHP using SQL-database (MySQL, PostgreSQL, or Microsoft SQL Server). Moodle can work with SCO objects and complies with the SCORM standard.

The project is funded in general by a network of official partners that provide installation, technical support, hosting, consulting, integration, refinement, and more. All official partners pay membership fees and a percentage of sales to Moodle Pty Ltd, managed by Martin Dougiama. Most of Moodle's most active core engineers are Moodle Pty Ltd. In Ukraine, Tekhnomatika Ltd is the official partner of Moodle.

Moodle is on an equal footing with the world's flagship market LMS (SDO). The international team of developers, led by the fund in Australia, has

been operating over the system for over 10 years. Thanks to this, Moodle combines the richness of functionality, flexibility, reliability and ease of use.

The system is widely known in the world, has more than 60 thousand installations in more than 100 countries, translated into several dozens of languages. The system is well-scaled: there are installations that serve up to a million users. LMS Moodle is designed to create and conduct quality distance courses.

Moodle is distributed in open source codes, which makes it possible to «sharpen» it to the peculiarities of each educational project:

- integrate with other information systems;
- supplement with new services, auxiliary functions or reports;
- install ready or develop absolutely new additional modules (activity).

Features of Moodle

All Resources are Gathered Into a Single

The system can create and store electronic teaching materials and give a sequence of their study. Because access to the Moodle through the Internet ab at other networks, has not led students' related to a particular place and time, can move through the material at their own pace from any part of the globe.

The electronic format allows you to use not only text as a «textbook,» but also interactive resources of any format from an article in Wikipedia to a video on YouTube. All materials of the course are stored in the system, they can be organized using shortcuts, tags and hypertext links.

Joint Decision of Educational Tasks

Moodle is focused on collaborative work. The system provides for this a mass of tools: wiki, glossary, blogs, forums, workshops. In this case, learning can be done asynchronously, when each student studies the material at its own pace and in real time, organizing online lectures and seminars.

The system supports the exchange of files of any format – both between the teacher and the student, and between the students themselves.

Teacher in Connection With Students

Wide opportunities for communication are one of Moodle's greatest strengths.

In the forum, you can discuss the groups, evaluate messages, attach files of any format. In personal messages and comments – to discuss a specific problem with the teacher personally. Chat discussions are in real time.

Subscriptions promptly inform all participants of the course or individual groups about current events: it is not necessary to write to each student about a new task, the group will receive the message automatically.

The Quality of the Controlled Training

Moodle creates and stores the portfolio of each student, all the work done by him, ratings and comments of the teacher, messages in the forum. Allows you to control «attendance» – the activity of students, the time of their academic work in the network.

As a result, the teacher spends his time more effectively. He can collect statistics for students: who downloaded, what homework they did, what grades received from the tests. So, understand how students have figured out the topic and, with this in mind, offer material for further study.

Moodle for User

The features that Moodle users can offer are grouped into roles:

- *students:* studying at anytime, anywhere, at a convenient pace; spend more time studying interesting topics thoroughly; knowledge is better absorbed;
- *Teachers:* keep the course up to date; change the order and method of submitting the material depending on the work of the group; spend more time on creative work and professional growth, because routine processes can be trusted and LMS; support the feedback with students, either in secret and after graduation;
- *administration:* efficiently distributes workload for teachers; analyzes learning outcomes; reduces the cost of managing the learning process.

Moodle has a solution to all possible learning management tasks. If the finished solution is not yet present or it is imperfect, the functional system can be easily extended.

ATutor is a Web-based Learning Management System (LMS). The software product is easy to install, configure, and maintain for system administrators; teachers (instructors) can easily create and transfer teaching materials and run their on-line courses. And since the system is modular, that is, It consists of separate functional units – modules, then it is open for modernization and expansion of functionality. The program has been developed and maintained since 2001 by Greg Gay, Joel Kronenberg, and Heidi Hazelton from the Adaptive Technology Resource Center at the University of Toronto. The ATutor system is distributed on the basis of the GNU General Public License (GPL), which, in particular, allows you to freely use, modify and supplement the program.

Interoperability. The training management system is based on the standards and formats for storing educational information:

- OpenSocial 1.0.
- IMS Content Packaging 1.1.2+.
- SCORM Content Packaging.
- SCORM 1.2 LMS RTE3.

- IMS Question Test Interoperability (QTI) 1.2 / 2.1.
- IMS BasicLTI 1.0 (reg. IMSA1B1as2012W1).
- IMS Common Cartridge 1.0 (reg. IMSA1B1as2012W1).

Basic features of the ATutor system

In ATutor identified three types of users (students, teachers, instructors and administrators). The system provides different categories of users with the following features:

For students

- Editing personal information. The student has the ability to edit personal information, including the ability to download his own photo, change his password and email address.
- View and record existing courses. A student can browse the list of courses, send a request for access rights to them.
- Use of training courses. A student has the opportunity to view full information in the training course on which it is recorded, with the possibility of batch loading of the teaching materials, if this is allowed by the course instructor. Also, look at additional sections of the training course, such as «References», «Dictionary», etc.
- Testing and surveys. Students in the course of the training can pass tests or anonymous surveys, view test results.
- Means of communication. The system of distance learning has the following means of communication between participants in the educational process: synchronous (chats, teleconferences, whiteboards); asynchronous (ads, forums, forums, emails, blogs, wikis, comments in file sharing).
- Groups and File Sharing. Students can download and share files as part of a training course or group.
- Search. Effective search engine within the course, all courses and external sources of information (TILE search).

Instructors (teachers)

Instructors, in addition to students' opportunities, have additional tools for effectively creating training courses in the ATutor system. In particular:

- Training Course. Teachers have the opportunity to create training courses within the system, determine access rights to them and other properties.
- Material. Creating educational materials in a training course using the embedded editor of materials, managing teaching materials (structure, access period), and reviewing the use of materials. Possibility of exporting and importing educational materials into the SCORM educational materials exchange format.
- File manager. Upload the necessary training materials to the server, for example, lectures, workshops, etc. in a variety of formats (Microsoft Word,

PDF, DJVU) with subsequent use in training materials. The possibility of batch loading of files is provided.

- Tests. Wide opportunities for creating and managing tests, questions, organizing the course questions database, previewing tests, reviewing user test attempts, the ability to evaluate them, viewing statistics by tests.

- Writing for a course, group. Manage course entries, view student recorded videos and manage their rights within the course. Possibility of appointment of assistants and graduates of the course. Create and manage groups within the course.

- E-mail course. Allows you to send messages to different categories of students: all registered in this course, only privileged students, graduates, those who were denied entry to the course or students of individual groups.

- Backup course. Ability to back up the course, restore the course from the backup.

is announcement. Allows you to add, remove, and edit student course announcements. Ads are displayed on the course homepage and can be sent via RSS (if enabled in Course Properties).

- Poll. With this tool, you can organize invaluable student polls to help you understand their thoughts on a particular topic.

- Dictionary. This item allows you to enter and edit vocabulary terms. The terms used in the material are easier to enter through the material editor.

- List of references. This tool provides an opportunity to indicate the list of sources, the obligation and the period of familiarization with them.

- Statistics. This tool shows data on how students and unregistered users use the course.

Administrators

- User management. Ability to manage the users of the system and their rights.

- Course management. Ability to manage system courses, backups.

- Manage common system parameters. The ability to control the general parameters of the system, in particular, subjects design, interface language, etc.

3.2. MEDIA TECHNOLOGIES APPLICABLE IN THE FIELD OF E-LEARNING

E-learning uses many technologies, some of them have been developed specifically for learning, while others are comfortably complementary to the learning process, such as computer games. Since the use of e-mail and instant messages, forums and social networks, we see a lot of tools that any the Internet-user would use anyway.

There are also some technologies that work on the basis of complementarity with other software. E-learning enables to effectively use

databases and CMS (Content Management System) technologists. These technologies go hand in hand to keep the content of the course, test results and student records. The data is stored in the database and the CMS provides a user interface for adding, updating and deleting data.

Technologies for improving the quality of education are quite varied. Software like Flash and PowerPoint can help you make your presentations interesting, with high quality, graphically rich content. There are text processing packs and HTML editors that format the pages of your text. There are also many online services that you can use to create interactive elements for courses such as quizzes and games.

On-line Courses

Elements of On-line Courses

During creation I the Internet-course requirements must be met to ensure that students receive the benefits to which they are subscribed. Below is a list of the most important of them:

The Presence Instructor: Value Feedback Connection

The role of the teacher is very important in the process of E-learning, as it has in his hands a tool for encouraging, inspiring and ensuring the correct adjustment to work, as well as the fact that it guarantees students the attention and feedback that is very important throughout the learning process. To do this, the learning management system opens up options such as instant messaging between users, email and other tools that provide the teacher's presence at a click away from you.

Well-designed LMS

When it comes to the success of LMS, it is, first of all, means that we want the site to E-learning, which is easy to navigate, clearly organized task and objective and which contains material of high quality. Daily tasks include the distribution of new material, transmission, reception and sorting of tasks. A well-designed LMS will ensure that these tasks can be solved without problems and that its users can easily connect to an infinite number of functions that are an important part of the E-learning process.

Content «in the Normal State»

In addition to the simplicity and design of your LMS, the next most important thing is to submit this material so that the student is satisfied. The role of the curriculum is also important in order to set the tone for the

organization of the work of teachers and students. Therefore, although the system must be well-designed and effective, content quality should be on par with the impression of LMS.

Content should always be available

Let's start with an example: you are taking an astrophysicist course and found a very interesting video, as you think, raises interest in passing this course. Is it right to add the specified video material to the course?

Like any other website, app, or product, its compatibility is always a delicate issue. We must always be sure that we publish the material for all possible browsers or platforms.

All of these key elements have the ability to contribute to the creation of a supportive, efficient E-learning environment. When all these important elements are in place, on-line learning has the ability not only to familiarize students with the skills and knowledge base they are looking for, but it provides virtual education that helps make a contribution to future success (and serves as a quality models of leading experience) in the field of E-learning.

On-line Tests and Quizzes

Despite the fact that E-learning lacks the element of physical presence, tests and quizzes are still an important part of the educational process. Through on-line tests and quizzes, the instructor can track student success and evaluate the effectiveness of the curriculum, while at the same time, students have the ability to track their progress and improve their skills.

Why do tests and quizzes play an important role in E-learning ?

Tests and quizzes are important in the field of E-learning and provide a number of benefits for students, and teachers. Let's first look at how they improve the work of the teacher.

Less work

Remember the school when tests continued for an hour at set times of day and teachers, usually, have to stay up late check until all the work and then write in detail the pros and cons for each and every individual student?

We have already determined that E-learning reduces the need for testing that will be done in a given hour. In tests of E-learning systems, as a rule, are equipped with tracking key tools that evaluate what has already been said in the work.

Unique trials

This is especially useful when the student has to re-test, from which he / she had previously had low performance. This feature is also useful for gaining more productivity by using a large amount of questions from which testing can be done, not by recycling the same issues over and over again.

Instant inspection and reverse-called connection

Instant checking and feedback is probably the most time-consuming task for a teacher. This is a place where he has the opportunity to express his opinion about the strengths and weaknesses of the student. The callback must be reciprocal. LMS, as a rule, allow the teacher to create dynamic actions depending on the student's response. For example, with a multiple choice test, if the student chooses an answer correct answer B instead of C, then, accordingly, reverse-called connection will be returned to the student, indicating a malfunction or a hint that another response would be more appropriate. Because it allows students to get an instant feedback on the correct / incorrect answer, which saves the teacher time.

In-depth analysis

Tests should be clear and fair to be valued, feedback should be written for each individual student to improve and work in specific fields. Through the reporting system, the LMS gives the teacher a test overview, progress and growth with a graphical representation of the results. Thus, the teacher has the opportunity to analyze which students have received the highest / lowest score, and which questions are most suitable for most students. Reporting is a handy tool that allows the teacher to see trends and act in accordance with them to improve the curriculum.

Now, let's see how the tests and quizzes have improved the student's work:

Self-assessment Tool

On-line testing, as a rule, instantly provides the user with results. This is good for students, because it allows them to immediately know what they did wrong, what to repeat, what to focus on, and how to improve the results if they need to reprint the test.

Time Management

Tests and quizzes have always been a stimulus to study heavier material when students know that their successes will be judged by the exam, an overview of effectiveness, etc. It sets a deadline when the material needs to be studied and diligent students know that they must follow it.

Further Considerations

Using different forms of testing, such as multiple choice tests, one-to-one tests, filling tests, truth or misleading tests, extended questions can also be used to evaluate student achievements and different learning styles. The combination of different learning styles is an important aspect of E-learning, which gives it an edge over traditional learning patterns. It is a good idea to use different types of materials, as well as different types of tests and quizzes.

Important note in on-line testing – learning through the Internet Internship should be done taking into account all the peculiarities of the students. If something is too difficult for the student who is learning, then, probably it will look in detail Intern ETI. If the tests are too simple, they will be conducted quickly and without special study and research. Thus, the tests should be structured in such a way as to encourage students to search for the material taught in the course.

Tools for Creating an Online Course

If you are considering creating the Internet-course in order to upload and sell it in Intern ETI, the process can be very complicated. In fact, thanks to the advent of modern technology, designing a simple and intuitive E-learning course can be relatively easy (provided that you already have a clear idea of what content you would like to include). Here are some on-line tools that can help you create an E-learning course.

LMS

Most people on the online course, as they say, look towards LMS – especially because it offers a large range of embedded tools that give the administrator the ability to create and enhance the test content in all ways that are more cost effective than using individual tools In addition, LMS includes «all in one «, which allows the user to create a platform (website) and content in the same space without the need for special network administration. Another attractive feature is the ability of the system to automatically calculate

the results of examinations and generate reports that help both the teacher and the student.

Platform Sites

There are many free or low-cost platform for creating site Intern ETI today. For those who offer on-line courses, having a well-organized and intuitive website can easily develop an effective electronic course for teachers and students.

Design Tools

Many companies currently provide affordable tools for designing a course. These sites allow you to download the contents of your courses and then develop effective presentations. There are even free platforms that you can use today. For example, Google now lets you design E-learning platforms for free. It is just for those who are not very well understood in coding and design.

Multimedia Resources

Indeed, an interactive and effective engagement of E-learning uses various multimedia resources that are available today. We now have access to instant streaming video and instant chat support services. In addition, you can count on a multitude of interactive multimedia products such as software development and high-definition cameras to record informative courses for your audience. There are even editing tools that give you the opportunity to turn crude material into a masterpiece in just a few minutes.

Video Conferencing is an Effective Tool For E-learning

Try to remember when was your videoconference last in your university? If more than a month ago, your school can hardly be called modern or innovative. Today, education without constant video conferencing is almost impossible. From Stanford to Tokyo, they combine the world's educational, student, and research groups into a single global community every day. In fact, videoconferencing technologies are so tightly intertwined with the education system around the world that the philosophy and essence of learning have undergone radical changes.

IN why the thing? Videoconferencing is the next stage in the development of communication technologies. She allows instead of talking tete-a-tete to communicate with unlimited groups of people, while not only hearing the interlocutors, but also seeing them. In practice, this means that distance communication is as close as possible to the real one, since now it

retains a non-verbosity that transmits most of the content of the conversation. It is the presence of non-verbal communication that makes videoconferencing an indispensable tool in the areas where maximum mutual understanding and trust are needed between the interlocutors – in business, government agencies structures, diplomacy, medicine and education. High image quality and communication stability create the conditions where virtual conversation is no longer perceived as remote. Videoconference destroys barriers and allows you to replace up to 80% of personal meetings, which would not be covered.

Videoconference in Education

For educational purposes, another aspect of the videoconference is also important, namely the unlimited number of participants. This actually means that a lot of participants from all over the world can join any virtual lecture, workshop, round table, etc. This approach brings university education to a new level, because it makes it possible for a daily, continuous exchange of experience, thoughts, and outcomes. Effective videoconferencing is possible both at the level of teaching staff, academic staff, and in the format of open lectures. Thus, students from any part of the planet will be able to reach the leading professors of the world in the audience. It is important that the connection during a two -party videoconference is not a live broadcast. Each participant can join the discussion, ask questions etc.

The main areas of video conferencing in education are as follows:

- distant education. Students' access to virtual lectures, which gather the best world specialists from the given specialty.
- sharing experience between scientists. Scientific conferences in virtual format.
- establishing inter-university relations, conducting joint classes between groups of students from different countries to deepen intercultural dialogue.
- conduct open lessons: lectures, seminars, examinations to facilitate their quality control, fight against violations, corruption.
- ability to hold distance lectures with leading lecturers of the world, including from foreign universities. Educational institutions can reach a larger audience of students and save time and money for the assignment of teachers.
- possibility of remote attendance at classes. People with disabilities can get education without leaving home, and there are no different reasons for students to visit a busy or view it in a recording.
- online exchange of educational material. Pressing two buttons teacher is able to give all students of necessary teaching materials.
- possibility of conducting large-scale scientific discussions and seminars. In practice, the organization of discussions and seminars is a matter of trouble: it is necessary to find premises, to gather all participants, to spend a lot of time and forces and organizational issues. Realem Conference will

minimize the efforts to organize the event and will allow you to save on renting the premises and expenses for business trips of participants.

- ability to re-review educational materials and lectures from the archive. Students who missed classes for a variety of reasons can easily make up for lost ones.

- ability to conduct distance trainings and thus quickly and effectively increase the level of personnel qualification.

Live-seminar (web-conference, webinar) is a kind of web conferences, conducting online-meetings or presentations via the Internet. During a web conference, each participant is located near his computer, and the link between them is supported through the Internet with the help of an application installed on each participant's computer or through a web application. In the latter case, to join the conference, you just need to enter the URL (site address) in the browser window.

Webinars can be shared and include sessions and polls that provide full interaction between the audience and the host. In some cases, the leader can speak on the phone, commenting on the information displayed on the screen, and listeners can tell him, mostly with phones with a speakerphone. On the market there are also technologies in which the support of VoIP-audio technologies is implemented, which ensures a complete audio link through the network. Webinars (depending on the provider) may have the function of anonymity or «invisibility» of users, so that members of the same conference may not know about the presence of each other.

In the first years after the onset Internet term «web conference» is often called the branch forum or message board. Later the term got the meaning of communication in real-time. The webinar is currently being used within the framework of E-learning .

3.3. HAEMIQUE

«Culture does not start as a game and not from the game, but in the game» (Johann Haying's «Homo ludens») – why not use what originated in the origins?

As a result of the appearance, distribution and deep penetration of our lives games, and in particular, video games, in the trade and marketing began to use the techniques used in games. These techniques have become applicable in business and education. In recent years they have penetrated even the social sphere and government organizations.

This technique was called gamification. Today it is a powerful business practice, the popularity of which grows year after year and which is used by an increasing number of different companies.

Gamification is a use of gaming practices and mechanisms in the context of non-fiction to attract end users to solve problems. Gaming has been studied and studied in several areas, including customer interaction, exercise,

investment return, data quality, punctuality and training. Most studies on gaming have shown positive trends after gameplay.

3.3.1. Basic Principles and Aspects of Gameplay

The basic principle of gamification – providing for permanent dimensional inverse-called ' communication from the user, which enables dynamic adjustment behavior of the user and, consequently, the rapid development of software functionality and gradual immersion of the user in the finer points. Another method of gamification the creation of Leg Ndi is a story, provided with dramatic techniques, which accompanies the process of using the program. It contributes to creating a sense of ownership for users, a contribution to the general business, an interest in achieving some fictitious goals. In addition, during gamification applied staged change and complexity of the goals and objectives of the measure user acquisition of new skills and competencies, ensuring the development of the operating results for the preservation of custom engagement.

Main aspects of gamification:

Dynamics is the use of scripts that require user attention and real-time response.

Mechanics is the use scenario-specific elements for gameplay, such as virtual rewards, statuses, glasses, virtual goods.

Aesthetics is the creation of a general gaming experience that promotes emotional engagement.

Social interaction is a wide range of techniques that provide inter- user interaction, characteristic for games.

It would seem that under the model gamification perfect school. Here are the levels (classes), and the development of various school (subjects), rewards (grades), the battle with the boss (credits, exams). However, this is not gamification for several reasons. First, this game is compulsory and obligatory, and secondly, this is a loser at all, a toy, and it has a radical effect on the entire person's destiny.

Why do I need to play games?

In order to enjoy some activities, it should be gamificated.

Gaming techniques can be used outside of gaming. Gameplay is the use of game elements and techniques for creating games in non-gaming contexts.

For starters is a n example.

The world-renowned Nike Plus company makes shoes and running shoes. They want people to run more (and, accordingly, they have bought more of their goods). Nike Plus has developed a device that is locked under the heel in the shoes and this device tracks every step you make. This device

knows how far and how fast you turn around – it has a wireless connection to your smartphone or computer that collects and processes data.

So, Nike made your run similar to the game. You will know your data and you can compare the results. Interestingly, you can set a goals and objectives for the achievement I are getting medals or trophies. Moreover, it looks like a real game. Nike has also developed various other «lotions» that allow you to compete with friends or receive incentives from them. This gives you a sense of inclusion in the game.

Now determine the gamification. **Gameplay is the use of game elements and techniques for creating games in non-gaming contexts.**

What do we know about game elements? These are balls, badges, various awards, different difficulty levels of play, collectibles, avatars, quests, graphics and panels that show you how much you level and how much you have left before you win or achieve a goal.

Bali – the simplest and most widespread game element. They accumulate in your account when you accumulate something in the game. In games, you may need to perform a quest to find your mission or learn the next goal. And when you complete this mission, you will receive a reward. The icons show your hero or your character, the graphs show your successes, as well as the successes of your opponents.

Nevertheless, the game is not just the elements or accumulation of elements that are «glued» together in some random way. Games – this is a thing that is developed thoughtfully, systematically and artistically, coordinating all the more in order to make the player have fun. In addition, what the game developers do is not just pure engineering. Yes, there are many engineering, algorithms, involved in many technologies and programs, but not only that. In the development of the game, there is an artistic and empirical component that allows us to consider the problem with a certain rank. This is mainly about video games. Video game techniques can be used outside the gaming limits. Each technique has its own way of thinking. It is not only a set of some techniques, but also a way to achieve a call for the player, **setting the problem that the player should solve.**

In the game there is such a concept as fun and joy – **you play to get pleasure.** However, when you play, say, because it is about your business, because it is needed to carry out the tasks of your company? On the other hand, do you play, say, something to learn what is necessary for your work? Alternatively, do you play in order to get some work is you taking part in a competition for filling vacancies or taking part in a tender for an order? This is no longer a game; it is the same non-gaming context as the definition of gaming.

What you do can still be similar to the game, but the purpose, its achievement, the experience and the desire to get it, are outside of the game. Consequently, the **non-gaming context is when your goal is out of the game.** That is, gaming is when the circumstances have some combination of

game elements and game design that are used not for the game, but for a different purpose.

However, gamification is not so simple; it is not as obvious as it may seem at first glance. Not just their only points or challenges that encourage people to do something or buy something. By implementing gaming, you have to do it ethically, in a way that «fits in» with your main and long-term goals and objectives. That is, it is something that cannot be read as a culinary recipe in a culinary book. Gaming elements and techniques need to be understood in a broad context and knowledge of other spheres and industries will only be in the favor.

What makes games so appealing?

As you know, video games have become a huge and influential industry. More and more elements of video games have become the basis of things that surround an employee at his workplace. They are – everywhere in small start apah that focus on technologies and large recognized companies that produce consumer products, even those that produce bricks and mortar.

And if earlier this technique was available to a limited circle of marketers, business coaches and other « dedicated «, then today it has come out in the broader masses – the course of gaming is available and free at the well-known field of online education Coursera. The course, which is also called «Gameplay», is conducted by Professor Kevin Verbach from the University of Vorton School of Business at the University of Pennsylvania.

Why Gameimitation Has Value? Well, at least, that gaming includes a set of modern techniques and technologies, the application of which allows you to advance in personal development.

And what makes games so appealing? What makes it possible to maintain complex thinking and desire to learn? Gaming teaches us techniques and things from other areas of knowledge that we have not previously been involved with.

Gameplay, in the first place, is based on psychology. Knowing the motivation of a person, you can do anything with it.

Games are very much related to the basic aspects of our brain's work. Therefore, they have always been in human history and people have always played them – consciously or unknowingly.

Modern information technologies provide a rich and exciting personal experience and carry them in real life.

K. Verbah about gaming

Professor Wharton School, University of Pennsylvania called Kevin Willow complex gamification motivational management techniques borrowed from the games and their creators. Verbah in the past is a law professor. He

devoted much time to the legal aspects of politics in the International. At the same time, he studied the promising technological trends, trying to understand how the Internet changes the nature of business, and, in general, relations between people.

Here's what he told him in his interview with **Slon**:

It is true to humanity to play. Any society, including prehistoric ones, did it. Let's say our love for puzzles or games, like Challenge, is rooted in sociology. Therefore, the game is optionally necessarily that in which you play for fun. For me, gaming is not just about games, but about what makes them so interesting and exciting, and how much these qualities can show in business, education, and other areas of our business.

Do what you do and gaming will make your work more enjoyable and interesting. The game focuses on many points of motivation – competition, prize incentives, logic to overcome obstacles. Simply put, your work does not become a game, but you start to work as if you are playing.

We are talking about the game as a way of creating challenges that motivate people to overcome difficulties. After all, this is the essence of the game and the game of consciousness. In addition, there is a rich gamut of various techniques used by designers in the process of creating games. And each of them is potentially able to cause a person to respond to the desired reaction.

In each of us lives a diet that in the childhood recognized the world and learned through simple and understandable games. Why, when we grow up, someone decides for us that there are no more places for games in our lives?! After all, more and more «far not children» prefer to spend free time on all sorts of games: mafia, crocodile, poker, chess and other desktop and games are gaining popularity in modern society. Why not bring the element of the game into the process of interaction with employees and clients, which will increase loyalty to the company, both from employees and from the outside.

Methods of Gaming

Methods of gaming attempt to attract natural human instincts: competition, achievement, status, self-expression, altruism, problem solving.

At the heart of the strategy of gaming is the reward for the tasks performed. There can be different types of incentives: points, marks or levels, progress indicator and issuance of a virtual currency executor.

Competition is another element, which can be used in the gamification. Provide an opportunity for all employees to see each other's oversight or pay bonuses to leaders and thus encourage others to complete their tasks.

An alternative approach to gaming is to provide the real task of the characteristics of the gaming world. For example: suggest some possible solutions to the problem, repeat from an example, gradually complicate, add a story or a prehistory.

3.3.2. The Use of Gamification in Training

Methods of gaming have become widespread in the educational sphere. Particularly popular and understandable examples are the boards of honor, the assessment system at the junior school (instead of the 5 or 12-point system – marks in the form of a sun, clouds, etc.), competitions between classes for the symbolic «currency», the use of game elements directly during lessons, etc.. Gaming can be used in the following cases:

- Formation of certain skills or behavior.
- Visualize and underscore actions and skills that are difficult to demonstrate using traditional techniques.
- To grab students, create a kind of competition between them.
- To allow students to observe their own progress.

The main difference between computer games and standard education is the attitude to mistakes. For mistakes they are always punished, but rarely praise for the right answers or solutions. Therefore, students only know what they did wrong. This leads to the fact that students concentrate only on assessments, but not on the knowledge itself and content.

One of the important features of education in the form of a game is a system of assessments, based on the following theses:

There is a ball system.

At the beginning of the semester, the student starts with a point at 0 points.

Each job is rated at a certain number of points.

Therefore, regardless of their abilities, each student knows that he is on an equal footing with others and he has only one option – the way to a good assessment. He can make mistakes as many times as possible, and, realizing that each earned score leads to success, the student will stop afraid to make mistakes and will focus on learning.

Another important factor in this format of training is teamwork. In a class, a student often has to be for himself. He also has to do homework at home. But there is a simple reason why he does not do this – he's bored. As computer games teach us teamwork and training should become teamwork, then students will be more involved in studying the material and will be interested in the process.

Oddly, but classic at the world forget a very simple but immensely significant thing – that what is done is bring us joy and fun. It makes and games so exciting. And this is lacking in the learning process.

Examples of Gaming in Education

One of the largest media platforms online-education Coursera, which has more than is tens of millions of users are also online-course «Gamification». In it issues of motivation, psychology, gaming elements, game design, problems

and perspectives of gaming are considered. Gaming sites, blogs and portals are dedicated.

One of the most striking examples of gaming is the «Classcraft» project. It is a system that turns training sessions on the game, like, popular Warcraft. Work is conducted in small groups (teams) 5 – 6 people. Each student chooses a game character of a certain class, depending on the characteristics of the character and the approaches to learning. In the process of learning, working on lessons, doing homework, students gain points in the game's «experience», raise the «level» of their game character, which receives various magic opportunities associated with the real learning process. Teacher imposes incentives and penalties, analyzes the success of students in and manages the «learning trajectory». An important role in such an educational process is played by teamwork.

Gamification is based on the formation of the user's certain feelings and needs: victory and recognition, problem solving, opening, rest, help others, collecting, surprise, self-expression. In the gamified training course, normally, use the following components: specific rules, achievements, badges, avatars, points, levels, reputation, quests, tasks, collecting leaderboard «battle» with another team, «fights with the boss» social moments, team work, virtual currency, gaming goods. The algorithm for implementation of gameplay includes the following steps:

- definition of educational goals;
- determination of the desired behavior of the user;
- definition of role roles;
- definition of learning trajectory, process of interaction, points of activity;
- the selection and use of the necessary tools that will stimulate action, the development of game mechanics and elements of game design;
- testing, testing of the game process, feedback.

The most popular online- platform and for learning foreign languages - LinguaLeo and DuoLingo is a re actively using elements of gameplay. Gaming is widely used not only in learning, but also in business, to attract new customers and maintain loyalty to existing ones. There are even platforms (Gingerbread, GameTrek, SailPlay) that offer gaming services for any business.

The game elements are also built into the most popular Moodle distance learning system. In addition to several games (crossword, sudoku, gallows, milionier, etc.), elements that use words with a glossary for their better assimilation in the game form are elements of the gameimization of the distance course. This is a progress bar (Progress Bar) to determine the position of the student within the training trajectory. This power ranking (Ranking), which allows for the extent of the course to determine the position of a student in the rankings among others. This is an experience level and level (Experience Points, Level availability, Level up), using which student at the time learning in a distance course accumulates «experience» and passes from one «level» to another, and depending on the «level» it is possible to regulate

access to the elements and sections of the course. This badges (Badges), which the teacher can (manually or automatically) to reward students for specific tasks or activities or their combination. That is, even the Moodle distance learning system, which is not primarily intended for game use, contains enough gaming elements to create gameplay courses.

3.3.3. Pros and Cons of Gaming

The advantages of gamification in the educational process are obvious – the genuine interest of the student, his involvement in the process at each stage, including the most «boring» and long – for the labor-intensive courses – «quests» – requires the appropriate reward. In this example, the resource Codeacademy used gamification in its best interest in a force majeure situation – when moving a resource to another server was lost part of the user's information is a part of earned points or game progress, which has led some students to reconsider the part tasks In this case, the resource administration awarded to all «victims» a special badge «404» – which in some way distinguished them from others and became almost a prerequisite for pride.

However, gamification is a highly psychological principle. It is clear that everyone loves computer games and does not like to learn. Therefore, the idea of introducing the game's dynamics into learning and thus changing the process of formation for the better – sounds great. However, if you look deeper, you have to withstand the negative effects of the application of the psychology of games in education:

External motivation. Exterior nails, such as badges and more, are of course essential, but more important, internal motivation for students to study.

Just another marker of the economy. There are various studies that talk about neglect of the use of awards in education – the student must clearly understand what exactly are given awards (badges, glasses, and so on).

Gameplay psychologically undermines behavior. Many students can focus on receiving awards, but not on the training itself. As a conclusion and the argument of limited ability gamification bring to the scene the following paradox.

A good game aims to create an illusion of importance and seriousness for a serious matter. That is why we need a possible loser. This also applies to most children's spontaneous games, and well-thought out products of the gaming industry.

Gamification tries to solve directly the opposite task – to give a serious case lightness, playfulness. The main obstacle is the unreadiness of the same abstract student to move into the game mode, since it is real, and not game liability. Accordingly, the main risk of successful gamification – reducing liability («Well, it is just a game!»).

The gameplay of the educational process can ultimately be considered in two ways. Undoubtedly, the application of basic approaches and techniques brings undoubted benefits is attracts and, importantly, supports constant interest throughout the learning process. The presence of all kinds of incentives for achievement and the absence of punishments for the mistake allows us to concentrate our attention on further progress, to clearly set goals without fear to make an incorrect step. However, gamification cannot be considered as a panacea or a universal way of building an educational process.

3.3.4. Top 10 Examples of Gameplay (Transforming into a Game) in Education that Will Change our Future

In gamification there is enormous potential in education. We believe that all people have an innate desire to learn. But most of the modern educational system, by contrast, does its utmost to avoid the desire to learn.

If you ask the child: «What is your job?», She will answer: «School and homework»! But if you ask the children: «What is entertainment?», Many will say: «Games!».

Obviously, there should be a way to help children learn from what they do best – they play. That is why many teachers are studying a number of new tools and methods of educational gaming. Modern educational tasks should include not only the transfer of educational content itself, but also include the process of attracting, stimulating their interests, keeping the attention and maintaining constant feedback. Modern educational systems place an important goal for themselves not only to maintain and to make the system of feedback between the student and the teacher more flexible, but also to create group activity and interaction between the student themselves / students.

The following examples demonstrate a number of interesting approaches that allowed not only to improve the learning process, but also to create more effective learning environment.

An Example of the Educational Gamification No.1 – DuoLingo: Learn a Foreign Language while Translating

Duolingo is a huge on-line community that combines the ability to learn languages through the Internet with a paid service for translating texts. The service is designed for year to allow students to learn a foreign language in a the Internet and helping to translate web sites and documents. Novice involved in the translation of basic, simple sentences Internet at the time as experienced getting more complex tasks. As a result, everyone develops, performing their part of «work».

In each of these cases, Duolingo provides the necessary training and translation tools to help students understand and remember the words they

encounter. Each student can also vote for the quality of the translations of other users by providing them with valuable information for further development and improvement of the quality of their work. Top translations from each level are available for public viewing.

As long as students learn the language, they earn points of skill for each completed lesson or translated content. The more tasks a player performs, the faster his «level» grows. This implementation within the framework of the International Foundation brings out more openly than the usual computerized translator.

The site also contains statistics on how much time the user needed to complete the task. Incorrect answers lead to the loss of points and «lives». Since the system is adaptive, it tracks each completed lesson, translation, testing, and practice sessions to provide feedback for the student and plan future lessons and translation tasks that will better meet their needs. All this leads to enormous success in the field of gaming education.

An Example of Educational Gamification No.2 – Ribbon Hero: A Game That Will Teach You to Use Microsoft Office

Ribbon Hero is a supplement that is available for free download photos I software package Microsoft, to help the user learn to use all the basic tools and means Office 2007 or 2010. After installation, the game can easily be run from any basic program Office, such as Word, Excel or PowerPoint. In the game itself, the user needs to solve the problem, and for its implementation, he receives points of achievement.

The problems are grouped into four sections: text work, page design and layout, artistic presentation and more generalized section of fast tasks. In the first three sections, each task acquaints the user with a key feature and enables them to edit a document template using this feature. Quick tasks do not offer specific problems, but allow you to accumulate additional points. Half of all available tasks are solved in parallel with trials from the first three sections, and the other points can be earned when implementing the same function outside the game.

Microsoft has spent a lot of effort to develop small tasks and provide immediate feedback for the help. In addition, keeping the difficulty level manageable, but rather complex, and providing proper support to ensure success, the game encourages further development of the skills of Office.

Another feature of Ribbon Hero is its ability to track user progress in learning, the use of Office functions and tools, and the corresponding difficulty level of tasks. Not only teaching users in the process of the game, but also continuing to test beyond the limits of the game. The game can adjust the content of the training to guarantee the use of only those functions and tools that they have not previously encountered.

Ribbon Hero can also be linked to Facebook – each user shares his results and compares his own successes with other friends who also play it. By nature, Ribbon Hero is a software game tutorial, which can also be associated with social relationships. This is one of the best examples of corporate gamification in education.

Note: Ribbon Hero is a sequel, Ribbon Hero 2: The second chance. It adds an element of «Time Travel», where the user can follow the main character, Clippie, in different eras. Shows are periods: Ancient Egypt, Ancient Greece, Middle Ages, Renaissance, 1960s and the future. In each case, there are several tasks that must be completed to move to the next period.

An example of educational gymnastics No.3 – ClassDojo: transforms a class into a game with awards and feedback

ClassDojo is a tool for managing whole groups of students in, helping teachers improve the behavior of students in their classes. The teacher chooses, what kinds of actions he considers «useful» and that students receive awards.

Each student gets an avatar that will be displayed on his ClassDojo profile. A teacher can worry with their subordinates and reward them with a simple click on their mobile device or computer. The feedback reduces the cost of time, resulting in positive reinforcement helping students achieve their goals, which increases the motivation for learning to learn further. The system gives students the opportunity to view data about their own behavior, the behavior of their classmates and the best students in the school.

The system also ensures the printing and sending of reports by e-mail to parents and the school administration. Everything is done by simply pressing a button on a mobile device, laptop or tablet – no additional data entry or other paperwork is required. This saves the time of teachers, allowing them to spend more time on the learning process and the students themselves.

An Example of Educational gamification No.4 – GoalBook: An Excellent Tool for Developing Individual Curricula for Each Student

GoalBook is an on-line platform that helps teachers, parents, and students themselves to keep track of the progress of learning. By integrating the peculiarities of social networks and the individual curriculum (IEP), the program makes the process of education easy for both students and teachers. The students together with the teacher of forming goals and steps, tasks to do, to achieve these goals.

With GoalBook, the teacher can easily access the profiles of all the students in and view their goals. The teacher can monitor the success of each student, with what speed and how they perform the task. When the goal is achieved, the instructor can quickly update the student profile and then share

his success with others. Through the regular website, the teacher can easily update and mark the achievements of any of the students in, as well as see how they react to them.

Amazing gaming tool for any special pedagogical education, GoalBook saves the accounting clock, allowing you to immediately notify parents of their students and primary instructors of any changes, progress or problems. An excellent solution to educational gymnastics.

An Example of educational gamification No.5 – The World Peace Game: political simulation in class

The genial creation of John Hunter's teacher from Virginia, the World Peace Game, is a large-scale and complex political modeling that invites young students to explore the world. Children have the opportunity to explore the world community and the nature of complex relations between countries.

Allows you to look at the world from the point of view of social, economic and philosophical issues, as well as to face problems in the aftermath of environmental crises and the immediate threat of war. At present, with over 28 years of continuous development, the World Peace Game has become an interactive theater for students and student teams focused around a large geographic field of play representing a fictional world.

Teacher presents information that provides initial scenarios is a mixture of existing conditions, favorable resources and political positions, taking into account new and changing factors, ranging from environmental issues to military conflicts. Students are encouraged to use their imagination and skills, to seek cooperation and to find solutions that will benefit both their team and the «witty community.»

The main goal of this educational instrument of gaming is to achieve a sufficiently harmonious state for each nation and to increase global prosperity with the least amount of military intervention. The next challenge for students from each team will be a deeper understanding of the critical role of information and how it is used. Often, the decisions that students from the fourth and fifth grades come in are quite innovative and amazing. This is not only a good example of gymnastics in education, but a lesson for our society as a whole!

An Example of educational gamification No. 6 – Coursera: an interactive and individual education system just at your home.

Coursera is an educational second platform and social enterprise, which cooperates with leading universities to convert some of their programs online-course free access ohm for everyone. The system contains many different courses: from the humanities and art to engineering and business. Courses are

presented in the form of short video lectures on various topics and tasks, usually, come every week.

Progress assignments and tests can be measured and published in Intern ETI to display statistics and estimates. In the same vein as previously considered educational systems using gaming, the results are immediately communicated to the student, as well as to the teaching staff to provide high-quality feedback. In some cases, you can also get awards or unique medals.

Permanent feedback allows the student to follow their own successes and independently evaluate the understanding of the material.

Interestingly, the most popular course on Coursera is devoted to gaming.

An Example of Educational Gaming No.7 – Mr Pai's Class: Electronic Assistant in Class

Sometimes the best examples of gameplay are those that combine many interesting technologies and solutions. Ananth Pai, a third-class teacher who works at the Parkview CenterPoint Elementary School in Minnesota, believes in the potential of games in the educational process. The game allows the student to learn more, learn more quickly and at his own individual level, and not worry about other students in the classroom.

He is a supporter of interactive educational games that can be played either by yourself or by other students in the classroom or even by students from other cities, states or countries. Mr Pai's Class is unique in that it uses several different devices and media channels right away. Not only computers with local applications and gaming applications, but also a web interface or game console (for example, Nintendo). He used traditional teaching methods in conjunction with technological innovations to create completely original educational opportunities.

As a result, this digital assistant caused enormous interest among students in improving math performance, and, of course, general enthusiasm. Often, such programs as the Flower Power game, allow you to introduce both the basic concepts of the field of economics and business, as well as develop their mathematical skills. Various goals, achievements and rewards make Mr. Paya's project so interesting and fun. So, learning can be interesting is a t least, most of the time.

The enthusiastic feedback from the students themselves, their parents, and other teachers led to a new trend towards the introduction of an electronic assistant for working with classes. This is not just educational gameplay, but also an attempt to change the very concept of learning!

An Example educational gamification No.8 – CourseHero: improving relations between teachers and students through the Internet

The Course Hero is an Internship Platform for Students and a portal for educators to distribute their educational courses and programs. The site collects and organizes training materials that have been downloaded by educators, and forms a broad data warehouse. The platform provides materials such as curricula, examination tickets and tutorials. In addition, Course Hero offers access to feedback from educators, digital cards and video collections.

The digital flash application allows students to create their own curriculum that can be made available to others. This allows you to set the pace of learning to help maximize the number of participants. In addition, the system rewards students to different levels of access based on their results and grades.

A characteristic feature of Course Hero is the «Course Categories», which offers a wide range of free and paid on-line courses. Each course, as a rule, consists of sections, which are presented in the form of videos and articles, as well as constant testing for fixing the material.

Some courses are further grouped into three main areas: entrepreneurship, business and web programming. For students who complete 5 or more courses in one of the areas, Course Hero provides unique rewards and encouragement. For example, an invitation to present your own business plan, interview with a good company and / or a cash prize.

An Example of Educational Gamification No.9 – Brainscape: Data Consolidation through the Constant Repetition of Game Concepts

Introduced by Venture Capital at the 2011 Education Summit, Brainscape is a mobile learning platform that helps students learn and, most importantly, memorize any information. The program uses adaptive algorithms to create memory cards (used to memorize words, formulas, or individual information), changing the sequence of cards displayed depending on what the student knows, and which causes difficulties for him.

The method used in this platform is known as the Confidence Based Repetition. After answering every question, the student responds to the question of how much, in his opinion, it is necessary for him to repeat this card. The color of each card is also encoded by the level of «confidence» (which actually means how many times the pupil correctly replied to this card): from 1 – worm for «uncertainty» to 5 – blue for «full confidence».

Such a system consists of two versions: the first offers free, self-created cards, and the second is aimed at selling teachers and students of ready-made sets of cards with premium access. This example of educational gaming can be

a great tool for schools and universities, as it is the most popular iPhone application, turning old cards into a much more useful memory.

An Example of Educational Gamification No.10 – Socrative 101: Mobile Interaction Between Teacher and Student

Many students find the school sad and boring, but Socrative 101 does its best to change it. This platform, using gaming, makes it easier and faster for students to engage in educational exercises in the form of games for a laptop or mobile device. First, each teacher will have his own «room number» that can be communicated to the students. Students will join the session by going to m.socrative.com and entering the room number. The teacher can communicate with students, interact with them, and then initiate a survey or test. After the test is completed, the results are immediately visible to the teacher.

Directed to the digital generation, this educational gamification program helps the teacher to adapt the lessons to modern learning styles and better track the results. With the help of mobile devices, any class can become more interactive and interesting. To change student expectations, education should follow this example, and this site may be one of the first steps in adopting a new concept.

Conclusion: educational gamification already changes our future.

Even with all the relevant examples above, this is just the tip of the iceberg of the potential of educational gaming. Very soon it will change the world.

3.5. MOOC SYSTEMS

«If we want to develop the skills and experience of the 21st century from the people who are studying, defined by the Alliance for Skills of the 21st Century, then we need to pay more attention to joint work involving the work of equal peers, focused on and around the content, as well as collaborative content development» – Michelle Salinger.

The rapid and unexpected changes taking place in the world can sometimes make any educated person deadlocked. For example, digital technologies are being implemented so quickly in our lives that we just do not have time to follow them. In the field of higher education, too, changes are expected, and they are so important that these people cannot be directly related to it. To date, it is clear that the system of higher education is changing, and these changes can make it completely different tomorrow.

Development Internet opens up many possibilities, and one of the latest innovations is a chance to get an education in the best universities of the world.

Whatever you are interested in, be it foreign languages, quantum mechanics, finance or genetics, there is now a huge amount of educational resources that are available to you online. They are called MOOSs (massive open online courses – massive open online courses) and they are very popular. MOOCs One advantage is that they are available in Intern ETI and off-line – that is, after the online-lectures end.

MOOCs is an ivy league online. The most prestigious universities in the world have put their best courses openly. It is an intellectual challenge. In addition, of course, millions of students from all over the world accepted this challenge. MOOCs are available for people of all ages. 12-year-old girl from Pakistan, seven of the ordinary poor family, has successfully completed a course in mathematics at Harvard and was immediately accepted into Harvard University on a special scholarship for gifted children.

What are the MEPs?

This is one of the current trends in open distance learning and the biggest change, or rather, the coup, since the advent of lectures.

Of course, the idea of distance learning itself is far from new. According to Forbes, distance learning began in 1892, when the University of Chicago created the first distance education program at college level using mail for correspondence with students. Later expanded distance learning to live broadcasts on radio in 1921 and television broadcasting in 1963. In 1970. Coastline Community College was the first college without physical territory, offering only a TV – courses.

However, the idea finally broke into the mind in 2011 with the introduction of MOOCs – first in the United States, and then in Europe. Open University in the UK have at least a decade in its program of partial teaching courses through the Internet, and now students can qualify fully online.

Wikipedia offers the following definition for MOOC: *«**A massive open online course (MOOC)** is an online **course** aimed at large-scale interactive participation and open access through the web... Massive open online course is a course that involves a large number of participants and open access via the Internet».* In addition to traditional materials such as video, lectures and problem-solving, MOOC provides forums to create a community for students and teachers.

As the title suggests, mass open online courses are a model for online education, available to almost anyone (without limitations) who wants to participate. Participants can be students of the institution on the basis of which the MOOC, and anyone with access to the Internet in.

The massive open on-line course is fundamentally different from the old «distance learning» programs. Each course is a merger of video collections, tests and training assignments, as well as a special forum where students communicate and ask questions, and teachers and other students respond to them. Training materials are available at any time of day or night for all comers – it would wish and the Internet-connection. In addition, exams are accepted either at authorized test centers around the world, or online with a special program that verifies the identity of the user.

Thus, NY Times notes that active efforts have been made to integrate MOOCs into the educational process of traditional colleges as *introductory and corrective courses.*

In November 2012, the American Council for Education and Coursera announced a **pilot project to determine the similarity of some of the free online on-line courses with traditional ones and thus introduce transfer credits for them.** The process started in early 2013 – together with the staff of the faculties, it is estimated how long the training took place at the participants who successfully completed Coursera courses.

Why are MOOCs so popular today?

The rapid growth in the popularity of mass open courses can be explained by the large number of benefits that they offer. The most common ones are:

1. **Quality.** MOOCs are the best courses from the best universities in the world.
2. **Collective learning, and massive.** At the core of MOOCs lies the philosophy of Connectionism, according to which a person truly learns only through social contacts. Therefore, for MOOCs there is a fundamental presence of forums and chats that accompany the training course.
3. **First of all, accessibility.** To participate in MOOCs enough to have access to the Internet. This is possible even in non- developed countries and for the poorer sections of the population. The only restriction is English as a language of instruction. However, due to the growing demand and numerous volunteers, course materials are also available in other languages.
4. **The high level of self,** not everyone is able to organize your time so that regular conscientiously study material, take part in online or live discussions and the completion of exams.
5. **A multimedia presentation of the material –** which transforms learning into exciting classes: scripts for reading, videos (including TED, iTunes, YouTube), on-line forums, webinars, puzzle interactive tasks, simulation electronics labs (for example, on MITX course «Circuits and Electronics»). Many believe that these complex formats successfully replace the boring textbooks and can make learning more focused, of course, by skillful their use.

6. **Relevance and novelty of the topics**: Networking, Quantum Mechanics / Physics, Sustainability, In-memory computing, The Secrets of Life (Biology) etc.

7. **A certain «universality» of knowledge –** the latter can be applied in virtually any country. MOOCs are equally appealing, as for retirees in India as a means of raising the level of education (for example, in literature) in lifelong learning and for students in new industrialized countries as the only way to pay high-paying jobs, as well as for single mothers or already for highly paid specialists.

8. **The possibility of employment** for some categories, first of all, for IT-specialists.

9. **For autistic** MEPs unexpectedly turned out to be practically the only form of education. By the way, many firms have already «discovered» for themselves the outstanding analytical capabilities of autistic people, and for some positions they hire them, creating special conditions for work (including noise isolation from the outside).

10. **Certification.** Live -training recognized officially by passing MOOCs student can get a certificate from the most prestigious universities in the world, which is often very important to plan his professional career premieres.

11. **Free.** MOOCs, with a very rare exception, are absolutely free. True, certification is most often required to pay. However, the price of the diploma of a prestigious university of world-level is manifested in such a scheme very, very democratic and, of course, it costs it.

Thanks to the practical but lightning feedback, course planners and teachers have the opportunity to quickly re- evaluate and improve courses.

How it all began

According to Wikipedia, the term MOOC came up with David Cormier, a professor at the University of Prince Edward Island. The term of appeared as a response to a course entitled «Connectionism and Connective Knowledge», which was held at the University of Manitoba (Canada) and attended by 25 students in the classroom and another 2,300 listeners online so having inside MOOCs open educational resources and find their roots in connectionism.

Platforms

Soon, more MOOC appeared which arose independently. At the moment, there are several major on-line platforms for the university level: Udacity, Coursera, edX, Eduson, Udemy, Skillshare. Most of them are based in the US and be began work in 2012 – 2013 was one after another. And a number of other virtual educational platforms, which, by the way, are becoming more and more.

«Together we can reinvent education in a global scale» – «Together, we can reinvent education globally.»

The purpose of such educational platforms is more than cogent – through the joint efforts of «re-inventing « education on a global scale and making it accessible to anyone who wishes. Moreover, this is a serious challenge to the traditional system of on-campus learning, with its sometimes unheard of prices for high-quality and prestigious education.

1) *Prometheus* – Ukrainian public project of mass open on-line courses. The main goal of the project is the free provision of on-line access to online university-level courses for all interested persons, as well as the ability to publish and distribute such courses to leading lecturers, universities and companies.

In addition, Prometheus provides access to on-line training for external independent evaluation (OEO).

On October 15, 2014, the registration for the first four was opened On-line courses of the project, which were prepared by the teachers of the three well-known Ukrainian universities of the Taras Shevchenko National University, the KPI and the Kyiv-Mohyla Academy.

Over the first 6 months since the project started, more than 70,000 users were registered on the web site, which was able to choose from 20 available courses.

2) *Coursera* is startup in the online-education based Stanford University professor Andrew Kelly and Daphne Keller. It exists within the project with the publication of educational materials to web ETI, as a set of free online-course.

The authors of the courses are teachers from several leading world universities. According to the authors of the resource, representatives of 116 universities, including the University of Princeton, Stanford University, Johns Hopkins University, California Institute of Technology, University of Edinburgh, University of Toronto, Columbia University, University of Pennsylvania, and others are currently taking part in the program. The number of courses is 984 (March 2015).

Coursera offers not separate lectures, but full courses, which include subtitling videos, text notes, homework, tests and final exams. Access to courses is limited in time; every homework or test must be completed only in the past period of time. Upon completion of the course, subject to the successful passing of intermediate tasks and the final exam, a certificate of completion may be sent to the student. By March 2015, most of the courses are in English, Spanish, Simplified Chinese, and courses in Russian and even in Ukrainian. At that, subtitles are actively added in many languages of the world (including Ukrainian), which are created by users of the project.

The project was invested $16 millions and as of March 2015, the project registered about 12 million users. In this case, each user can be a student of several courses.

About 38.5% of students live in the United States. Countries like Brazil, China and India are leading the list of foreign students. The top 20 also

includes students from Germany, Spain, the United Kingdom, Canada and Australia.

The mission of the organization is to train millions of students from all over the world, changing the traditional teaching methods. In the ranking of the Top 100 Sites in 2012, compiled by Time magazine, the Coursera startup won the best educational site of the year in the nomination.

3) *Udacity* is a private educational organization founded by Sebastian Tran, David Stavens and Michael Sokolski, with the goal of democratizing education. The company emerged as a result of the expansion of the computer science program at Stanford University. Distance learning courses are available free Intern ETI, they may listen to anyone. At first six courses were offered. At the end of 2014 r. Udacity offers about 50 different full both paid and free courses. The number of students is 1.6 million.

Courses offered in the format of video lectures in English with subtitles, in combination with built-in tests and subsequent homework, based on the model of «learning in practice». Each lecture includes a built-in test to help students understand the concepts and ideas offered.

Students can register for one or more classes before the date of the first homework assignment. After completing the course, students receive a certificate of completion, signed by teachers.

4) *edX*. Harvard University and the Massachusetts Institute of Technology (MIT) announced the launch of a partnership in distance education. The new project was called edX. Its main goal is to combine the efforts of the two leading universities to create up-to- date on-line free training courses and provide it to students in the whole world. It is planned that this system of free on-line learning will bring together up to 1 billion people.

This community is inviting people who are looking for opportunities for self-education and are interested in participating in this project.

The EdX technology platform for the new project was created at MIT. The software is open source, it can be used by other universities and organizations for their own needs. It is expected that due to the openness of the code, users of the platform will make improvements to it. The educational platform provides video lessons embedded op ytuvannya, instant reverse Connectivity with teachers, student ratings of questions and answers, online laboratories and training at a pace most suitable as the second student. The project will determine which teaching methods and tools are most successful. The project is managed by a joint board of directors from Harvard and MIT. Each of the university has invested in the project about $ 30 million. The partnership is open to other universities.

5) *Eduson*. On-line education is going through a boom. Eduson focuses on online business education. The platform hosts courses with outstanding instructors (practitioners and academics) and provides corporate and private users with access to the library of courses through their platform – LMS

Eduson. A few years later, every company in the world will teach its employees mostly on-line. Mission Eduson – Make quality business education accessible to professionals.

Eduson has three types of courses. The first is from professors from leading business schools, for example, Strategist Stormy Times from Dominica Holder's London Business School professor. The second – from intro shenyh practitioners, each of which is a n expert in his field, for example, Roadmap to IPO Director of Merrill Lynch aria dressmaker. This is a paid course.

But the third type is free leadership, venture capital, marketing, and other disciplines, comprised of performances by world-renowned speakers (Mark Zuckerberg, Steve Ballmer, Tony Shea, Tim Draper, Steve Blanca). Dozens of courses about consulting, advertising business, PR etc. are being prepared.

6) *Udemy*. Platform or playground for online training. Udemy provides a platform for experts of any kind to create courses that can be offered to the public, both free and for a fee. Udemy provides tools that allow users to create a course, advertise it and earn money from tuition fees.

Udemy courses are currently not accredited for study loans; students take courses primarily as a means to enhance professional skills. Udemy is doing a lot of work to attract corporate trainers who want to create courses for their company employees. In February 2014, Udemy has over 5 million students registered and more than 22,000 course options are available.

7) *Khan Academy*

The Khan Academy carries an important mission. It is a nonprofit organization that is trying to make education better by providing free and high-quality knowledge to everyone and everywhere through the Internet.

A representative of the Khan Academy in the CIS countries is a team of volunteers from the School Champion project (www.schoolchampion.com), formerly known as the EDUkIT educational platform (www.edukit.org.ua).

8) *2U* (formerly 2tor Inc.) is an educational technology company that collaborates with leading non-profit colleges and universities that offer on-line applications. 2U was founded in 2008 by John Katsman (founder of Princeton Review).Co-founder Chip Posichu (former CEO of Phonics) and Jeremy Johnson.

9) *Lynda.com*

10) *World Education University*

11) *http://en.wikipedia.org/wiki/Codecademy*

12) *http://en.wikipedia.org/wiki/Learnterest.com,_Inc.*

Certification

Methods of evaluation are different. Since there are so many students, it is especially difficult to rate essays like essays. Coursera adds to the verification of the executed tasks of the users themselves. Before putting

marks on their colleagues, students study the evaluation criteria and practice on already verified work.

The success of Udaci ty users is evaluated with the help of computer programs. The edX platform uses machine verification, self-assessment and checking of work by other students.

Testing and certification methods also vary. The training is free, but all three platforms are starting to introduce different levels of testing and certification at some courses. The cost of a test and a certificate varies from 30 to 190 dollars.

The overall goal of all educational platforms – joint efforts to «reinvent» education on a global scale, and make it accessible to anyone who wants. And this is a serious challenge to the traditional system of full-time education, with its sometimes unbelievable prices for high-quality and prestigious education. Which caused more than a heated debate about how dangerous MOOC for elite universities, but primarily for colleges middle level, which have the reputation of elite universities in the country and the world – they, their prices and current trends, it is BC It is more difficult to attract students.

MOOC and Carrier

Many are wondering if MOOC can help with job placement? Global digital education platforms may prove to be a real find for firms looking for employees.

Two giant platforms, Coursera and Udacity, have also realized this, introducing a «headhunting» business model, working directly with firms – potential employers. Platforms began to charge a fee from employers – legal entities, for access to the list for highly successful participants (with the permission of such participants).

By creating such databases, MOOC plans, among other things, to finance their existence: in this case, student attendance courses may continue to be free.

Udacity has created the Job Placement Program to facilitate the placement of exam participants who have profiles available to interested employers, including Google, Bank of America, Facebook, Twitter, TrialPay, Bu.mp, and Greylock Venture Partners. According to Professor university, Udacity is going to conduct a detailed report on students (include activity level, resulting difference etc.) who have acquired certain skills s, and if a recruiter expresses a desire to access the first hundred of the best students This list from a specific geographic region, he can buy information.

According to the forum on the platform page, Udacity students hired to work in computer companies for software, operators, web developers.

Coursera, inspired by the feedback from participants, which knowledge gained at the courses helped get a job, began with the placement of students in

software development courses, but plans to extend the offer to other disciplines.

Is it necessary for our students?

Already, about 30 percent of American students study at least one course in online. As literally recognized by all the leading educational institutions working on the system of distance education, in order to be effective in this direction, the students themselves are actively involved in the educational process. Access to information plus tools for engagement with students is key to the success and development of distance education in the near future. Providing quick and easy access to information and related tools to interact with it is crucial for promoting distance education and stimulating innovation in this area. Internet opens up new opportunities for working together at great distances and at high speed, and it is about to be comfortably in such large countries as Ukraine and the United States.

What opportunities have opened for Ukrainian students with the appearance of mass open online resources? Their set and here are the most promising of them:

- is a chance to study for free at the best universities in the world;
- to receive invaluable knowledge in the field of its specialization and not only;
- reduction of barriers in training and self-reliance;
- possibility of communication with students from different countries and discussions, participation in joint projects with the subjects being studied;
- successful completion of a particular course student can help draw the attention of the university offering the course and contribute to a possible entry to him;
- the possibility of further employment (including abroad). The Udacity platform, for example, can help the trainee to find work, because he generates a resume for each graduate and, if desired, sends it to a potential employer.

Despite all its advantages, the MEP still cannot replace the basic education. However, universities could use MOOC as a source of additional education, an additional tool for continuing education and maintaining it at the current level. In this MOOC may be irreplaceable. You can try to organically enter the MEP into stationary training programs for your students. All that is required for this is a good technical base and appropriate language training, since most of the courses are in English. Therefore, for most countries and for Ukraine there is only one obstacle to using MOOC – English! Of course, as experience shows, many video collections are quickly translated into foreign languages, including Ukrainian. Students and volunteers have written a lot of subtitles for video collections. However, the qualitative course of the course will, first of all, depend on the level of language learning by the student. IN In this case, MOOC, among other things, will be the strongest way to stimulate the

study of English at the university. The future for MOOC and this future is waiting for us and our students.

3. 5. SOCIAL NETWORKS OF EDUCATIONAL ADMINISTRATION

Social networks are used for educational purposes by teachers of educational institutions who want to use social media for teaching their students form an Intern et- learning ecosystem. Practical activities in the field of education, namely social education – that is, the use of social networks in work to support learning, the interaction of teachers and students, the establishment of business contacts and knowledge sharing. Social learning often provides a more powerful and sustainable learning experience; it helps people establish and use social relationships to accelerate and facilitate the process of sharing experiences, information and mentoring; allows students to increase their productivity, teach faster and more rational work.

What do we know about social networks?

Under non-specialized social networks – we call «networks of the general profile» – we understand the communities in the International, which have no restrictions on any parameters and do not have any thematic specialization. Such social networks make it possible to establish informal contacts rather quickly. In social networks, people find themselves more open than in real life, more willing to share information.

Specialized social networks, as a rule, are a platform for a community of professionals. They are called community of practitioners and pursue purely practical goals. Community practitioners may consist of academics, lecturers, engineers, marketing and sales specialists, and other professionals in. In addition, these communities are not required necessarily have to be confined to one company, and can unify other people with similar interests in different organizations all over the world. The community of practitioners differs from the community by interests – its participants combine not only the desire for a certain area of knowledge, but also the desire to cooperate in the process of applying this knowledge in practice.

Social Network in Educational Format

Social networks in educational format, in the first *turn*, *is an instrument of internal educational communications.* For educational institutions with a large number of branches, educational social *the network can become an instrument of interaction of employees among themselves* often in order to quickly obtain the necessary information, the provision of mutual assistance. In the modern world, information technology is rapidly developing, giving a

great competitive advantage to those who use the new tools that offer dispersed workers and a distributed network of partners and consumers contextual, quick and easy *exchange of information and method of cooperation.* In education, one of these approaches is E – *Learning* 2.0. The technology of creating a social network as a model of learning. IS – *Training* 2.0 refers to the concept of the implementation of tools and technologies *Web* 2.0.

Thus, E. – Learning 2.0 is a collection of technologies and practical solutions for an educational process that can evolve together with an educational institution. Thanks to its simplicity and openness, *the* approach of E *Learning* 2.0 helps focus the collective mind on solving learning tasks through competencies, streamline and optimize the creation of communication channels between the teacher and students and the communication environment for students.

The average student conducts on-line social networks from 5 minutes to 2 hours a day, every fifth *The user of such networks spends more than one* hour per day. Equipped with a handy tool for placement, search and data classification called relationships between listeners and objects, social *The network,* which is based on the technology of E- Learning 2.0 allows you to solve *a complex of tasks* connected with the educational process and training:

- an information platform for parents is created for obtaining the actual information on the progress and the exact state of the educational process;
- the possibility of conducting an interview, obtaining operative events and actual informational reasons is created.

Interaction of Students

The E- Learning 2.0 solution allows you to implement a comfortable environment for interaction with a teacher, friends, classmates, and parents, increasing their loyalty and improving the effectiveness of cooperation.

Counterparties within the framework of their layer will be able to resolve issues of educational interaction promptly. IN Within the framework of E- Learning 2.0, a broad functionality is available for the organization of effective learning processes: the ability to publish interactive articles and video materials is an example of such functions.

Creating and managing a student community allows you to solve several classes of tasks:

1. Creation of a collective knowledge base from the educational process and the services of teachers, the system of search and subscription. Students have the opportunity to communicate directly and discuss the quality of the educational process.
2. Creation of effective tools for managing access to information about the latest news of the educational institution, the department, « fresh « educational materials, events and plans.

3. Conducting marketing and promotional events for the presentation of educational materials and services of an educational institution.

4. Mechanism for collecting and analyzing feedback. The Student Support Service is able to accommodate the most common issues and trouble moments in student service.

Creating a Social Educational Network

To create an effective social network of educational appointments, it is necessary to conduct an examination in various areas: the availability of education in the implementation and management of social networks in the International; Examination in educational and corporate education affairs. In the absence of any of these key expertise, some part of the solution of educational tasks will be omitted and the decision as a whole will not be effective.

Stages of Creating a Training Social Network:

The stages of the creation of the educational social environment E Learning 2.0 can be modified depending on the specifics of the educational institution:

1. Analysis of educational models and the development of the concept of the use of Internet services and social networks for educational purposes.

2. Set up, implementation and launch of the system, including the development of additional extensions, integration with existing educational programs in the educational institution.

3. Staff training, maintenance and support during the operation of the system.

Learning in Social Networks

To begin with, define what is E-learning 2.0 and social learning. First of all, I ask you not to confuse social learning with social media. Publishing training materials on a Facebook or Windows Live tutorial page and continuing to bring students there means that you have started to take full advantage of social networks in the form of E- Learning 2.0, which means a higher level of interaction with users. Another tool that most experts have become perceived as synonymous with the concept of «social learning». This is a service using Twitter to deliberately designated topic and cache tag when experts communicate to the predetermined topic and watch for new questions and comments in a mode online. However, synchronous training is difficult to name, because although such chats are organized on a certain day and hour, users can continue to participate in them and after all disperse. This is just a network environment or tool with a set of rules.

When it comes to social learning, it is necessary to implement not only technologies and tools, but also the system of interaction and information exchange between people. Social learning is a democracy in the working environment. When used this paradigm, the student can ask questions to the teacher regardless of status of both and be sure that it will not cause roughness and vice versa will receive a significant response. Social learning is the complete autonomy and independence of the participants. This is an appeal to society at the time of the emergence of an appropriate need. The above situations need to be planned in advance. The task of the educational institution is to try to create the appropriate conditions for effective solution of the difficulties and provide a convenient environment for placing currently relevant problems. In a social education, you cannot apply the prepared guides to educational materials and teach them to students. The most accurately describes the social learning of the concept of «precisely at the time of learning», which can be paraphrased as «learning in need.» This is a direction in the E- Learning 2.0, which implies learning from specific topics and at a time when a student needs a knowledge of a particular subject. Only at this moment the educational institution should provide it with the necessary information and respond to its request.

Learning Tools in Social Networks

As you know, tools in this case play a minor role. However, they are more than enough. It can also be classical social networks such as Facebook, Twittter, Windows Live, Vk and Linkedln. It may be YouTube. No less useful will be internal Wiki, personal blogs, OneNote, or any other platform designed to save information and share knowledge. It is also worth mentioning about a separate direction of special tools, designed only for intra- group communication.

The system is also protected from others. This is expressed in the fact that only those who have permission to register in your training group can register. So, for example, to see what students of the group communicate, you will only get if you are a member of the group and admitted to the discussion. An additional feature of the service is the ability to attach files of any format, including documents and spreadsheets, to your message.

The educational market for Microsoft is one of the main sources of income, so it could not stay away from the popular trend of social *Teaching.* Originally, Microsoft SharePoint's corporate product has evolved through a variety of social buttons, «keymatches» and the ability to display tags (tags) for themselves on each individually-found SharePoint page. It appeared in it an opportunity and to conduct personal blogs, subscribe to other blogs and track any changes.

Social Networking Rules

- *Discussion.* Before you start working with a social network, make sure you have discussed each step and tool at least twice. Check that at least once you have looked at the questions from the perspective of prospective users.
- *Preparation.* Get started with your problems before you start chatting.
- *Plan.* It is important to have a strategy on the basis of which you can base your activity – you need pre-determined scenarios that will help you at any time decide what to do (or NOT do) for the most effective way out of the situation.
- *Monitoring.* The fact that you decide to blog does not mean that you do not need to monitor social networks.
- *Part of yourself.* Participating in a social network requires that you maximally demonstrate your communication skills, adding to your work a piece of your true identity.
- *Do not shut yourself up.* If you do not have the time to read, write others, respond, respond, give them links to relevant materials – so you do not participate in social interaction, so you just spend time.
- *Respond / Do not respond.* Being part of it does not mean that you have to respond to every little detail.
- *Tell us about your relationship.* Links and recommendations are currency in social networks. But be smart advisor: if you give too many links, your readers will stop reading them : they will be considered meaningless.
- *Agree your actions.* The objectives of your strategy in the social network must be in line with the tasks that a common learning strategy puts in place.
- *Evaluate and finally evaluate:* what and how you get out.

Many schools have understood the importance of participating in social networks and should now work out the right approach before starting to communicate with their clients.

Possibilities of Using of Social Networks

Consider the basic approaches to using social networks during learning. E-learning is of particular relevance today, as the development of the Internet and assurance of students by personal computers improves *exchange of information both between the teacher and the students,* and students with each other. All this contributes to the revitalization and modernization of the learning process. The most promising is social learning – *the Internet technologies and social networks* because it allows training elements vary considerably. The development and maintenance of personal teaching resources of teachers or university portals depends on the form of distance learning developed by the educational institution, which can be decentralized, centralized or mixed.

At the same time during the use of I social networking individual teachers virtually no difficulties, but on the contrary to work on intuitive than in the corporate system. The teacher, being an expert in your field may have trouble when creating or using specialized sites. The second difficulty is not always *the site for studying is interesting and what the student visits.* Practice shows that students are very difficult to teach to use the training site. Therefore, suggest to use as a tool for distance learning already established and those social networks that work. What are the benefits of using social networks for students and teachers?

1. Today young people spend a lot of time on social networks, the mu and communicate them (as well as the acquisition of knowledge) for them is not a boring study of the subject, as familiar and enjoyable experience that leads to better development of the material.
2. Student, communicating in a social network with a teacher, behaves less sketchy, which allows him to ask questions about the subject, without fearing others to look ridiculous.
3. Students have the opportunity to communicate in real time, not only with the teacher, but also with each other. Can organize something similar to conferences, especially before passing the exam or the exam.
4. The teacher for a student becomes psychologically not only a teacher, but also a participant of a social network – the interaction on the vertical level changes to the interaction on a horizontal level. This creates greater confidence on the part of the student and improves the process of assimilation of information.
5. The teacher significantly expands the time of communication with the audience, as it is possible to quickly notify students about the events in the process of the hearing. At the same time, it is possible to conduct educational work with absentees and lagging behind.

How to best organize social networking for student distance education? We offer two variants of interaction of the teacher with students of full-time and part-time studies. The first option is the use of a social network for distance counseling and the second option is the use of a social network in conjunction with a distance education training site.

In the first option, the teacher creates a group of disciplines, and on certain lessons he announces students who are members of the social network, invites them to become members of this group, and reports the estimated time when he is online. Then students are invited to *time of independent work in case of problems, ask the* teacher questions through social *the network.* There are three ways to communicate:

1. *Communication through speech.* This allows for the involvement of several participants in the discussion.
2. *Communication through the message.* It can happen in the event that the teacher has no time for communication in real time.

3. *Real-time communication through short messages with* those members who are currently on the net.

4. Using the social network together with the site of distance learning. Involving students and communicating with them is the same as in the first version, but as a resource is involved *distance learning site A link to educational materials is posted on* the teacher's page.

Students are advised to go through the test site before passing the exam on the subject, which will also take the form of a test. The teacher only participates in the further organization of the consultation without giving concrete answers to the test questions. In the first two days of exam preparation, students try to answer the test questions individually, then they begin to compare the grades of the test with each other and on the third day it flows into a global conference between the students (in the role of a teacher in) on the discussion of different options for answers. A similar method of consultation gives the following:

1. *Students are growing their motivation to study the material of the subject,* including by comparing their own grades with other students.

2. *Studying the material of the object by collective methods* (brainstorming), allows you to improve the quality of knowledge, even for weak students.

3. *Mastering of the discipline takes place in the form of a game with a* competitive struggle in real time, which causes interest to students in the learning process.

In the social networks that the teacher uses, links are placed on the training *site* In the initial period of teaching discipline, there is a mutual addition of students and the teaching of «friends». The teacher obligingly establishes constant contact with the leaders of the groups.

For instant messaging on the network there is an instant messaging service where you can ask a tutor and discuss individual tasks not only with students in their group, but also with students of related specialties.

Now in the world a boom in the development of new media technologies, especially the popularization of network services social networks. At the same time, a growing number of needs for education and the creation of adequate education is growing. How are the related social networks and learning management systems really?

Consider a number of examples of how social networks can be used in various forms of learning:

1. *Training in the middle of organizational* – use of social networks to inform employees about the actions and activities, and more.

2. *Formalization of structured learning* – the ability of teachers (teachers, trainers), as well as students to use social networks within the framework of professional training.

3. *Group learning* is the feasibility of using social networks for work and study together as groups of people (groups of projects, training groups , etc.).

4. *Personal training* – the use of social networks by people for their own (self) personal or professional training.

5. *Random learning* – the possibility of individuals and through social networks to get something new, knowing it consciously (called random learning).

Examples of the use of social networks for educational purposes

Edmodo

Edmodo is something like a social network for teachers and students. The service is built around communication – the teacher can create subject groups for the exchange of educational materials, surveys and tests to test students' knowledge, upload books to a special library section, and other files to Google Drive, which is synchronized with Edmodo. All this creates an environment where teachers and students communicate on an equal footing and share experiences. Especially active students here can be further motivated by badges – «diligent student», «help with homework», etc. The service is completely free, all of its features are opened immediately after registration. In addition, Edmodo has a mobile version for Android and iOS, also free.

Eliademy

Educational platform of the Finnish company CBTec, which was founded by natives of Nokia. Eliademy is trying to completely integrate the process of passing courses to the browser – directly in place you can view even Excel spreadsheets and PowerPoint presentations. Under the set files, the teachers leave voice notes – so in the Eliademy and lectures are formed. Each lesson can be related to a particular homework. There is no band for discussion, but there is a forum where you can conduct group discussions like Coursera. If you want to hide your course from third-party eyes, make it private and let the invitations. Registration at Eliademy is free, but anyone can set a fee for listening to lectures.

Basecamp

Basecamp is well-known in the IT environment – it is one of the most popular project management solutions, easy to learn, but very flexible and fast. Above each project can work in groups: the administrator creates discussions, creates a list of tasks and downloads the files necessary for their execution, and the performers participate in the discussion and work on the remaining

tasks. In fact, this is a great environment for conducting online-course, Basecamp's toolkit is similar to that of Lore or Eliademy. In addition, the service is supported by most modern platforms and has mobile versions for Android and iOS. And most importantly – Basecamp is absolutely free for teachers. You only need to register on the service site and write a short letter to teachers@basecamp.com with a story where you work and teach.

Ning is a platform that allows users to create their own social networks. The service was launched in October 2005. The founders of the service are Gina Bianchini and Marc Andreessen, for whom this is the third major project (after Netscape and Opsware). As Gina Bjankini explains in her blog, the word ja (寧 nin) in Chinese means «world». According to Quantcast, Ning monthly visits 7.4 million unique visitors from the United States.

Social networks are mushrooms of the modern Internet. They are in huge numbers, especially in the Western Internet, and are enjoying tremendous popularity there. You will be surprised, but modern schoolchildren have moved many things into social networks, adults are not lagging behind them. Initially, social networks were very general orientation – the creators gathered users, and the more, the better. Today most of them have a very narrow focus – social network from 60 to 70, social network of dog lovers, etc. The modern fashion phenomenon is the hosting of social networks, services that allow you to open your network for a couple of clicks, ask your own design for it, invite your people and communicate on topics of interest to you. Ning – this is exactly the service in which anyone can create their own social network for easy communication and exchange of digital content of any type – text, photos, video and sound. This and more you will get absolutely free, that is for free!

To create your new network, enter its name, subdomain (1111.ning.com), then define the network as closed, only for your «gang» or open to anyone to read. Next, describe the network with tags and write a short description, select a language and add an avatar. All of this is needed for the social networking directory that is on Ning, and if you are interested in promoting your network, then focus on the fields with particular attention and even responsiveness.

Next, you can arrange the information elements of the network interface – everything is done by moving the mouse information interface blocks. Next, you will be prompted to select all kinds of font settings and more. Then press the LAUNCH button! you launch your network in swimming.

If you want to see a social network that only works for a few days, the interests of all those involved in BarCamp Baltics 2008 intersect, then go back and look at this event. Incidentally, in the mechanism used social network groups, ie open or closed group of people in the framework of the social network who are going to discuss any sub-themes main network. In social network BarCamp participants created a group so lets only be pre- vented upon request from them.

In order not to override the benefits of creating a team on Ning, I will simply say that all the solutions of modern Web 2.0 that can be imagined are used here. Run the section of our forums, videos and audio, blogs and created networks, and you make sure that everything here is at the top. There is everything! And why is it all for free, you ask! Not for free, users pay for such a powerful communication tool by viewing unobtrusive text ads from the almighty Google.

Google Online Services Oppia Training

On February 27, 2014, a project called Oppia began. His creation was made by Google. The service is an on-line open source platform for learning some people by using interactive lessons. The following lessons are called «research», and several people can create them at once through a special interface that does not require programming language knowledge.

Google says they have created this project to make the learning process easy for all people. According to them, on-line tutorials can give a person much more than a separate component of a lesson (text, audio or video), since they will have a key element, a callback. This will help those who learn to learn much more about the subject of study.

Also, a Google representative says Oppia is «providing» online, a teacher who will ask questions, and the student will have to answer them. Based on the quality of the answers, the teacher will decide whether to go to the next lesson or pass the material again. Accordingly, Oppia, as claimed by Google, is a smart feedback system that not only provides a standard training scheme, but also assesses the current level of human knowledge for an individual training course.

For teachers is also a nice feature: the service, besides those already described above purpose, also collect certain statistics to help lesson the author to correct and improve it for future students in. For example, create an additional question or replace one question with another because of this complexity or uselessness.

Functional service online training Oppia

So what's in the Oppia service at this time: a feature-rich graphics editor that does not require specialist knowledge and programming language; open source platform to the possibility its flexibility on scaffolding; the ability to add new elements and other logic circuits for feedback. Collecting statistics that will help classmates make them even better and more accessible to students. Individual idiomatic work with each student depending on the level of answers to certain questions. Embedding searches on the HTML page of absolutely any site. Ability to customize the lesson settings for each student

individually with the following tutorials : to his profile. Ability to group and edit searches.

Also developed is an interface specifically for mobile devices. As the service is new and dynamically developing, it is anticipated to introduce some more functions. However, Google claims that this on-line service is not their product, which suggests that Oppia is planned to be «put into power» by the user community, and that the development and improvement of the site will be the efforts of altruists and enthusiasts.

So far there is a small amount of research, namely, lessons in geography, languages, mathematics and programming. Every person who, although learning one of the topics, should answer a few questions. For example, in the first lesson on a mathematical topic, it will be asked how well a student is familiar with this topic, then moving on to part of the lesson, where he is asked to solve an example or task, and if he did something wrong, then the search would explain where exactly it was supposed a mistake, and only then will move on to the next part of the training.

To create your own research, a person is required to sign up, see a Google video tutorial that tells you how to work with the site.

The Khan Academy is a non-profit educational organization established in 2006 by Salman Khan, a teacher for «high-quality education for anyone and anywhere.» The organization creates lectures in the form of YouTube videos. In addition to micro-collections, the organization's web page has practical lessons and tutorials for teachers. All resources are free for everyone around the world.

The project is sponsored by donations, with a significant portion of donations being made by Google and the Bill and Melinda Gates Foundation. Lectures are provided in English, there is a project for translating lectures into other languages supported by volunteers.

The Asana application is one of the most convenient on-line tools for planning and managing tasks and organizing the educational process during the teamwork of a teacher and a student. Was created by co-founder of Facebook Dustin Moscovitz and former engineer Justin Rosenstein, who worked on increasing the productivity of employees on Facebook.

Engrade is an on-line tool created for helping a teacher to manage a group of students, publish posts, magazine appearances, homework schedules, and the ability to track student statistics and their parents.

3.6. EXAMPLES OF APPLICATION OF MEDIA TECHNOLOGIES FOR EDUCATION IN DIFFERENT SECTORS

Training for Customer Service

Customer service training is the basis for the entire company support process. Thorough training program ensures that the team works, in order, to deliver good service to customers. In a broad sense, customer service training refers to the training of the knowledge, skills and skills necessary to increase customer satisfaction with the company's services. Media technologies provide employees with this knowledge, skills and abilities, being too costly in cash equivalents. The main advantage of using media technology in customer service training is that participants can plan their learning process and work at their own pace.

Marketing Training

Effective sales training develops the individual's skills and builds on existing abilities to enhance business efficiency through increased productivity and profitability. Good training courses can increase the level of activity, sales volume and volume of orders. Internet training built from application of media technologies offer a range of advantages for sellers who want to improve their capabilities and learn new skills. Good online-training will be thoroughly train employees for successful sales, allowing employees to gain experience and practical knowledge about the success selling, giving confidence, and providing them with the skills needed to succeed. In addition to the obvious benefits (for example, employees are able to complete the training courses and modules at their own pace). Best on-line sales trainings use powerful interactive tools that engage listeners and allow you to track your progress. The most effective on-line programs – training have a complete set of tools for monitoring and reporting that allows management to see the development of their employees.

Customer Training

You can reduce your support costs, find new customers, and provide loyalty to existing customers by offering them online training. Sharing and interacting with on-line content has become the norm, and customers expect that companies will provide them with modern and timely support. More of media technology is a great way to get feedback service called ' connection.

Customer training can also be used as a marketing solution to find potential customers. The buyer may feel more confident in the knowledge that it will get a free online – learning. Of course, if the content is freely available in Intern ETI it can be used independently – customers can, for example, view

online – the course before buying a product or service to get a better understanding of the features and functionality.

Most online -course is more convenient and much less burdensome than reading documents online -course for customers is definitely an advantage.

Security Education

The main advantage of on-line training, when it comes to security, is that employees can be accessed anywhere, around the world, at any time. Security training should be quickly updated and distributed among employees quickly and easily – with a minimum of confusion. The use of media technology is the only way to combine the number of employees in different places in a single line and can be achieved immediately, without much effort.

Issues involving security curricula vary considerably depending on the company and industry. For example, a transport company may want to tell its employees about proper lifting procedures to avoid back injuries, while a health facility can tell its subordinates how to behave during an epidemic.

Typically, such courses offer multimedia presentations of specific risk situations and accurately illustrate how to behave and what to do.

IT Training

Information technology (IT) is developing at a fast pace and is characterized by constant innovation, which leads to the need for continuous training. Understanding IT is needed for enterprises and organizations that introduce new technologies. Employees with outdated IT skills have few advantages for any business and it makes their preparation one of the most popular brunches of media technologies for learning.

Integrated onlinE-learning can include a virtual interaction in the classroom, individual assessment, online, video and multimedia, for that make learning more effective. This training covers a wide range of topics, from basic courses from Microsoft Office to very complex topics in the programming language and IT security. Because of its nature, the IT course can be easily done by writing detailed information about the subject through capturing video screens from the computer screen or creating interactive tests. These courses are often very effective.

IT training can benefit a variety of people in organizations at all levels from workers to administration. The use of media technology for IT training benefits both employees and employers, as it provides students with flexibility and flexibility, which means saving time and improving employee productivity. As with any media technology training, employees can attend various training at their own pace and at the same time (or within the time limits set by the management).

Technical training

When a company launches a new product, the issue of training employees to study the peculiarities of working with this product, it can be problematic because of the time spent, including, with the usual classroom training. Employee productivity falls when they spend many hours sitting in the training room during the working day is and when the benefits of such training are often not tracked. On-line training solves these problems by being available to the employee in his free time and keeping the firm's costs associated with the work of the instructor and the leasing of study premises, travel costs and loss of productivity.

Moreover, in the case of multinational corporations where employees are located in different countries, curricula need to be adapted to different markets, since the principle of «one size fits all» will not work. In the case of training with the use of media technology, training courses can be adapted with a minimum of costs, so that cultural differences can be easily considered.

Benefits of technical training with the use of media technologies:

a) learning becomes flexible, easy and fast. Staff can take their free time training on their own devices;

b) practitioners can take courses in several places in several languages, all at once or at different times and from the first day of issue;

c) learning can be cross-cultural and easily adapted to different markets, quickly and without much effort;

d) companies will have more efficient and trained staff with current and practical knowledge;

e) increasing efficiency and productivity means increasing profits.

Education in Medicine

Continuing medical education is considered to be required compulsory for all employees of health care I provide to their respective knowledge we have, the skills and competence to be regularly updated and improved. Training is important for most professions, but especially for health care, this can mean the difference between life and death.

Medical education has many unresolved issues and issues such as the high cost of creating and maintaining physical training centers, the difficulty in meeting changing requirements in relation to demography and the ever-changing trends in diseases, medical technologies and medicines. In the busy world of health care, finding time to for training can be a difficult task. But the role of training often has inestimable value.

Studies using media technology brings great benefits to employees of Health I, including the ability to be trained at any time, in any place, on any device – with less loss of time and productivity. In medical practice, the training implies interaction – however, for example, videos can be used to

obtain basic knowledge, and practical training to be conducted locally. Further education courses can be held at any time and the training can be easily supervised.

Control questions

1. Give examples of media technology applications for training in a variety of industries.
2. What are the benefits to students and teachers using social networking and educational purposes?
3. Tell us about social networking sites.
4. Describe the major MOOC-platform.
5. What are the main advantages of MOOC-platforms?
6. What are the examples of educational gameplay you know?
7. Speak about gaming.
8. Name the media technologies used in E-learning .
9. What do you know about learning management systems?

4. APPLICATION OF MEDIA TECHNOLOGIES BY TEACHERS OF TECHNICAL DISCIPLINES IN PROFESSIONAL ACTIVITIES: PRACTICAL RECOMMENDATIONS

4.1. DEVELOPMENT OF EFFECTIVE ELECTRONIC EDUCATIONAL COURSE

«You will never have a second chance to make the first impression!» Alan Piz.

We all know that the e-course must capture its plot and turn, sometimes dry, into a fascinating educational material into the theory. The subtleties of creating effective and sound teaching are the science of pedagogical design, which is aimed at maximizing the involvement of the student from the beginning of the course and until its completion. Proper use of pedagogical design will help motivate users to memorize key information and apply new knowledge in practice.

You will begin to experience the first impression of a potential student literally from the first introductory words, and possibly from the first image on your homepage of the website. From what it will be the first impression it will depend – whether it will engage in the learning process or become lost forever. Very often, in order to maximize the involvement of potential listeners in training, it is proposed to use a free test module. How competently it will be compiled and what information will be presented in it will depend on whether the listener will stay with you or not.

There are many things to keep in mind when developing an E-learning course. In addition to the need to take care of the core content and development of an effective E-learning strategy, it is still necessary to take into account the architecture of the course, which will fit the subject of the training and its audience.

The main five recommendations to take into account in your work:

1. Explore and analyze your target audience in detail

IN developing a training course where informative and well-written content, high-quality design elements and usability are important, do not forget that the course is created, first of all, for the sake of the client, and not for the sake of the course!

Before embarking on an e-course, you must define:

- What are the interests of your potential students?
- What is their level of training?
- How is their attitude to education?

By finding the answers to these simple questions, you will be able to create an ideal training course for your listener, who will become your regular customer. This knowledge allows you to correctly adapt the material to the

audience; to determine the level of their knowledge, to avoid excessive information or to suddenly not lose important; In the end, talk with students in one language, using their slang or professional slang.

So, really one of the most valuable tasks for you as a course designer or pedagogical designer will be to analyze the target audience and identify its key features.

2. Do not lose the purpose of learning

Even at the beginning of the course design, the goal of learning should always be the basis. Each element of the E-learning course – from the timetable to the very elementary graphic that you use on the last page – should serve this purpose. If B and in the process of learning lose the purpose and objectives, then you risk creating an ineffective for the URS. Just do the work in vain. You need to have a clear idea of what the student expects from your e-course to convey the correct information to him and confirm the expectations.

The purpose and tasks can be incredibly confusing and here you have to clearly highlight the main thing, to structure and implement this information in learning, without the slightest deviation from the tasks. This way, users will be able to complete the whole course of study without difficulty and achieve the common goal – to acquire new knowledge and skills and to remain content and service.

It is a little like a ladder. The goal is the upper step that your listener must reach. To accomplish this task, he will have to step up the new ladder to gradually become higher and more experienced. In this case, an excellent incentive for an easy and effective «lift» is a modular system of training that provides for an intermediate control of knowledge and thus does not allow a student to abandon training. To implement such a solution it is recommended to use testing or practical tasks (cases) after each module of training.

3. Use this material for the course, which will be a challenge for students

Creating an E-learning course that is not very difficult to challenge a student is one of the biggest mistakes of E-learning. A student in the learning process must feel that he goes beyond the knowledge and experience how the course fills it with new experiences. Otherwise, he will not be able to see the real value of learning and will not be sufficiently motivated to continue studying the material.

4. Avoid heavy information that leads to cognitive overload

Despite the informative saturation and apparent usefulness of the material, it should not overburden the student's brain. Each element of your

course should be easy to perceive and mastery. That is why understanding the fundamentals of the theory of cognitive overload and applying them to the development of curricula is an absolute necessity.

Do you want your students to get the most out of your training?

The cognitive load theory assumes that students are able to effectively capture information only if it does not overload their perceptions. In other words, our short-term (operational) memory can save only a certain amount of information simultaneously (and not an infinite stock of data).

Be laconic. Do not include excessive information and simplify complex concepts, replace them with ones that are more normal. In this, you will definitely help pedagogical design.

Here are some tips on how to reduce cognitive overload in course design:

1. Take care of the simplicity of the course.

Remove all content that is not absolutely necessary for the learning process. For example, if you are developing a slideshow to visualize information, try reducing the number of third-party graphs and charts.

2. Use different methodical techniques.

Provide information in different ways. For example, with the help of webinars, graphic catalogs and methodical collections, audio recordings and other tools. Strive to provide information both verbally and visually, with samples and charts. In this way, you will «enable» two channels of perception is audio and visual.

3. Take a fractional course study.

Divide the content of the course into smaller lessons and encourage students to move forward only at the rate until full assimilation of the material, without reloading their operational memory.

5. Use interactive elements to create a course

IN In this case, you will need video and audio clips, cases, background music and everything that will help make E-learning more effective and productive.

The main goal is to achieve emotional commitment from the user. Emotional responses help students learn more about new information and skills. From eo clips or images that can evoke an emotional response, remain in memory ' memory for a long time and are forced to think of themselves even after graduation.

Here, perhaps, the most powerful and affordable tool for you will be the integration into the course of studying examples and from the real life that a student can apply in his particular case. This demonstration demonstrates to students first and foremost, as acquired knowledge can be used outside of the learning environment and thereby benefit your E-learning course.

It is very important to organize group interaction in the learning process. Ensure students communicate with each other. Start and with group discussions on the Internet forums and encourages them to solve problems collectively mode online.

A very powerful tool is social networks (social networking sites), so we recommend integrating social media into an E-learning strategy. Collaboration in groups allows you to include the human factor in the course, despite some limited virtual communication. Lively communication will give your audience an opportunity to learn from each other, thereby studying the topic deeper, sharing experiences and their experiences in specially created groups.

With these tips in mind, B can create a successful E-learning course even when you're new to education. For more experienced teachers who already have some experience in organizing on-line training, these recommendations allow you to fine-tune your final results and avoid mistakes. Over time, you will receive a course that satisfies the demands of the most exacting students and will bring you real pleasure, and your audience will give quality training in a convenient format!

4.2. Finding a Relevant Information on the Internet

Search for information: basic concepts, types and forms of organization

Searching for information, or information retrieval is a one of the major information processes. Mankind has long been engaged in it. Objectives, opportunities and the nature of the search have always depended on the availability of information, its importance and accessibility, and the means of search organization.

The end of XX – the beginning of the XXI century, is characterized by enormous array of ever-increasing diverse information available and of interest to the widest sections of society. More the Internet technology and software and hardware are also available to most people, allow this process at any time, virtually anywhere in a query.

Search is a process in which a correlation of what we are looking for with each object that is stored in an array is carried out in one or another sequence. The purpose of any search is the need, the need or the desire to find various types of information that facilitate the receipt of the person who is searching, the information, knowledge required for it, etc. to enhance their own professional, cultural and any other level; creation of new information and formation of new knowledge; making managerial decisions, etc.

In Intern ETI are millions of users – in a mode on-line (Eng. «On-line» – interactive access at any time) and the number of users is growing. This makes it difficult to organize an operational search and find the right amount of information users. There are problems due to various possibilities (types) of

information search, different ways of their implementation in information retrieval systems, different levels of knowledge of users about the possibilities of such systems, especially in the field of writing and processing data received as a result of these requests, etc. d.

There are different interpretations of the term «search information» or «information search».

The term *«information retrieval»* («Information retrieval») was introduced by American mathematician C. Muers. He noticed that the motive reason for such a search is the *information need,* expressed in the form of an information request. To the objects of information search K. Muers carried documents, data on their availability and (or) location, factual information.

From the point of view of the use of computer technology *«information search»* is a set of logical and technical operations, with the ultimate goal of finding documents, information about them, facts, data relevant to the consumer's request.

«Search Engines» searches for database documents or other data arrays that contain specified words.

*«*Information retrieval system» (IRS) is a system designed to find and store information; a software package that implements processes for creating, updating, storing and searching in information databases and databases.

Relevance (English relevance) – the measure of matching the result to the desired. In terms of search, this is a measure of matching the search results with the task put in the search query.

Irrelevant document is a document that was selected as a result of information retrieval but whose content does not match the user's request.

Relevance determines how complete a given document meets the criteria specified in the user's request. It should be borne in mind that each search engine has its own program (spider) that indexes web pages, each system indexes pages in its own way and the priorities for indexes are also different. Therefore, the query for the same keywords in each search engine generates different results.

Relevance of the search

This is a subjective notion because search results that are appropriate for one user may not be suitable for another.

The basic method for assessing relevance is the TF-IDF-method used in most search engines (both the Internet-search engines, and in reference systems (MSDN). Its content is to ensure that the more local the frequency of the term (request) in a document (TF) and a larger «rarity» (that is, the more rarely it occurs in other documents) the term in the collection (IDF), the higher the weight of a document relative to the term – that is, the document will be published earlier in the search results for the given term. The author of the method is Gerard Salton (further elaborated by Karen S. Jones pp).

Allocate the following relevancy criteria:

- availability of useful information on the page;

- Meta Tags Title and Description;
- text size and presence of key queries and logical structure in it;
- the absence of errors in the code that interfere with indexing the site.

Search tools: main ways to find information in the Internet

1. Ways of finding information Intern ETI

1.1. Search pointers

Before we introduce ways to find information on the Intern ETI need to deal with concepts such as search indexes, keyword search query results.

The work of search pointers is as follows: search work («worms», «caterpillers», «crackers») – special programs browse the web for 24 hours a day, and copy all found pages, go over hyperlinks, find new documents, copy them, etc. From such pages a special database is created, called a ***pointer.*** Thanks to these index files, the client request can be processed almost instantly. Each search engine indexes its algorithms, which are a commercial secret.

1.2. Keywords

The principle of the search indexes is based on the *keywords.* Keywords (Keywords) or *search* – words, phrases or character set that reflects the basic idea that a customer Internet introduces special field (string) search to obtain information that interests him. The request is processed by a search engine that finds in its databases the data of the addresses of Web-resources that contain the keywords and the client is given search results.

1.3. Search Results

Search engine result page is a Web page displayed by the search engine as a response to a user's request. It contains a set of links to Internet pages that match, according to the algorithm of the search engine, the given query. This Web-page is called *resultant.*

Before delivering results, the *ranking of search* results occurs – the system determines the value of each of the resources found and sorts them so that the most valuable are located at the beginning of the list. For this, each resource is rated. The most valuable are the pages on which the keywords are found in the header page, repeatedly repeated in the text, and so on. As you said, if you have a well-formed query, you can get the information you need by having a look at a few Web pages occupying the first positions in the issuance of the search engine.

It is interesting!

The most up-to-date search engines can be queried as an ordinary question. The system itself will understand which words and phrases are key.

1.4. Ways to find information

Search engines use several ways to find information.

1.4.1. Simple search

This is a search for one or more keywords. And more relevant, of course, will be the search for a few words related to the desired topic to be searched. For example, a «fairy tale» will be issued a huge number of different links.

Adding one or two keywords (such as «Ukrainian folk tale») greatly reduces the search area. When you create a query, the number of words in a group is not limited. Using simple search tools, you can use contextual search tools. If the keywords are quoted, the search engine will find the documents in which the phrase is present verbatim. So you can find a quote from an artistic work, scientific work, etc.

1.4.2. Advanced search

To simplify the task of generating complex queries, use special forms with which advanced search is performed. For faster and more successful searches in search engines, different *logical operators are* used together with the keywords. Due to this you can design a request so that not only sites will be found on a subject that interests you, but also specific pages and even individual documents. The rules for compiling complex queries in one search engine may differ from those in the other, but in any case the following basic logical operators and syntactic expressions will be used (Table 4.1).

Table 4.1

Logical Operators and Syntactic Expressions

Name	Function	Example of use
And	Combines two or more words so that they are all present in the document you are looking for (often using *&* or *+* instead of *I)*	At the request of *Krasnaja I Kapochka* will be found documents containing both those and another word
Or	Provides search for each of the group words	On request, *education or training* will find documents that contain the word *education* or word of *instruction*
Puzzle brackets	Manages the order of passage of logical operators	At the request of *Lomonosov Or (Mikhail I Vasilyevich)* will be found documents containing the word *Lomonosov* or the phrase *Mikhail Vasilievich*
Not	Excludes any keyword from the search results	On request *Mammals NOT predators* will be found documents containing the word *mammals* and do not contain the word *predators*
Near	Allows you to specify the distance from each other can be placed words in the document	At request *NEAR music* will be *free* to publish documents in which these words are not far from each other, that is, between them should not be more than ten words
Quotes	Provide word-for-word expression or phrase search	At the request of the *«dollar to euro ratio»* will be issued documents that literally contain this phrase

To access the Web-form of advanced search, it is enough on the Google homepage to find the link «Advanced Search» and go over it. On the start page, you can select individual blocks, each of which consists of several lines.

The first block on the Google Advanced Search page consists of four lines for entering search queries.

Line 1: Find results with all the words (similar to the usual Google search string on the main page).

Line 2. Find results with an exact phrase (similar to using a footer operator, that is, entering a phrase in the quotation marks).

Line 3. Find results with each of the words (similar to the application of the operator (OR).

Line 4. Find results without the words specified in this line (similar to the use of the operator NOT).

Example of using these four search rows:

Line 1: Cooking Recipe.

Line 2: Biscuit Dough.

Line 3: Cake.

Line 4: Article.

The contents of such a request: find pages with the words «recipe» and «cooking» (the order of the words on the page is not relevant), with the exact phrase «biscuit dough», with each word «cake» or «cake», but without the word «article «

The following parameter *block* on the Advanced Search page adjusts the various search settings.

Line 1. Language (language selection is Russian, Ukrainian, English, etc.).

Line 2. Format of the file (whether to search on request, in files of the following types): any available format, PDF, Postscript, MS-Exel, MS-Powerpoint, RTF, etc.).

Line 3. Date (look for pages created or modified no later than a certain date (day, week, month, or year) or search for pages created at any time).

Line 4. Reminder (the place is determined on the page where the keyword search will occur is in the page, in the address, in the header, in the main part, in the links).

Line 5. Domain (the ability to search in a given domain).

The last block contains two elements.

Line 1. Similarly (look for pages similar to the content specified in the search bar).

Line 2. Links (search for pages that link to the specified page in the search bar).

1.4.3. Contextual Search

Contextual search will be useful if you do not know which keywords to choose for search.

This search engine works by the following algorithm:

1) In the page in the browser, select a piece of text (or even entire page entirely);

2) the system will analyze the selected text, highlight the keywords and itself will make a search query. Theoretically, the system allows you to find plenty of diverse additional information on a topic that interests you;

3) The results of the posting while using this tool are the same as for other types of queries. At the top and bottom of the page is a list of search words and phrases that can be adjusted, and the page is automatically updated.

1.4.4. Custom Search

Custom Search allows you to search for documents:

- by dates;
- by links to a specific address;
- by headings of web-pages;
- by other parameters.

2. Querying the query for the search engine

All search engine queries can be divided into three types:

Information requests (user searches for information, not knowing at which site it will be, for example, «tissue properties»).

Navigation requests (the user pre-searches for a site that should have information of interest to him, for example, «textiles».

Transaction requests (the user in the formulation of the request expresses a willingness to do some sort of action, for example, «buy a TV»).

Practical recommendations when making a request for a search engine

When defining a problem for a search engine, follow these rules. This will save you time and increase the relevancy of the answer.

- *Do requests more accurately.* It is imperative that the keywords in the query accurately and completely determine the information you need. The order of the words in the query does not matter.
- *Do not search one word.* Using multiple keywords allows you to refine your search, increase the completeness and accuracy of the search, and ultimately save time and money.
- *Use synonyms.* If the list of found pages is too small or does not contain pages with the necessary information, try changing the keywords in the query, get synonyms for them. For example, instead of the words «course project» you can write «Coursework.»

- *When constructing queries, consider the possibility of writing the same term in Latin or Cyrillic.* For example: modem (modem), web (web), fax (fax). While writing Cyrillic, some terms may have different writing options. For example: browser or browser.

- *Determine the location of the required information.* References or works are better to search on specialized sites, and literary works – in electronic libraries. But you can use and universal search resources Internet. When searching for information from a particular region (weather, work, real estate, goods, services, etc.), contact the local portals.

- *Check spelling.* If no pages were found or too small in the search result, a spelling mistake may be made in writing the query words.

- *Do not write in capital letters.* To increase the search efficiency, the title letters in the query are recommended only in their own names. For example: «the city of Kharkiv», «TV program» Culinary Battle «.

- *Do not use «stop words» in the requests* – prepositions, conjunctions, particles, words in length less than 4 letters. It is believed that «stop words» do not have a semantic load and slow down the search. Therefore, they are simply not considered by the search engines when processing the request. For example, the *«we in Italy»* request will find documents that include the word *«Italy».*

Different search engines use different algorithms and search engines, differently evaluate the degree of matching of the found references of the user's request. Try sending the same query to different search engines.

3. Creation of a bibliographer of raffled site records

By selecting the sites you want from the resulting page that the search engine gives you on your request, create their bibliographic records. Creating such records confirms the reliability of the information you have selected for this request. The description for every site should indicate the name and address Intern ETI. Example site description: *The story of a little black dress: fun.mobus.com/22393.html*

4.3. CONTROL SYSTEMS BY EDUCATIONAL TASKS

4.3.1. Trello

People use *Trello* for any projects you can imagine. Weddings, shopping at the store, vacation, project management to plan with *Trello is* much more interesting! So, let's talk about the basics of working with *Trello.* To start, go to the link *https://trello.com*, and then the plan.

1. We click the *Sign up* button (Figure 4.1).

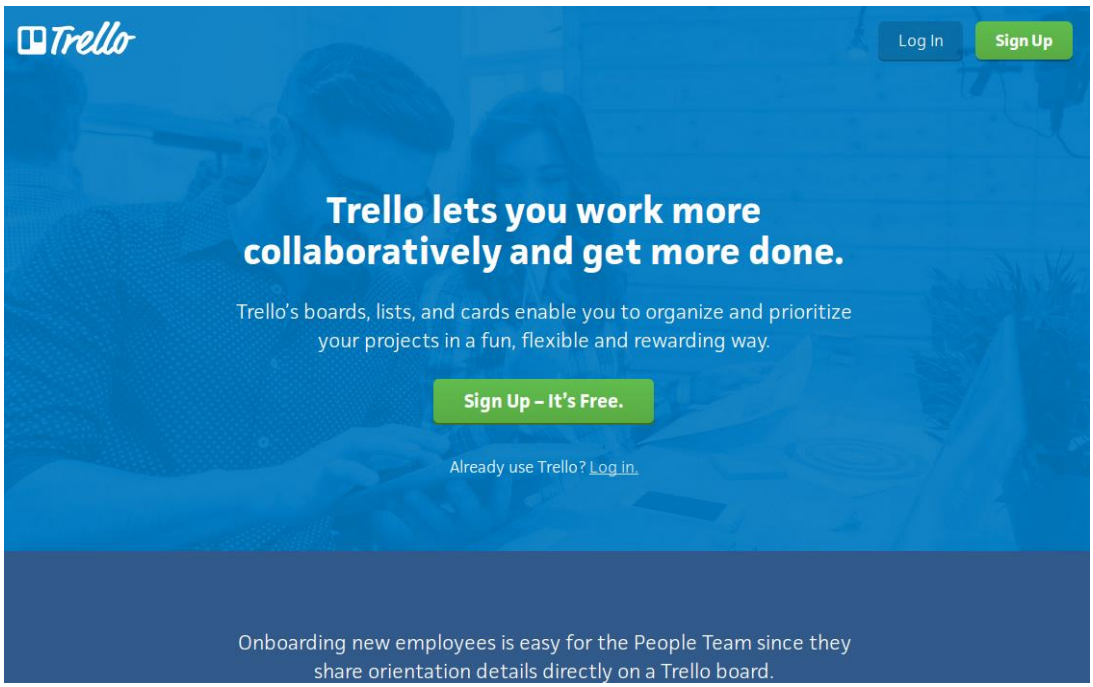


Figure 4.1 – Registration in the Trello system

2. Register on the site (Figure 4.2).

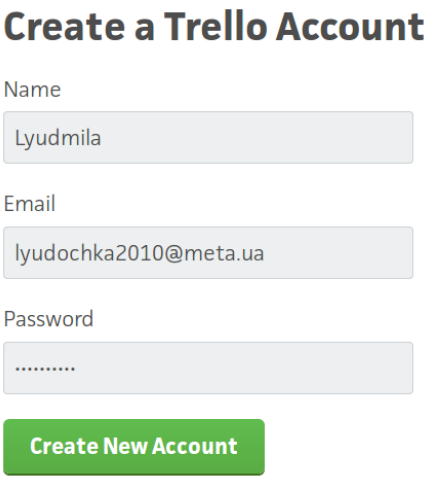


Figure 4.2 – Creating an account in the Trello system

3 Once the account has been created, a confirmation letter will be sent to the specified mail. Follow the link in the letter.

4 Now we have the opportunity to create our own boards for the planning of affairs or management of educational tasks (Figure 4.3).

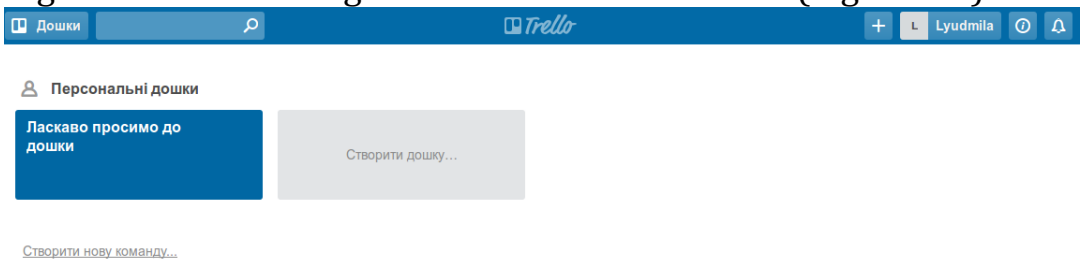


Figure 4.2 – Create your own Trello system board

5. Create our own board (Figure 4.3).

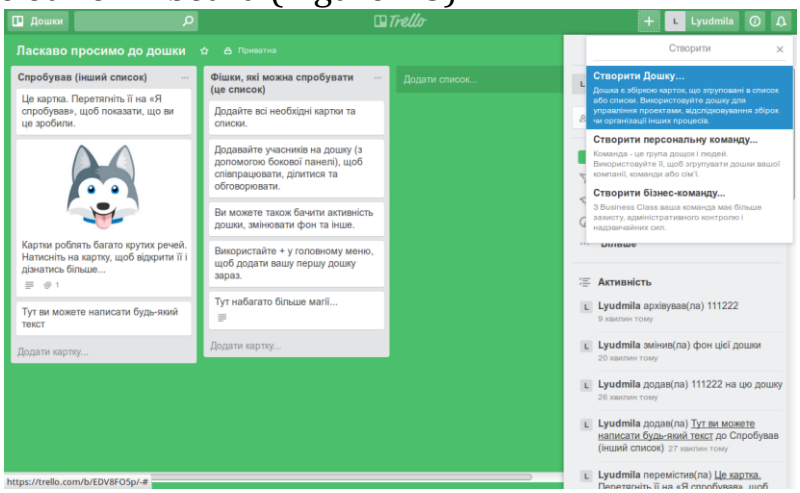


Figure 4.3 – Boards created in the Trello system

6. On the board you can post lists, in each list – so-called cards (these are your cases or other items) (Figure 4.4).

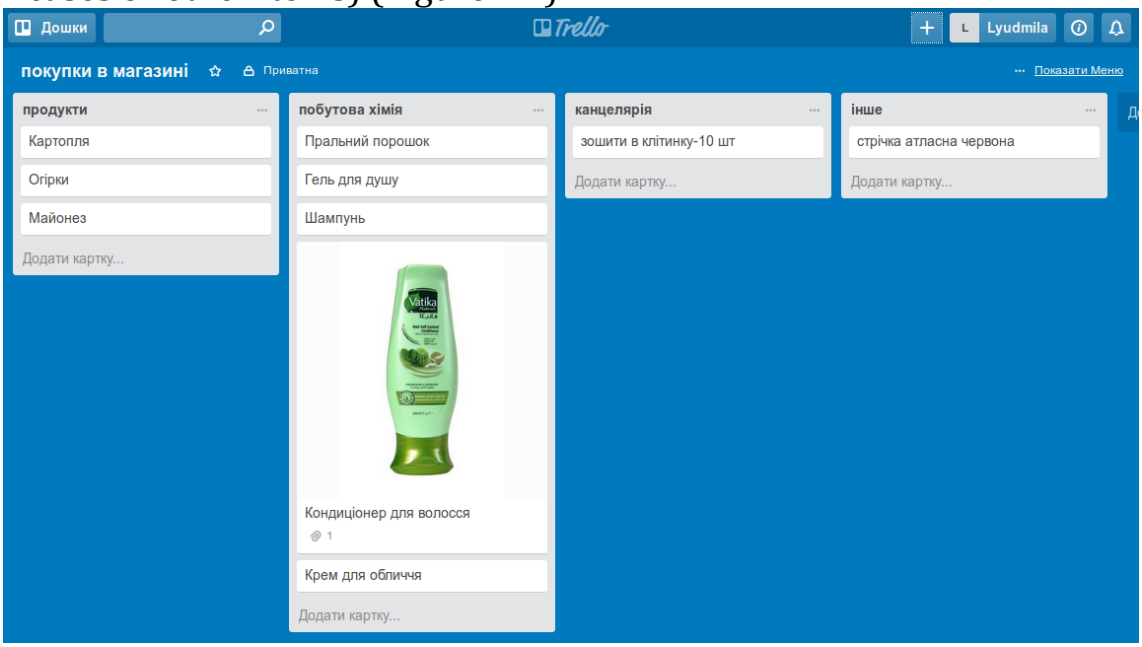


Figure 4.4 – Boards with lists in the Trello system

7. You can attach images, links, or invite friends to discuss this card for each card. You can also add an end date (the end date, when the right is to be made, the product purchased, etc., see Figure 4.5).

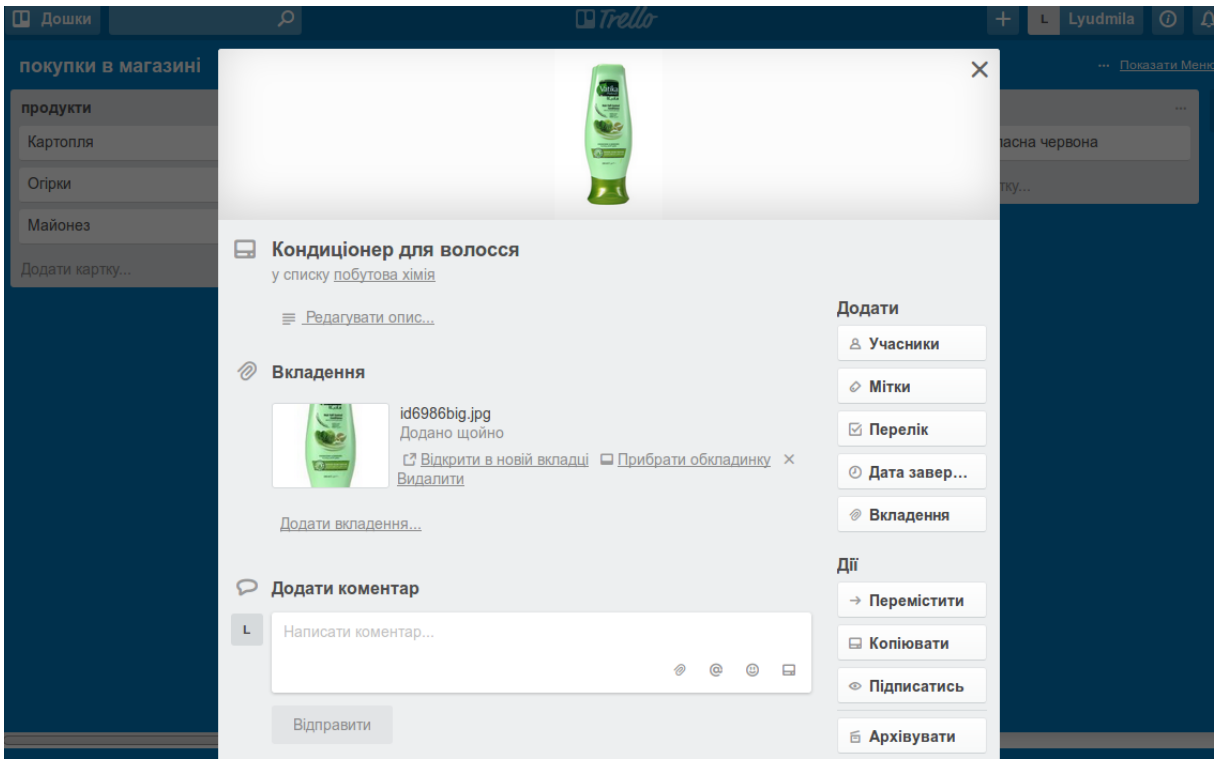


Figure 4.5 – Edit the card in the Trello system

8. To learn more about *Trello's* features in the main board with the name of the *Welcome to the board* in the *Chips* list, *which you can try* to click on the text card. *There is much more magic.*

9. By going through the links you will learn about other possibilities *trello* (fig. 4.6).

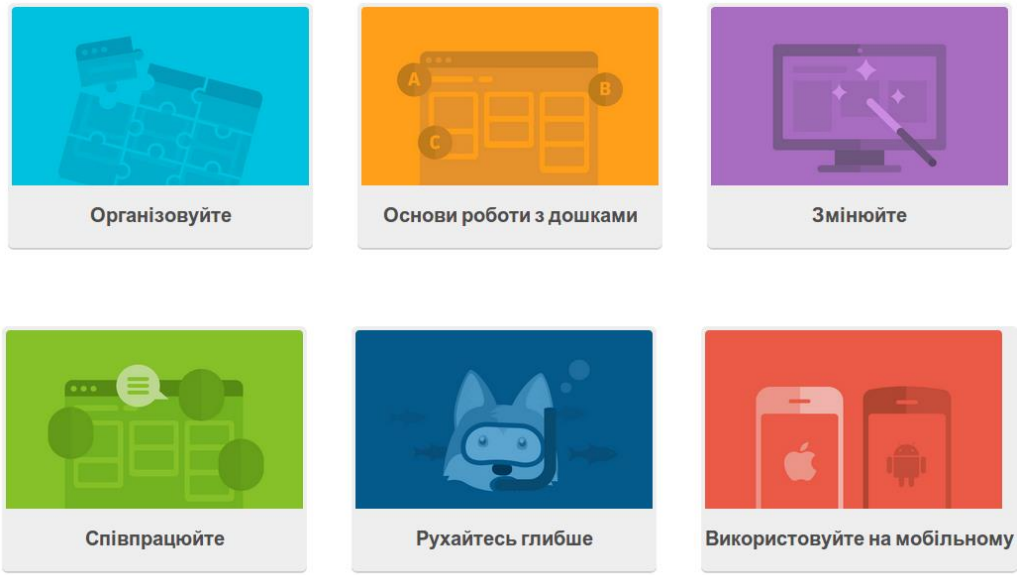


Figure 4.6 – Familiarity with Trello system features

4.3.2. Asana

Asana – not just a list of tasks and the entire system of small tools, to help replace almost any application with task management, customer relationship, projects and more. So, let's talk about the basics of working with *Asana.* To get started, go to *https://asana.com* and follow the plan.

1. Sign up on the site by entering your email in the field and clicking on the *Get started for free* key (Figure 4.7).

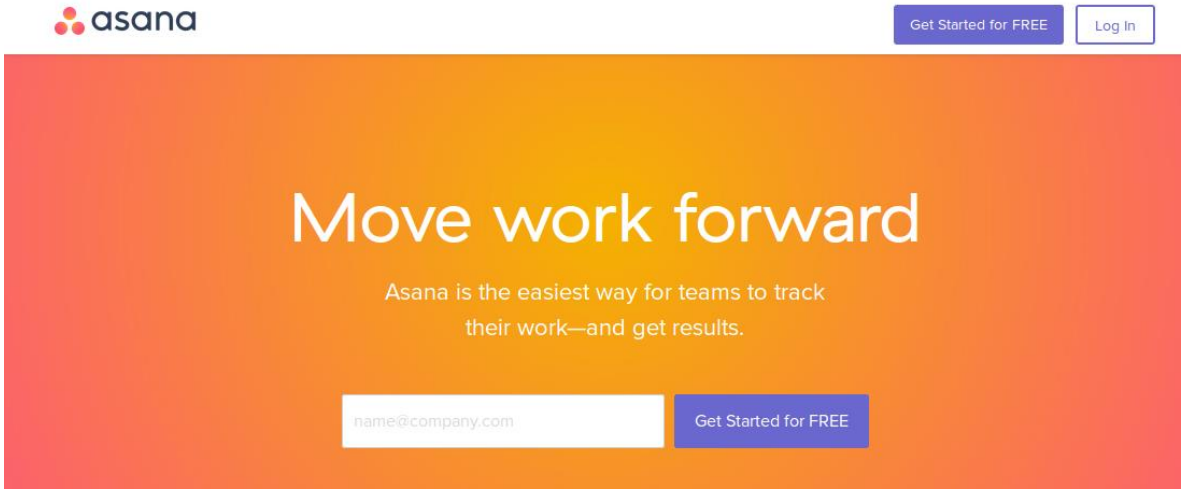


Figure 4.7 – Creating an account in the Asana system

2. After the account is created, a confirmation email will be sent to the specified mail. Follow the link in the letter. We register on the site (fig 4.8).

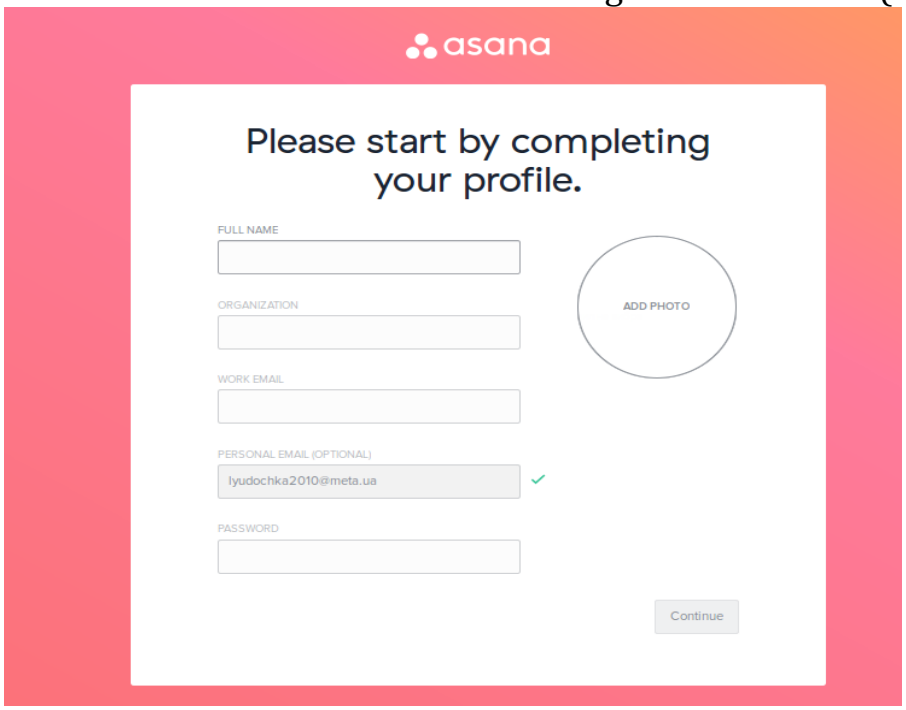


Figure 4.8 – Filling in the profile of the Asana system

3 If you plan to work in a team, you can add participants by simply entering their respective fields in their emails. Next, enter the name of our team and go to the creation and execution of tasks (Figure 4.9)!

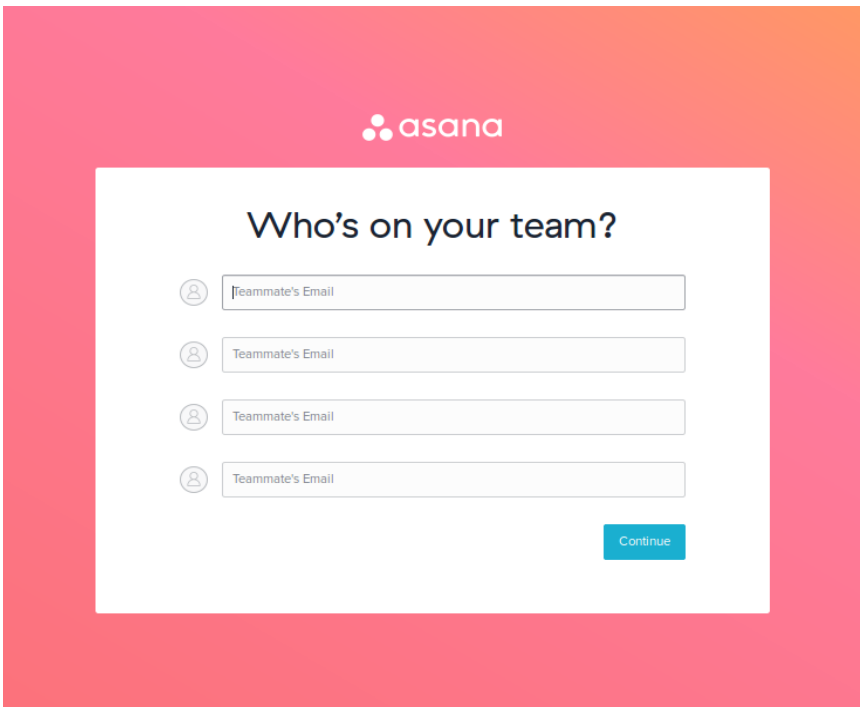


Figure 4.9 – Creating a team in the Asana system

4 By clicking on the **+** top panel, we can create a new project, task, discussion, etc. Create a new project. All projects will be displayed in the left side panel (Figure 4.10).

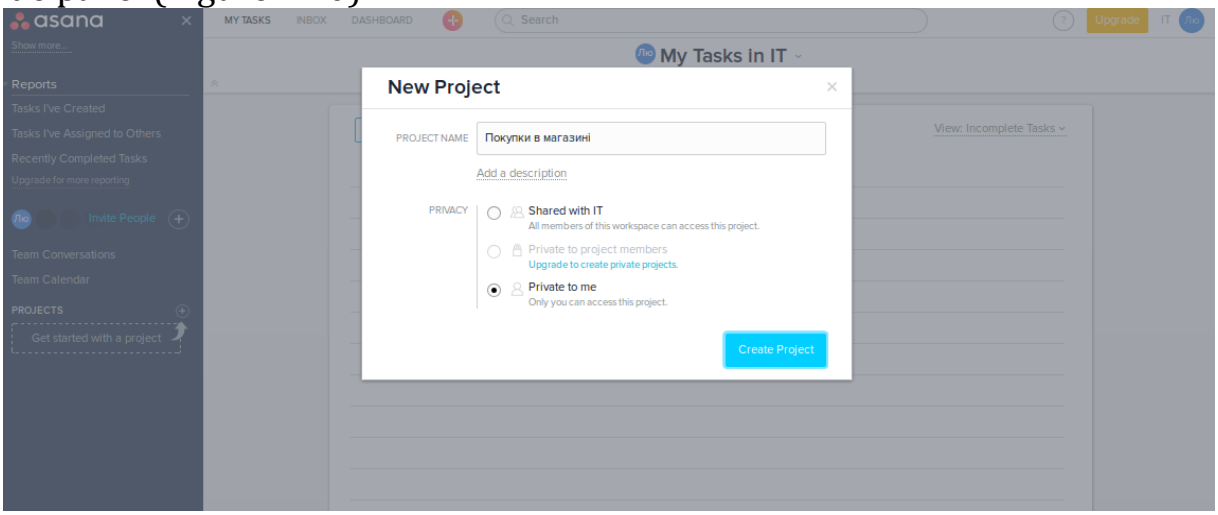


Figure 4.10 – Creating a new project in the Asana system

5. In the project, we can create a list of tasks for execution (Figure 4.11).

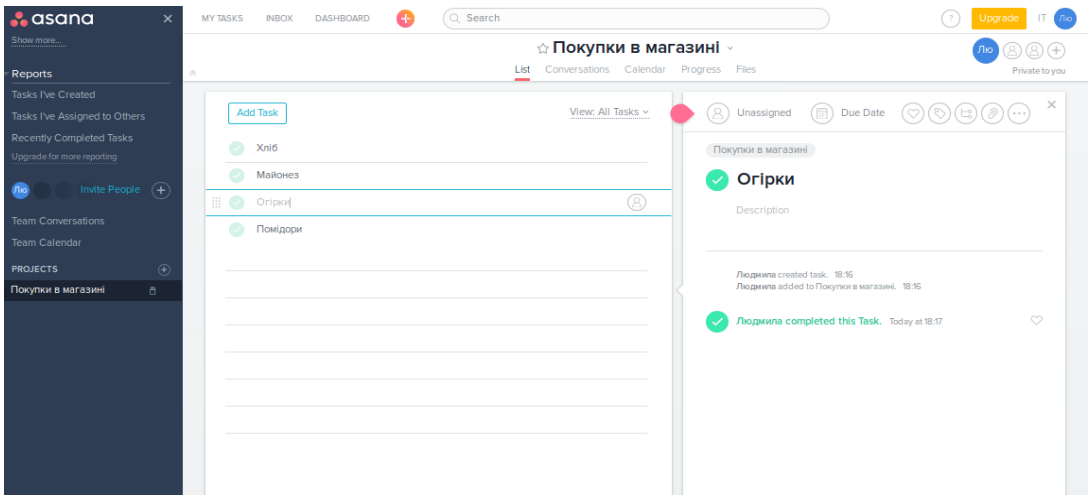


Figure 4.11 – Creating a task list in the Asana system

6. By clicking on the check mark next to the task, we can mark it as done (Figure 4.12). You can also change the list of tasks to be displayed (all, executed, not executed, etc.).

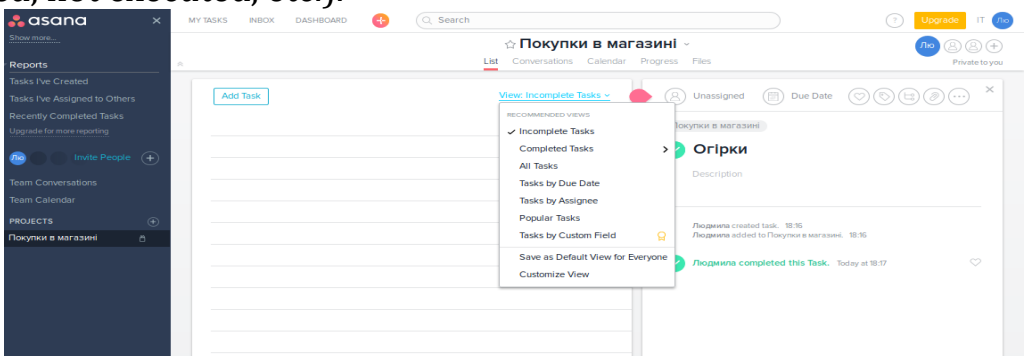
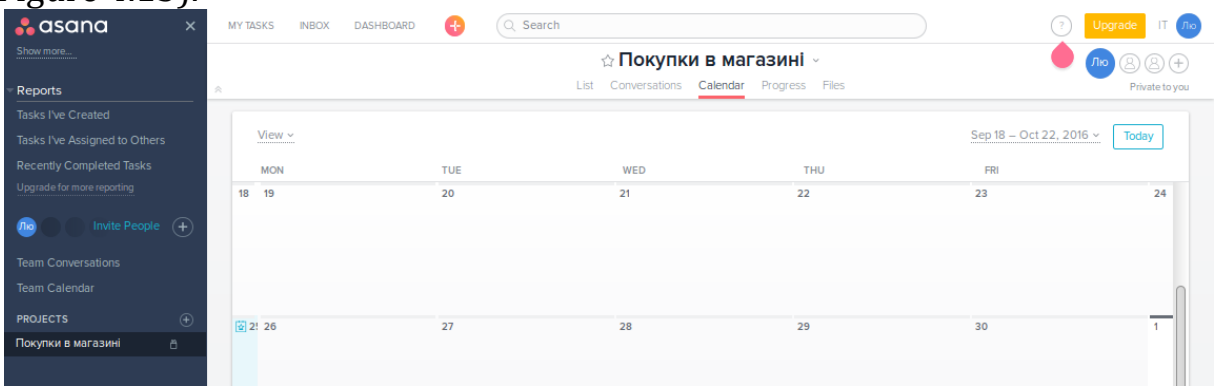


Figure 4.12 – Manage tasks in the Asana system

7 To each task we can add an attachment (photo, comment, etc.).

8 Over the name of your project in the menu, there is the option to select *Calendar* to display the tasks of the current or next months (Figure 4.13).



Rice Point 4.13 – Working with the calendar in the Asana system

9 We can follow the progress of tasks, clicking on *Progress* (Fig. 4.14).

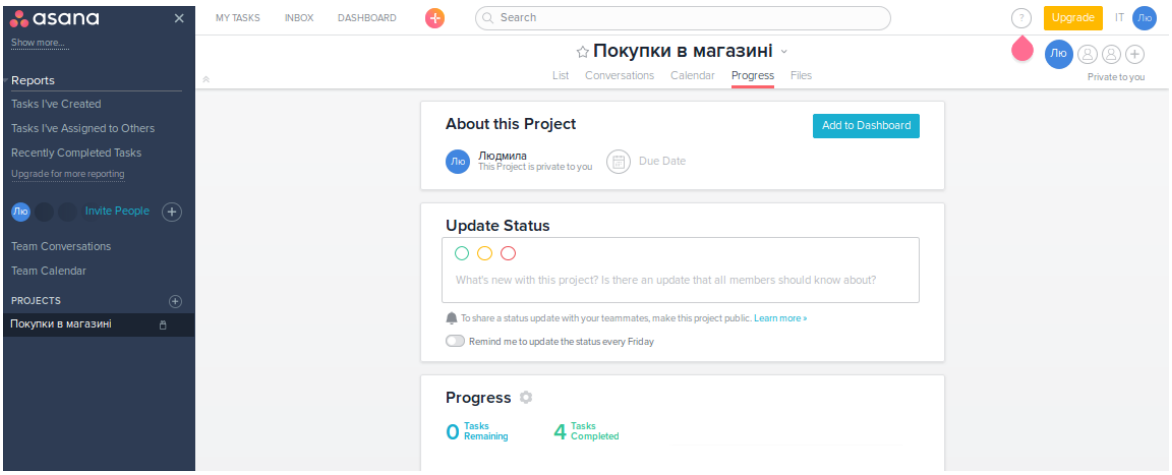


Figure 4.14 – View the process of executing a task in the Asana system

10. If there are other questions regarding the use of the site, we may click on? in the top panel.

4.4. EXAMPLES OF HUMAN APPLICATION FOR EDUCATION

4.4.1. Applying Gameplay for Learning Programming

The Code.org site is a nonprofit organization and site with the same name, aimed at encouraging people to study computer science. The site includes free coding lessons and a description of how other codes and games were created. It is very interesting and useful for those who want to learn coding applications.

1. Go to https://code.org/. The main window appears in front of you (Figure 4.15).

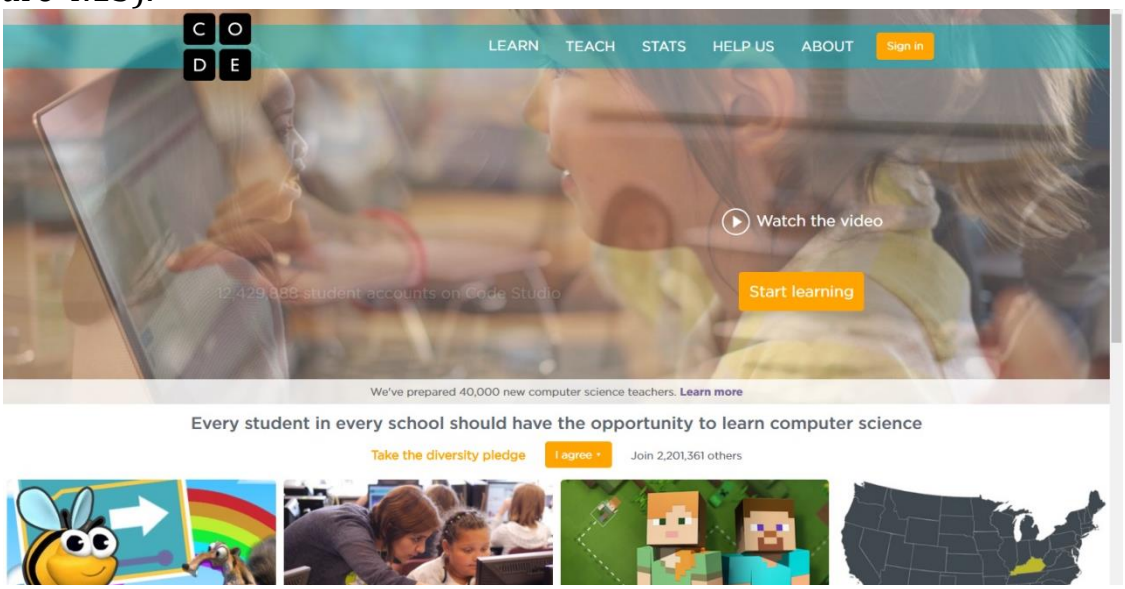


Figure 4.15 – The main window of the portal Code

2. Register and start to work. When registering, you need to specify how you want to work: as a student or as a teacher, You must also specify your age and other information.

3. Next we can choose a game by which we will teach programming. We choose Flappy. After it launches, a field for the game appears (Figure 4.16).

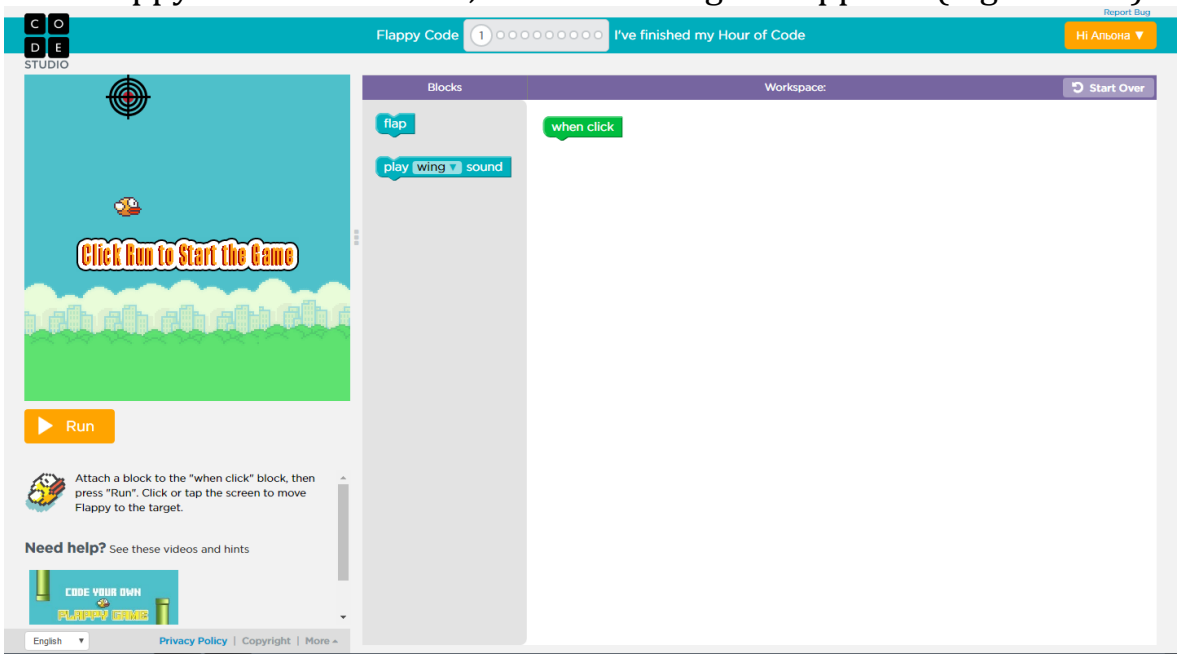


Figure 4.16 – Window game «Flappy»

4. To launch the game, you need to make code etc. (Figure 4.17). In the block phrases are given. If you move them in the right field, you can make a program by which the game will start. Putting the code, click on the game and it should work if the code is compiled correctly.

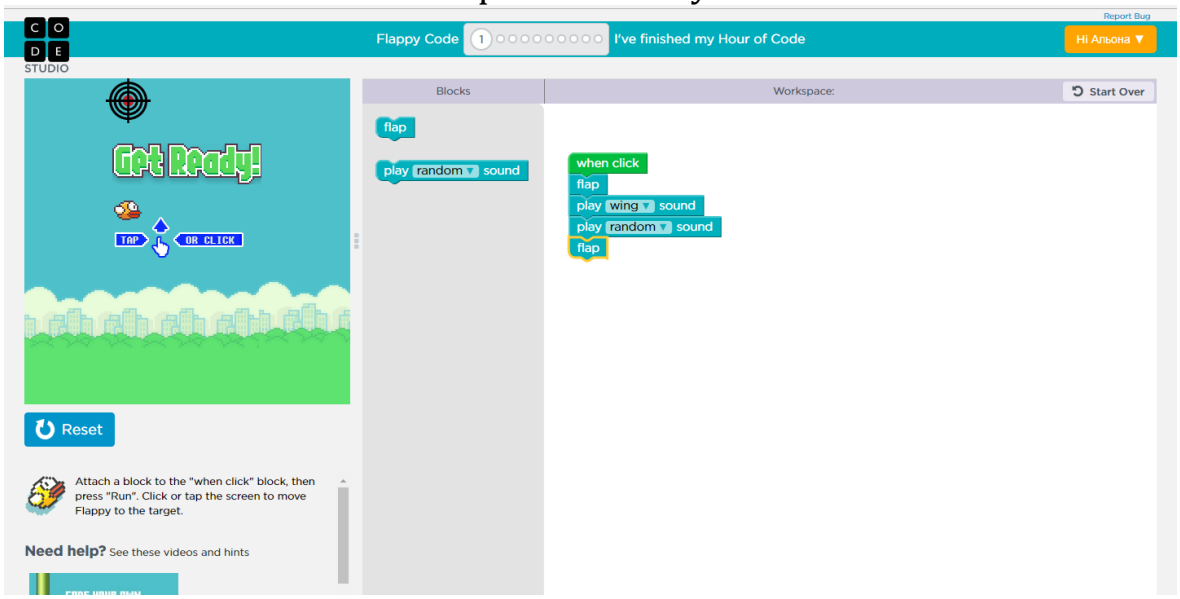


Figure 4.17 – Build games with blocks

5. On the *code.org* site, there are many games that you can learn in programming in different ways.

After clicking on *Any* what game was originally called a description of what to do and then you can start to work. In fig. 4.18 shows an example of an assignment in the Artist game.

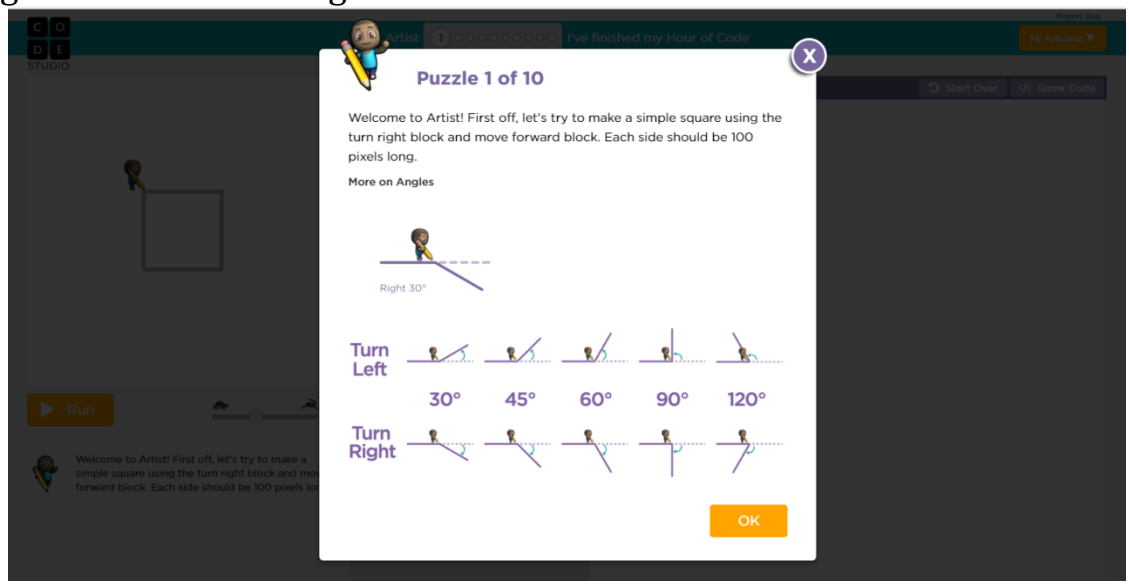


Figure 4.18 – An example of a task in the Artist game

6. If, after you click *Run* code does not work then you'll see a message which will be discharged description of the problem (Fig. 4.19).

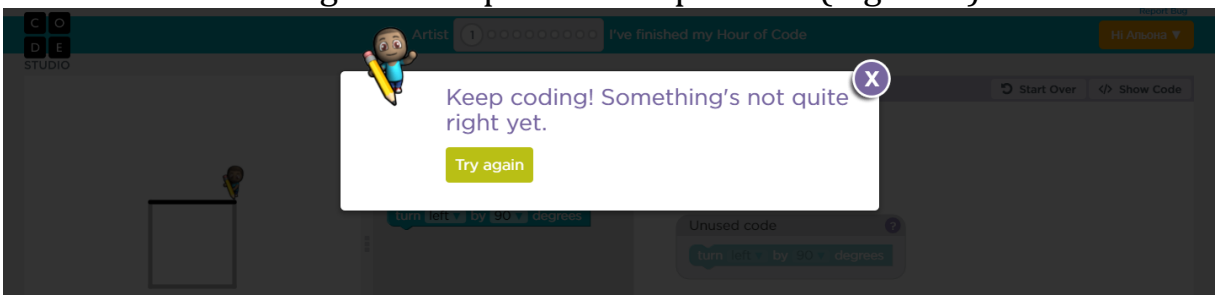


Figure 4.19 – Messages describing the problem

7. Then click «Try again» and continue to work until the program is launched at runtime. In addition, the site has the opportunity to create their own projects; on the main one, you can see the already created game codes with drawings.

When you click on a picture, you can see how it works and find the code on which it was created (Figure 4.20).

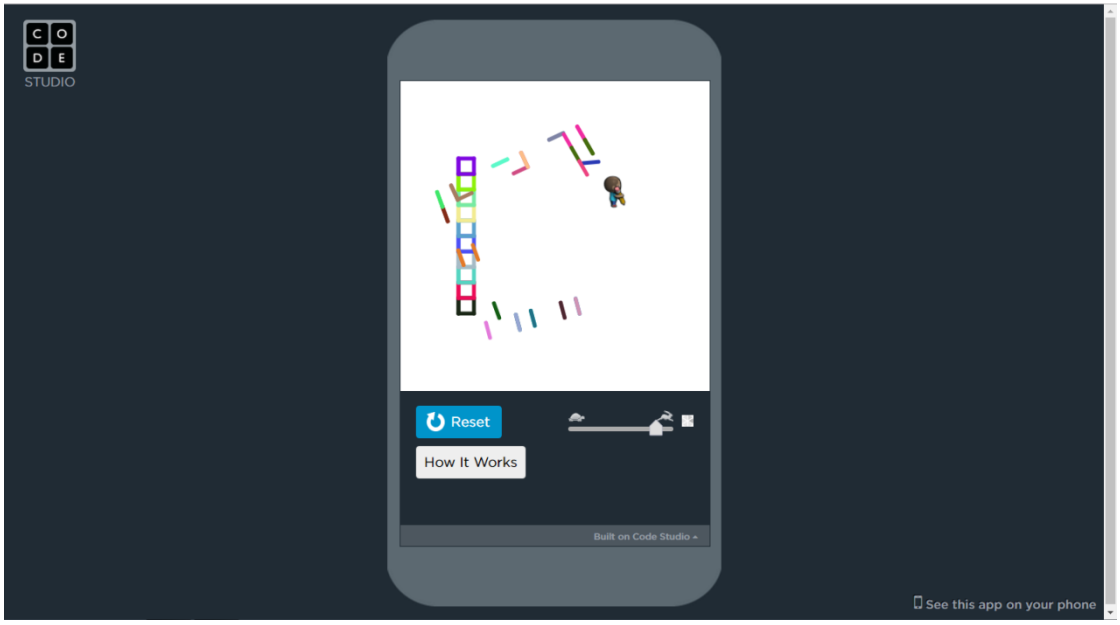


Figure 4.20 – A view of the created game

4.4.2. Using gaming skills to work with and from Microsoft Office. Ribbon The hero

To quickly learn to work in Microsoft Office and learn about all the nuances of its use, there is a game program Ribbon Hero. This is a video game developed by Microsoft Office Labs. The game is available for free download and serves to familiarize users with Microsoft Office.

1. To start playing this game you need to install it. We go to the site http://ribbon-hero.en.softonic.com/ download and install. After installing, open the Microsoft Word document and in the upper right corner, we find the shortcut of the game, press and start playing (Figure 4.21).

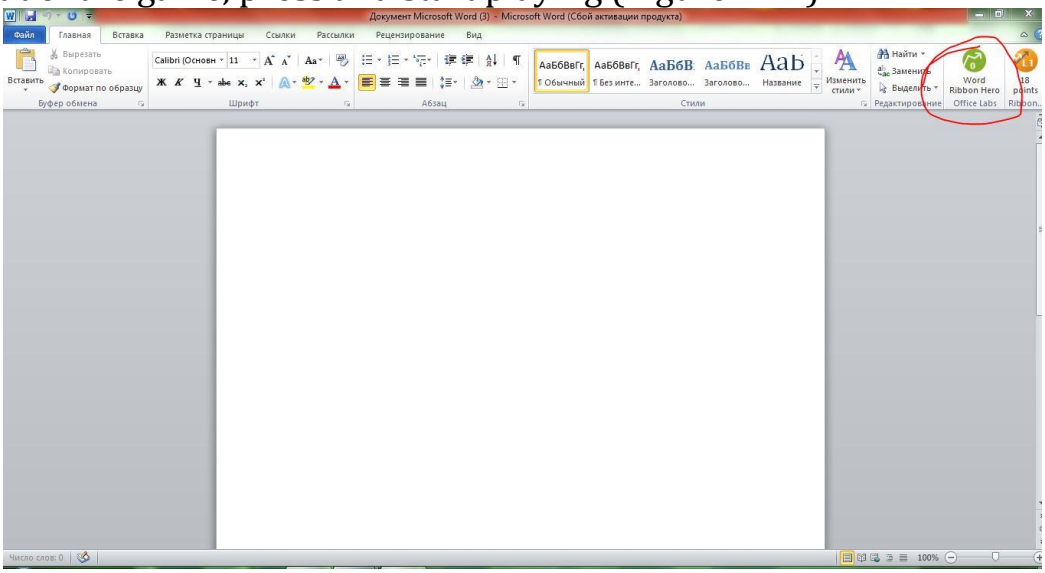


Figure 4.21 – Microsoft Word with the installed Ribbon The hero

2. The principle of the game look at the example of Ribbon Hero 2. Also, this game is accompanied by music and pictures.

We begin to perform tasks. All steps for its execution are on the right. Hovering over the last step, the image appears with the specified place, where the answers to the problem are.

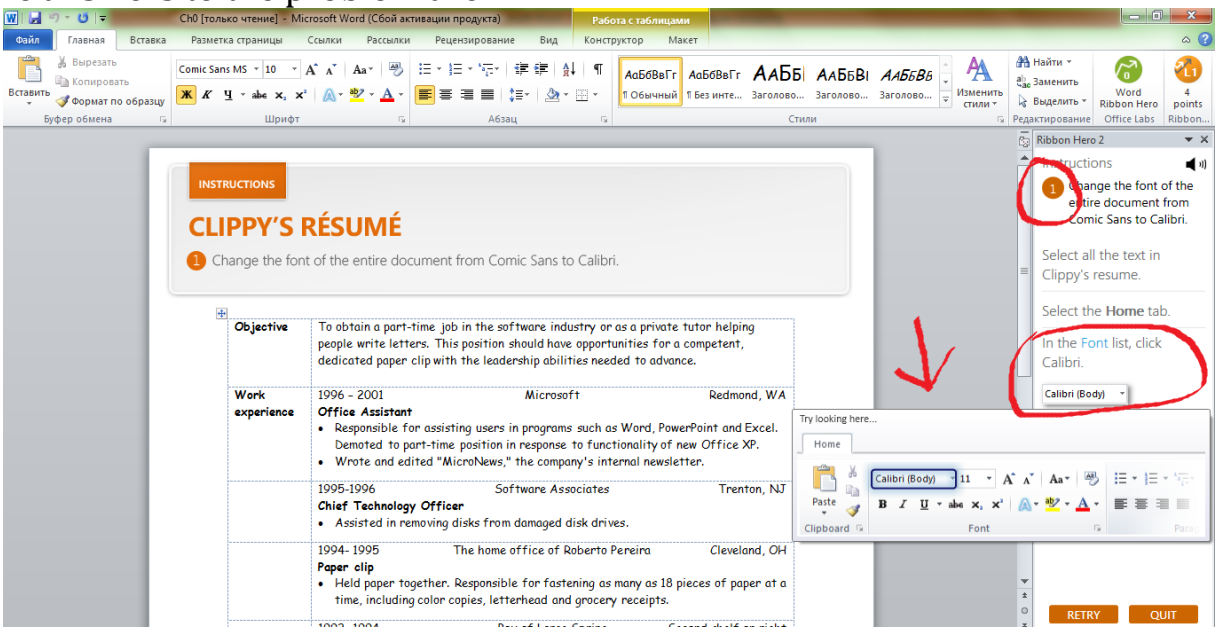


Figure 4.22 – Performing Ribbon tasks The hero

3. We carry out the task and proceed to the next (Fig. 4.23).

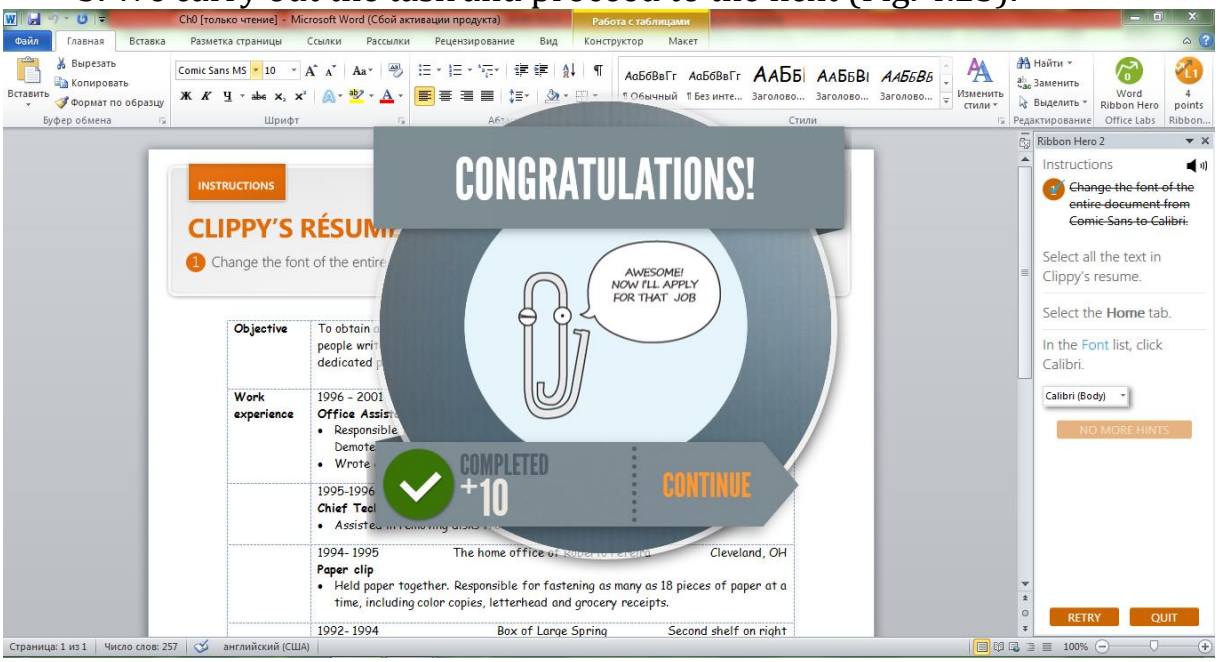


Figure 4.23 – Performing Ribbon Tasks The hero

4. A window with a message about the successful completion of the task appears (Figure 4.24).

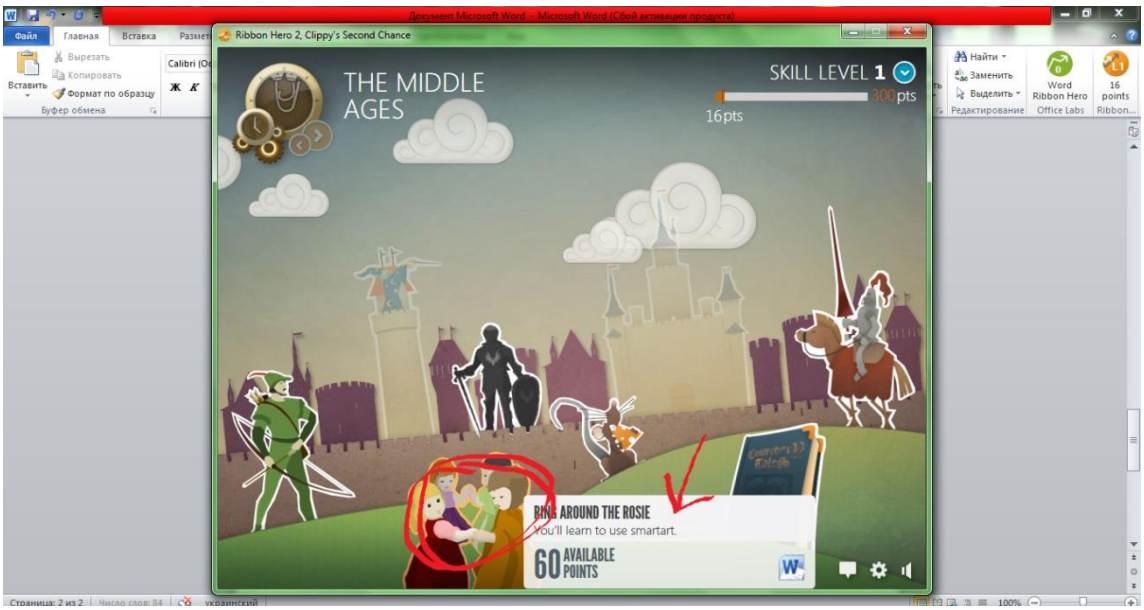


Figure 4.24 – Reporting the successful completion of the task

5. Clicking on the image opens the following task. To go to the next level you must complete all the tasks in this picture.

Problems of the game are grouped into four sections: work with text, page design and layout, artistic presentation and more generalized section of fast tasks. In the first three sections, each task acquaints the user with a key feature and enables them to edit a document template using this feature. Quick tasks allow you to accumulate extra points to advance to the next level. In addition, Ribbon Hero has the ability to track user progress in learning through the use of Office functions and tools, as well as the corresponding difficulty level of tasks. Therefore, if you want to quickly master the use of Microsoft Office products, you can safely begin to use gamification in the training, because it is the fastest and most interesting way of learning how to work in Microsoft Office.

4.5. PROMETHEUS, COURSERA AND KHAN ACADEMY PROJECTS

4.5.1. Prometheus – Ukrainian public project of mass open online courses (MOOC). The main goal of the project is free provision on-line access to university-level courses for all interested persons, as well as the opportunity to publish and distribute such courses to leading teachers, universities and companies.

The site is located at : http://prometheus.org.ua

1. Register on the site (Fig. 4.25).

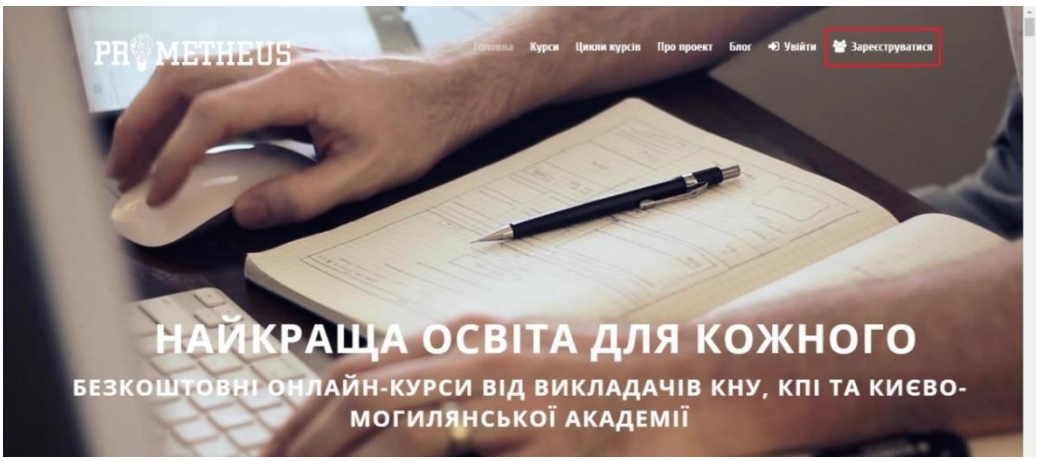


Figure 4.25 – The main window of the Prometheus project

2. After registering, go to the tabs courses. We go to «My office». We are looking for a course (Fig. 4.26).

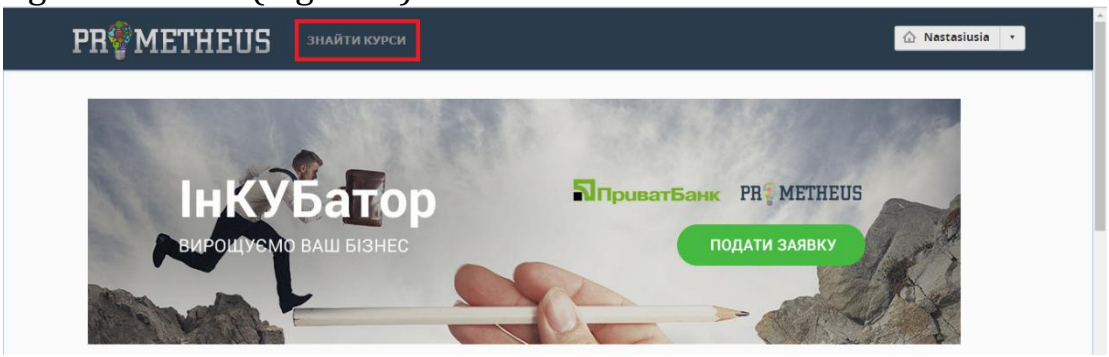


Figure 4.26 – Course search in the Prometheus project

3. Y In the list below, choose the course we want to pass. In the window that opens, I will register for the course. For example, «Information Wars» (Figure 4.27).

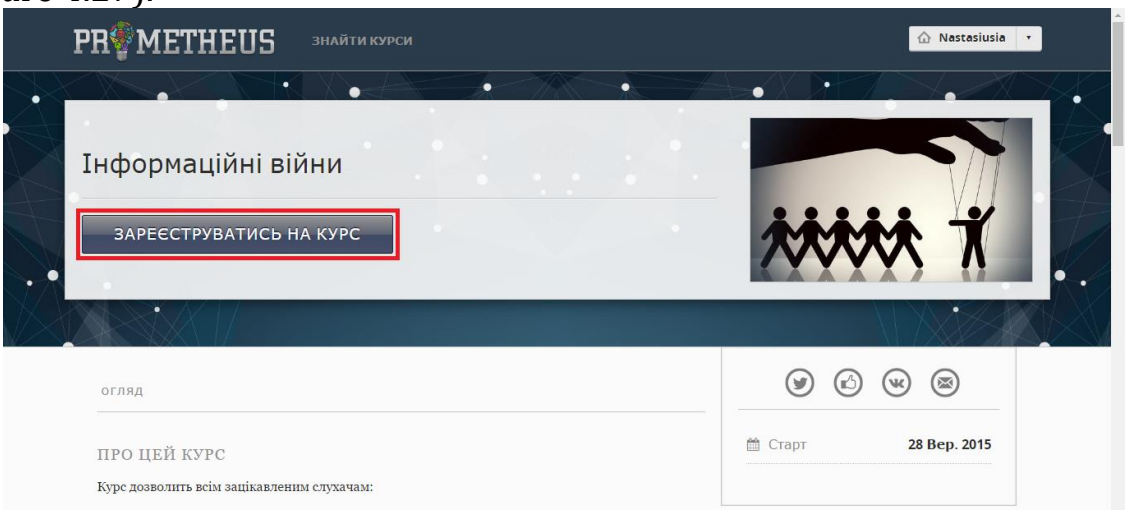


Figure 4.27 – Registration for the course

4. Now in your office a course will appear. Check it out. In the announcement ticket for the course. To pass the course, select the first week in « *Visual Course Material* «.

When you go to the next window, you will first learn how to work with the course (Figure 4.28). At first, you are listening to lectures. At the end of each week, you will pass the tests. Last week pass the final exam. After delivery, you will receive a certificate of completion of the course.

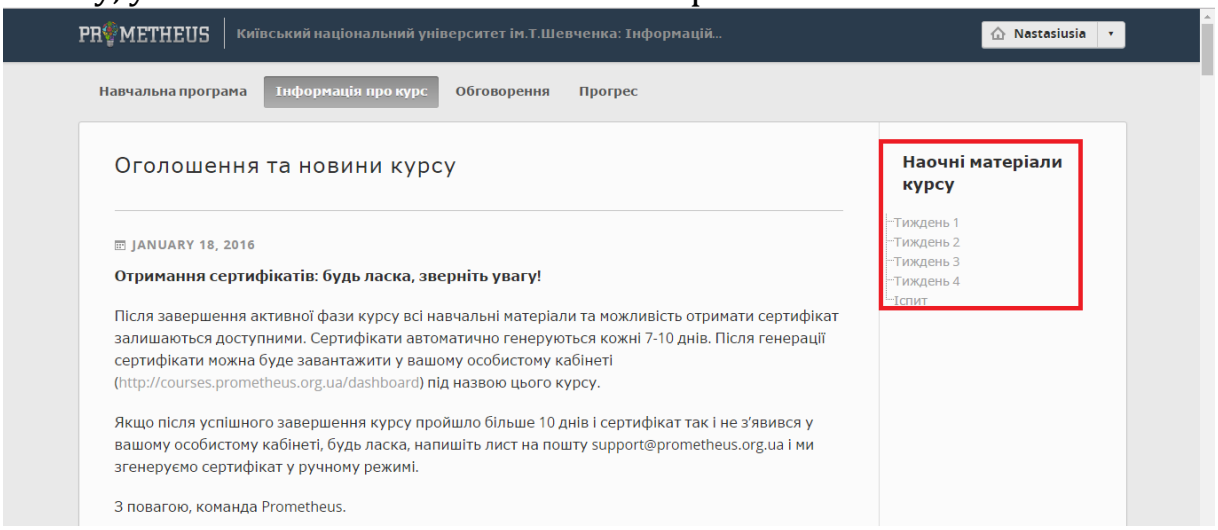


Figure 4.28 – View information about the chosen course

4.5.2. Coursera is a technology company working in the field of education. Coursera offers its users hundreds of free on-line courses (MOOCs) from various disciplines, in case of successful completion, the user receives a certificate of completion of the course.

The site is located at : http://coursera.org

1. Register on the site. If you have a profile on Facebook, simply Preferred 'yazhit it. If Facebook profile no registration passes is normal (Fig. 4.29).

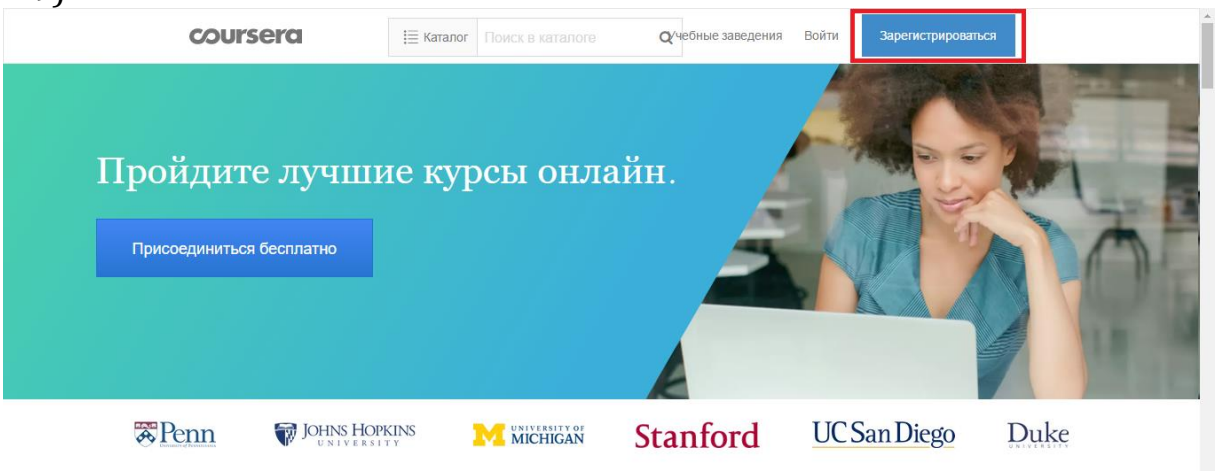


Figure 4.29 – Join in the information system «Coursera»

2. Once you have created a profile, you will immediately be in your own office. Click on the directory and look for a suitable course (Figure 4.30).

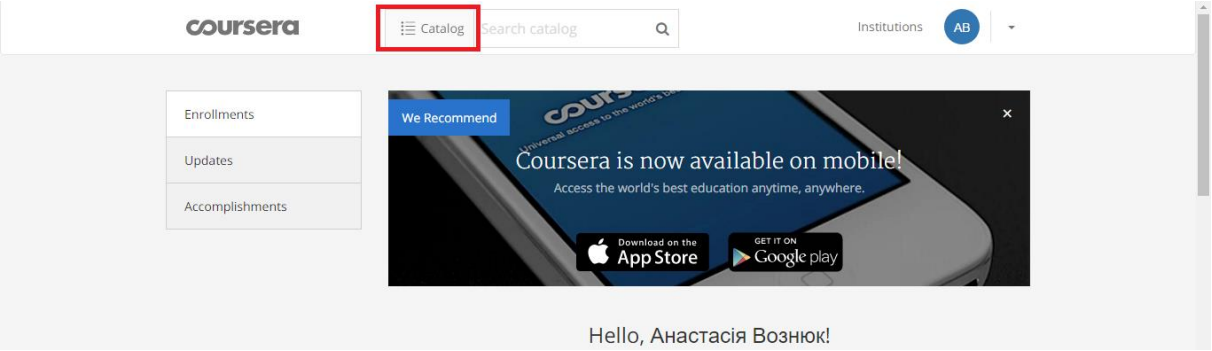


Figure 4.30 – Search for a course in information system «Coursera»

3. First, choose the direction in which you want to work, then choose a course. You are enrolled in the course you need. We select without a certificate, then the URS will be free (fig 4.31).

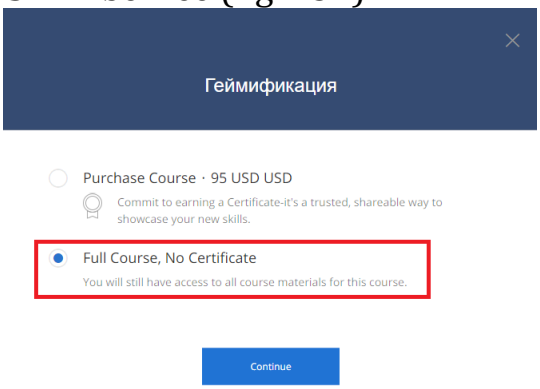


Figure 4.31 – Registration for the course

4. After enrollment, you will immediately get to the course page. The course starts with a certain number. We are waiting for the course.

Figure 4.32 – Course page

4.5.3. Khan Academy is a nonprofit educational organization founded in 2006 by Salman Khan, a teacher for «high-quality education for anyone and anywhere.» The organization creates lectures in the form of YouTube – videos. In addition to micro-collections, the organization's web page has practical lessons and tutorials for teachers. All resources are free for everyone around the world.

The site is located at: http://khanacademy.org

1. Register on the site. All quick check with the help of my and the counties Facebook and Google (pic 4.33).

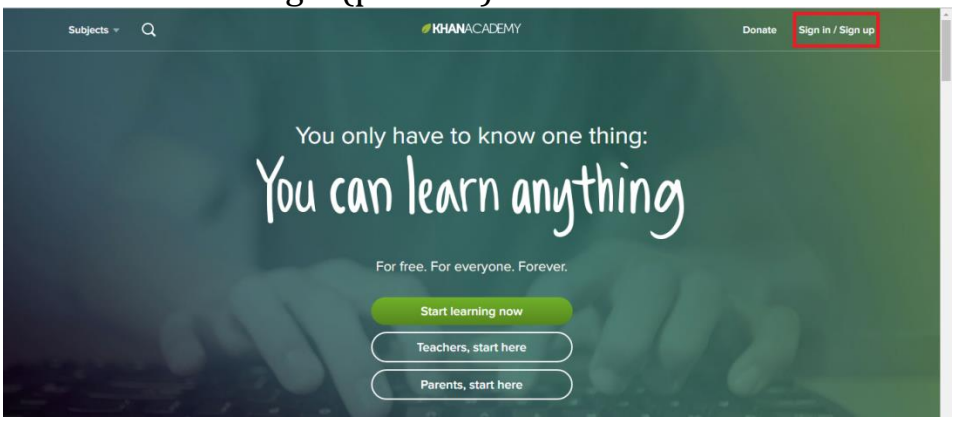


Figure 4.33 – Registration on the portal « Khan Academy «

2. Immediately after registration, you will be transferred to your personal office (Figure 4.34).

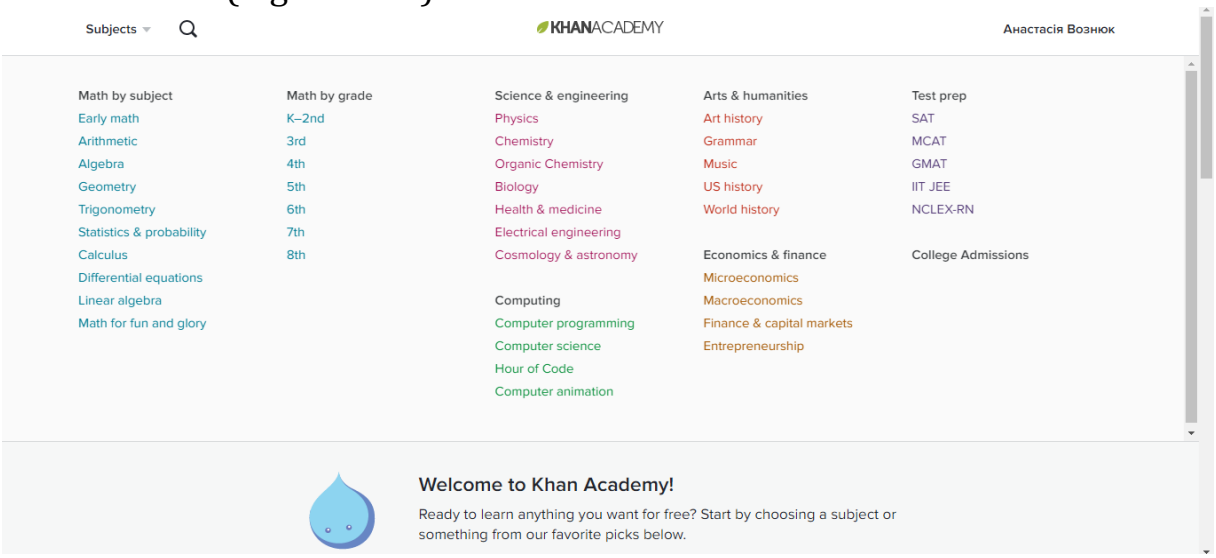


Figure 4.34 – Personal office on the Khan portal Academy «

3. Select the desired direction. Then – the course you need. You will see a window of the course (fig 4.35). There is a list of topics. IN the general theme is simply from video lectures. There may also be a simple lecture, as well as a test at the end of the cycle of lectures.

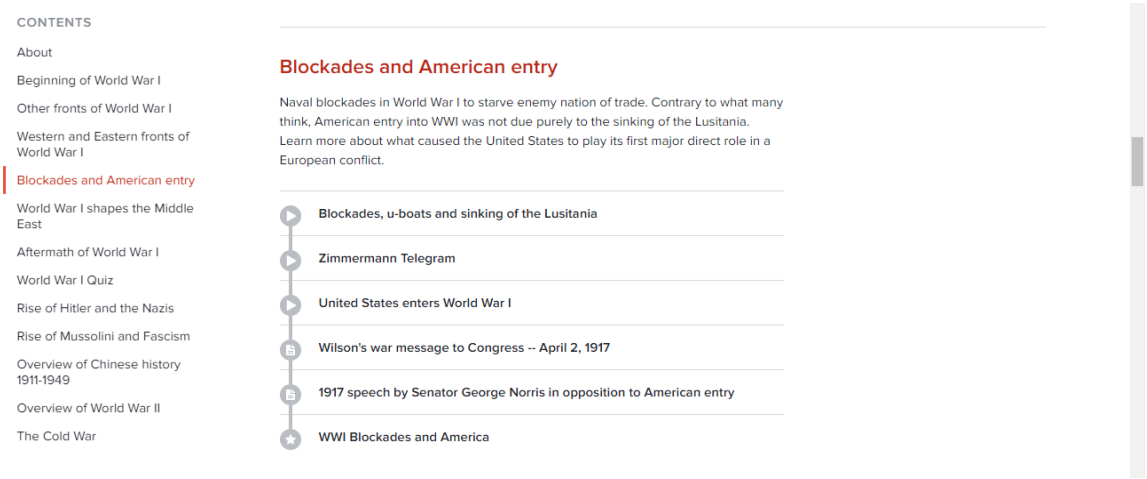


Figure 4.35 – Course window on the portal « Khan Academy «

After the course you do not receive any certificate, only knowledge.

4.6. BASIS FOR CREATING COURSES IN LMS MOODLE AND ATUTOR

4.6.1. LMS Moodle

Step-by-step Instructions for Installing the Moodle System:

1. You can download the distribution package from here: http://download.moodle.org/. On the same page there are software packages that are required to run the Moodle system.

2. The distribution should be uploaded to your site in the home directory (or in a specially created directory for the Moodle) and unpacked.

3. You need to check the settings of the web server and PHP. If not all the settings are set correctly, then you need to change the php.ini and / or.htaccess files (in the case of Apache).

4. It is necessary to create an empty database and a special user who has access to this database (and only to it).

5. You need to create a directory on the site to store user-defined data from the fixes with the name: moodledata. For security reasons, this directory should not be accessible through the Internet. You can do this by placing it in the root directory of the site.

6. Run the installation script simply by typing the address of your site in the browser or dial: http ://yourserver/install.php.

7. Passing in a series of steps, the site administrator specifies the setup parameters, the program fills the database and creates a configuration file config.php.

8. Set backups, backups.

9. Once the system is installed Moodle, the site administrator can create a new course Admin page.

Before creating a new course, let's get acquainted with the program interface at the current LMS Moolde course. If you previously logged in on the site, then go to the course as a student, if not is a s a guest. Download the following page.

At the top of the page you will see the name of the course and your name. The left column of the page contains blocks:

- Participants The block of viewing information about all participants of the current course.
- Course elements. A block in which all the trained elements of the course are grouped by type.
- Search in forums. Find the right information at the course forums (which may be many).
- My courses. List of courses you are subscribed to (registered). For a quick transition from one course to another.

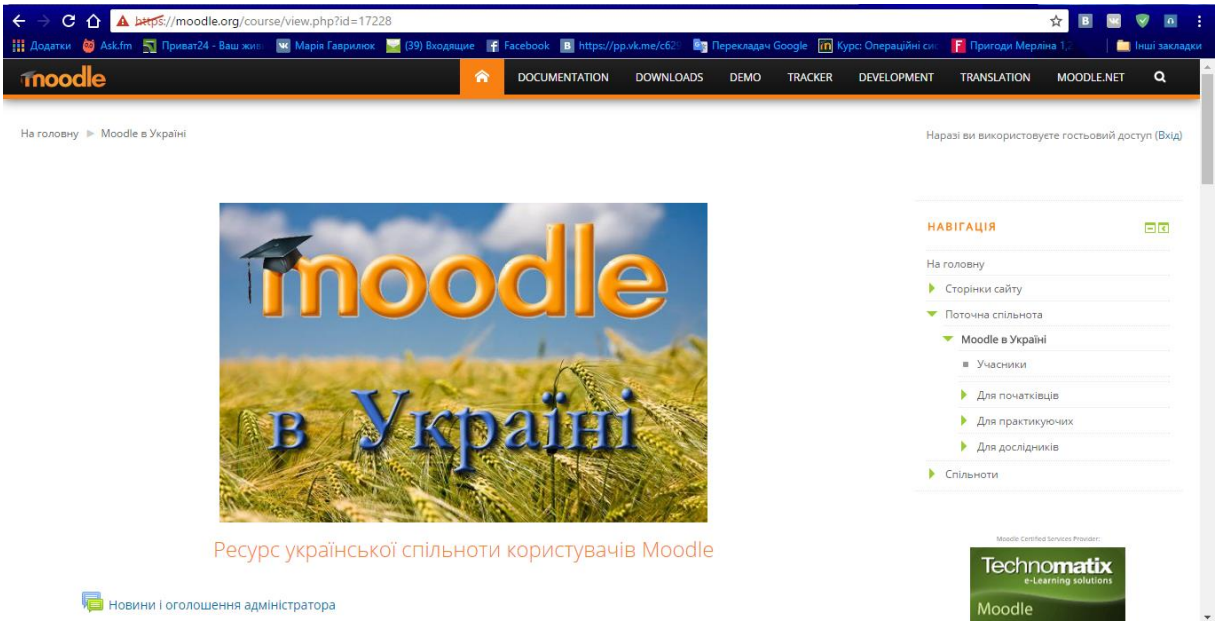


Figure 4.36 – Test Course LMS Moodle

On the right column of the page:

- Forum News.
- Upcoming events.
- Recent activity
- Update course.

These are information blocks. Their content is generated by the program automatically. The purpose – to report timely information for teachers and students, new developments, changes in course delivery task reminders, etc. And, finally, the central column. All educational elements of E-learning are placed in these sections in the form of hyperlinks. It is divided into several sections. Each section is a separate thematic module. In fig. 4.36 shows two upper sections: introduction (without title) and section 1 «Pedagogical aspects of distance learning». Clicking on the first link «Plan of classes», you will read

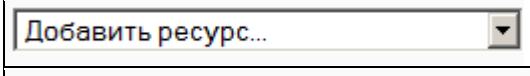
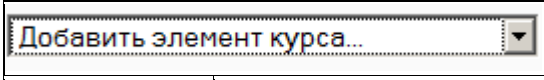
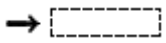
the text with a brief description of the content of the course. The material of the second lesson («Application for a distance course») states that by sending an application by e- mail administrator, you will receive an electronic course for testing and training in practice.

Below is a presentation of the «Short Description of the Moodle Toolkit «, which briefly describes the main tools of Moodle. As you study, you will have questions that you can ask at the Technical Questions Forum. The entire course consists of 10 sections, which are text descriptions, links to helpful resources the Internet, presentations, step by step instructions, assignments, tests, etc. By studying the materials presented on the course, you will be able to create high-quality distance courses, using all the features of the Moolde program. Assume that you have filled in an application; the administrator created a new course and appointed you by his developer. Log in to the site, log in (enter a login and password) and click on the name of this course.

Here is a summary of all icons representing various editing tools (table 4.2):

Table 4.2

Icons for Course Editing in LMS Moodle

Icon	Appointment	Explanation
		Selecting and adding an informational resource
		Choosing and Adding an Interactive Element
	Edit	The button translates to the edit mode of the resource or the course item
	Help	The button calls the help file in the popup window
	Open / Hide	Buttons activate / deactivate this element or course resource. At the same time, these printouts indicate whether this object is available to course listeners. In order to close the audience to this object, the teacher should click on the «open eye»
	Move to the right move left	The «Move to the right», «Move to the left» buttons allow you to «mirror» this object as a format element.
	Move up Move down	The buttons «Move Up», «Down» can perform a «reflection» of the object as part format
	Move	The «Move and» button allows you to move this object without copying to any other module.
	Move here	The place where the object is transferred is marked as «Move here»
	Remove	Allow irrevocably (there is an intermediate deletion message with the question: «Are you sure you want to delete this object?») To delete the given object
	Current module	The «light bulb» image shows that this electronic module is current
	Expanded module	One rectangle shows that the entire course module is deployed
	Modules are folded down	During Mr. and pressed him, modules and fold 'is a double rectangle. Accordingly, the deployment of modules is carried out by clicking on this image

Let's start our work on setting the basic course parameters. In the left column, in the «Management» block, click on the «Options» link. Download the «Edit Course Settings» page. Let's consider the settings / settings of the course (table 4.3).

Table 4.2

Basic course settings in LMS Moodle

Basic	The block contains the basic settings of the course
Full name	This title must be clear to the students and, if possible, describe the content of the course. That is, do not write phrases such as «Problem Solving». Precisely define the subject area
Short name	The shortened name of the course, which consists of one or two words
Course ID	The service floor is filled by the site administrator
Brief description	The text of the description will be visible to visitors to the site when viewed in the course list. Has the character of the course developer's appeal to the potential students (content, advertising)
Format	Selector that contains: - «Calendar». Course with time schedule, broken up for several weeks. - «Structure». The course consists of several sections, the topics – without the need for a calendar. - «Community (forum)». The course contains one general discussion forum.
Number of weeks / topics	Number of separate sections (weeks) of which the course is composed. If during the development of the course there will be a lack of the previously set value – then it will be possible to increase (or decrease) it later.
Course start date	Important only if the chosen calendar format is the beginning of the first week of training
Displays hidden sections	In the process of development, some sections can be hidden from students. In this case: - In unfinished form. The student does not see the content, but, in the presence of a small gray area, understands that the section exists. - Completely invisible Student sees section and does not provide its available Amount
News	Numeric selector from 0 to 10. If you select 0, then the course will not have a news forum. If any other number – that news forum will be created and will display the selected number of recent news
Show ratings	Teacher can present ratings, but does he want to show them to students? Options: Yes or No
Show activity report	The teacher always has a report on the activities of students in. Do I need to show a report for each student? Options: Yes or No
Maximum file size	Specifies the maximum size of the file that can be downloaded from the site to the site
Is this a metacourse?	The metacourse contains general teaching materials that are useful for several other courses in one subject area. Students of several courses will have access to the information in the order of its association in the metacpc

Subscription	The block contains the settings that regulate the process of recording students to the course
Recording method	Method for recording students on a course. By default, any user registered on the site, has the opportunity to independently enroll in the course chosen by him
Default role	Selector: «Default Site (Student)», « Non-editing teacher «,» Student «,» Guest «
The course is available for writing	Determines whether students can independently be enrolled in a course. Options: o No. Hence, the teacher himself will record students at the course. So. Students can independently enroll for the course at any time. Period. Students can be recorded, but at a certain time
Initial date	If selected: Course is writable = Period, then you can specify the start date of the recording. If the date is not specified, then you can record it on any day until the end date
End date	If selected: Course is available for recording = Period, then you can specify the end date of the record. If the date is not specified, then you can record it on any day, n the starting date
Duration of training	You can choose «unlimited» or specify the term of study in days
Notification of graduation	Provides the opportunity to send e- mail to students, in connection with the instruction on education or registration
Notify	Tell students about the upcoming completion of the course. Options: Yes or No
Notify students	Report to students about completing the registration. Options: Yes or No
Threshold	For how many days in advance to send an e- mail
Groups	Students recorded on the course can be divided into groups. And all the training elements of the course have settings for working in groups. In this block, and general rules are defined
Group method	Options: No groups. Individual groups. Students in each group work independently and do not know about the existence of other groups. Available groups. Students in each group work separately, but see the results of their activities and other groups
Forcibly	The group method determines the condition for the entire course. There are two options: o Yes. At each training element of the course, the selected group method will be applied. No. The developer can change the conditions of the group method on different educational elements
Accessibility	The block defines the rules for students (students) entering the course
Code word	Serves to restrict students' access. If a code word is given then students will need to enter it when they first enter the course
Guest access	Guest is any visitor to the site that has not been logged in. You can allow guests to go to the course and view public materials. In any case, the visitor cannot do any action, ie, leave a message on the forum or perform tasks and so on. Options to choose: Do not allow guest. Admit a guest without a key a. Allow a guest with a key
Language	The block defines the language of the program interface

Remark. *You can change the course settings later, as you upgrade it.*

4.6.2. Atutor

General information

The ATutor program (read «Etitor») is developed and maintained since 2001 by Greg Gay, Joel Kronenberg and Heidi Hazelton from the Adaptive Technology Resource Center, University of Toronto. The ATutor system is distributed on the basis of the GNU General Public License (GPL), which, in particular, allows you to freely use and modify the program. According to the accepted programs of this type of terminology, ATutor relates to management systems training material LCMS (Learning Course Management System) and Learning Management Systems (LMS) (Learning Management System). The program is user-friendly and differs from analogues with a simple and effectively structured interface. Considered program ATutor 2.0.3 which is the latest at the time of writing this guide.

Getting Started

The general view of the window that you will see at the first logon is shown in Fig. 4.37.

Figure 4.37 – LMS Moodle test course window

You are currently on the start page of the program. It allows you to log in if you are already registered in it, register – if not, and also help if you forgot your password. The ATutor interface is convenient and logical, however, and this, step by step, will be described further.

Registration

Registration of the user profile of the ATutor system begins by pressing the «Registration» button on the system start page. This will open a page for registration of the new system user profile (Figure 4.38).

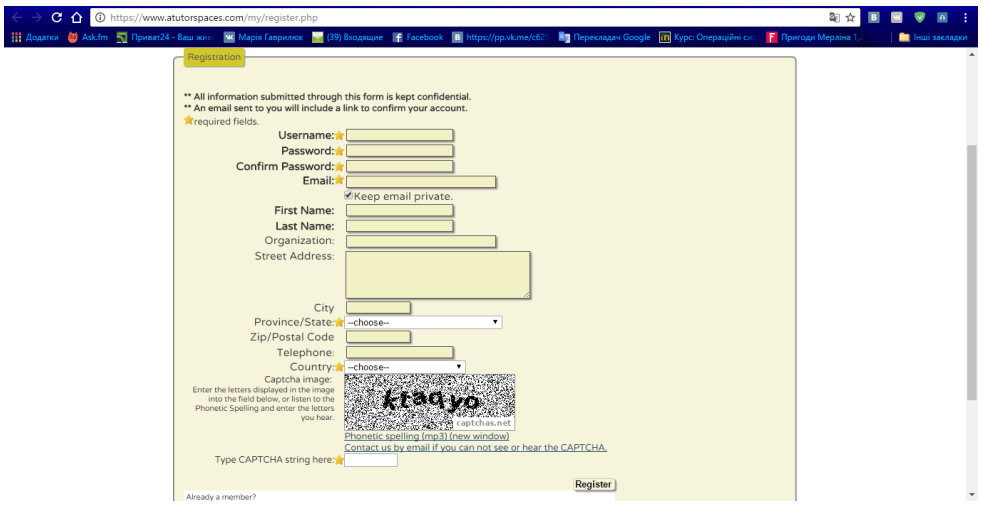


Figure 4.38 – User registration page

Your new user profile on the AUTUR system has been created, but not yet activated, so you will not be able to log in at this stage. What's next? After registering, you must log in to the email address you provided when registering (use a browser or email client for this) and read the letter from the remote training server. If you agree to the Rules, then to activate the profile, you must click on the link specified in the letter. After that, your profile will be activated and you will now be able to sign in through the login page (Figure 4.39).

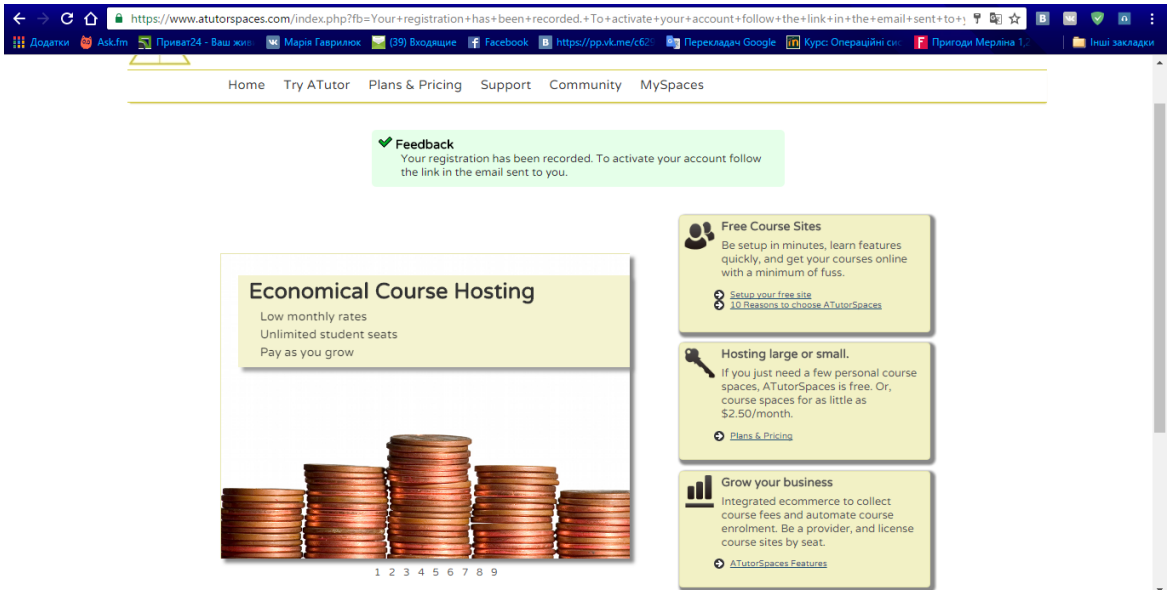


Figure 4.39 – Confirmation of registration

Getting the Rights of an Instructor

Users who work with the ATutor system may have two levels of access to its resources: student rights and the rights of the instructor (teacher / lecturer). After registering and activating a profile, the user of the system receives the student's rights. To get the instructor's rights to create and manage training courses, you need:

1. Sign in using login and password.

2. Click on the «Request Instructor's Instructions» tab in the «My Courses» section.

3. Enter a brief description of the course scheduled for creation in the field that appeared (Figure 4.40).

4. Press the «Send» button.

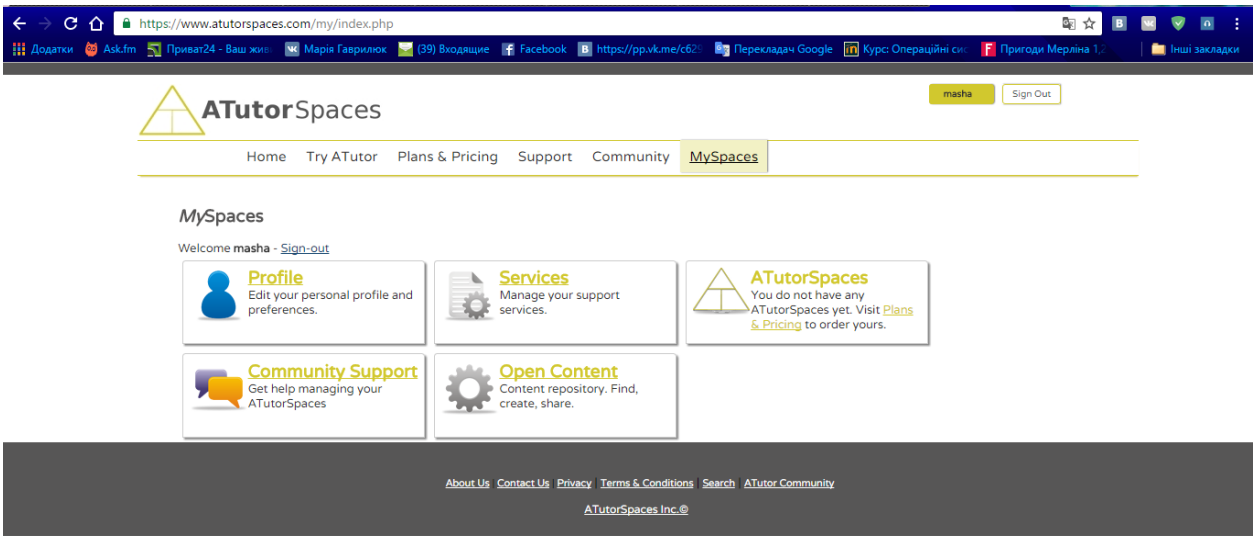


Figure 4.40 – Form for requesting instructor's rights

A letter asking for the instructor's rights will be sent to the system administrator. After checking you will get the rights of the instructor. Instead of the «Request Instructor's Instructions» tab, in the «My Courses» section, a bookmark will appear with the words «Create a new course».

Creating a course

The course has the following properties:

1. Title. Subject according to curriculum or work program.

2. The main language. The language that will be set to display the interface elements.

3. Characteristics. Brief description of the course.

4. Specialties. Ciphers and names of the directions (specialties) for which the subject is assigned.

5 Course name in URL. Name of course in the Internet-link that the course will be available (by default assigned digital ID).

Category 6. Choose from the list the name of the department, on which the discipline is fixed.

7. Export of the material. Allows students to download course materials to their computer and then use them in the format of an electronic textbook without going to the Internets. The following options are available:

- not available on any page. Students will not be provided with special tools that would facilitate the storage of course materials on their computers;

- only available on top-level pages. It is possible to save only sections and sections, with all subdivisions;

- is available on every page. Students will be able to keep any units or course pages individually, without taking into account its overall hierarchical structure.

8. Posting ads. Allows you to post annotated ads through the RSS (Rich Site Summary) system. Enable if you plan to regularly post important ads.

9. Access By access, courses are divided into:

- Open. Courses with this level of access can be viewed by all users of the system regardless of the registration in it. At the same time, it is not obligatory to enter the system under its own name or to register on the course.

- Protected Available only to system users registered in it. It is necessary to enter the system, but to be registered on the course – no.

- Closed. Available only to registered users of the system provided that you confirm their eligibility for the course. Sign in and sign up for the course.

10. Date of publication. Allows you to set the date from which course the course will be available / closed for viewing by other users. This is useful, for example, if you are preparing for the next semester.

11. Banner. Text (slogan or phrase phrase) at the top of the course home page.

12. Initial filling. Determines whether to create the initial course filling the template or back up of another course at once. Using the template will make it easier for you to orientate, where and what material to place.

13. The copyright notification field. The entered message will be placed at the bottom of each page of the material.

14. Icon. Select the icon for the visual identification of the course in the My Courses list.

All these properties can be edited as needed when you create a course. To complete, you need to click on the «Save» button.

4.7. CONDUCTING VIDEO CONFERENCES AND WEBINARS

4.7.1. Instructions for Joining a Webinar Based on TeamViewer

Webinar (*from Web Based Seminar)* is a seminar and via the Internet in real time interactivity and the possibility of head and listeners.

Videoconference is a telecommunication technology that provides simultaneous two-way transmission, processing, transformation and presentation of interactive media at a distance in real time using hardware and software computing. Video conferencing is one of the types of Groupware, a software for interaction between people who work together on one issue.

To participate in a videoconference, you need to have:

1. High-speed network connectivity the Internet.

2. The installed TeamViewer software.
3. Conference ID: **m..-... -...** (will be notified).
4. Headphones, microphone.
5. Webcam (optional).

Software Installation

1. Download TeamViewer.
2. Unpack the archive.
3. Install the program:

- Run executable file *TeamViewer_Setup_ru.exe*
- When you start the program, you will have a window in which you need to select the option «Personal / non-commercial use « in the section «How do you want to use TeamViewer? « (Figure 4.41).
- You need to wait a little time to install the program.
- After the installation is complete, the shortcut for the installed TeamViewer will appear on your computer's desktop.
- And then TeamViewer will automatically start.

No configuration is required.

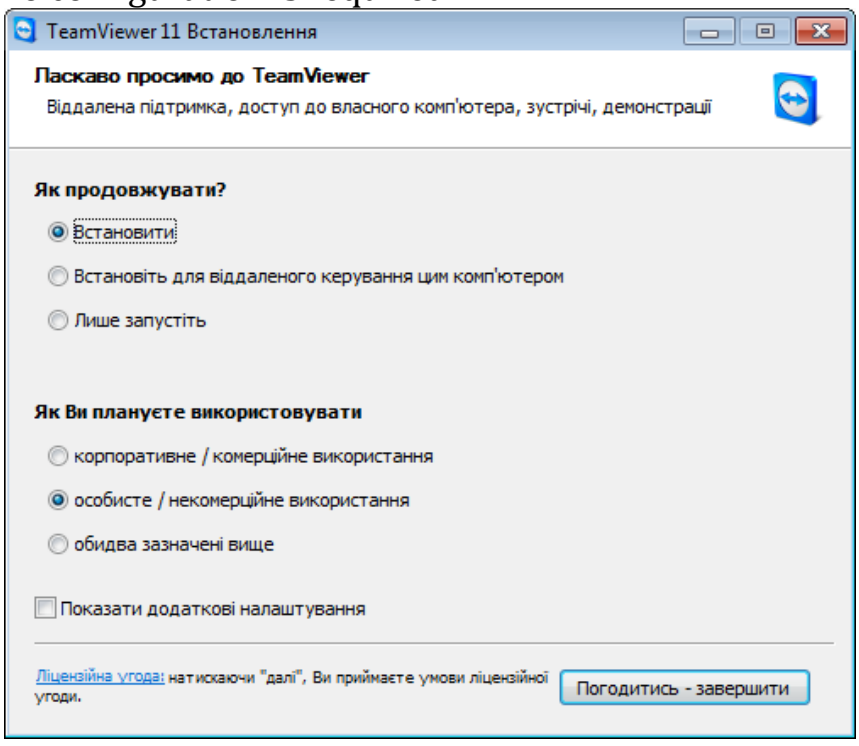


Figure 4.41 – Installing TeamViewer

Joining Videoconference

1. Connect your computer to the Internet.
2. In the running TeamViewer window, select the «Conference» tab. In the ID- conference field, enter **m..-... -...,** and in the «Your Name» field enter your real name, name and area of residence so that you can be identified (Figure 4.42).

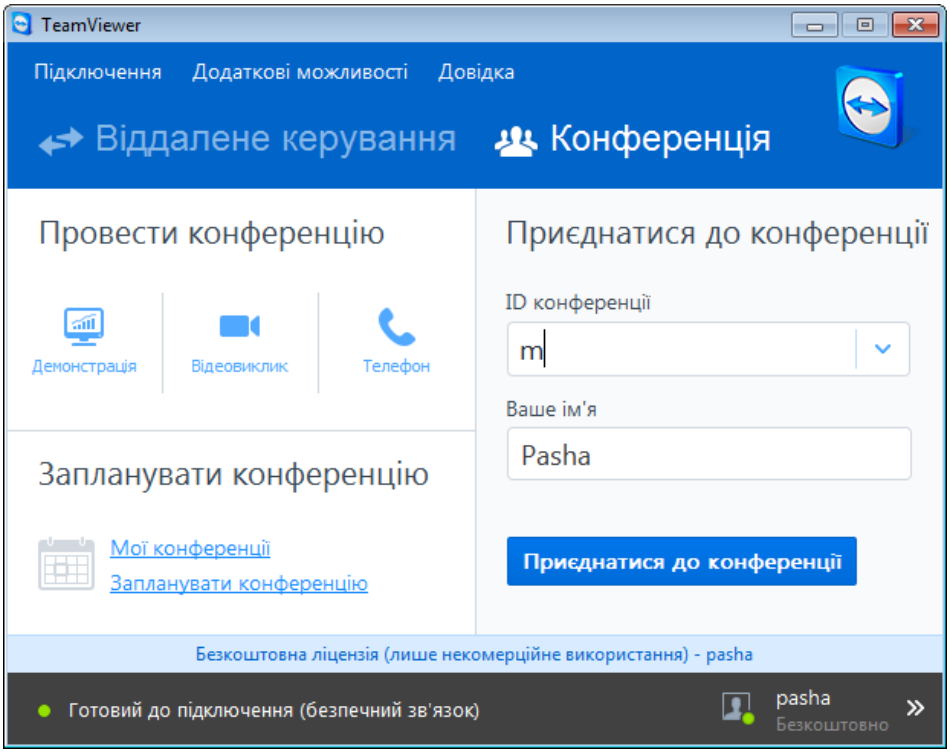


Figure 4.42 – Join the conference in TeamViewer

3. Be sure to check out the program in advance (for example, the day before the videoconference). To do this, enter the conference ID. If you do this not during the videoconference, but earlier, then you should have a window showing the impossibility of connecting.

4. On the day of the videoconference, when you enter the conference ID, a custom panel will appear in the Wa. IN It select the icon «Chat» to be able to chat online with a text message. Select the Voice over IP protocol icon and turn on the microphone and adjust the speaker / headphone volume. The «Video» icon allows you to connect a webcam.

4.7.2. Organization of an On-line Conference in Skype Step-by-Step

After launching the program and authorizing, you will need to select registered users to participate in the conference. All contacts can be found in the left window, and more detailed information is located on the right. In order to create a videoconference in Skype, all its members must be online. When you click on the «Group» button below the contact window, a new window will appear. He needs a left mouse button to «drag» the desired users. You can also add users by clicking the «Add people» button and finding the contacts you want in the list.

You can start a videoconference in Skype:

- on computers running Windows;
- on Android devices;
- on iOS devices;

- on Mac OS computers;
- in Skype for the web.

You can join a videoconference on any device. The conference can be attended by up to 25 people (including you).

All participants of the conference will need:

- Hi-Speed Internet;
- speakers and microphone (in mobile phones, tablets and most laptops they are built-in);
- Built-in camera for video calls (or webcam if you have a desktop computer without a built-in camera).

If you are not able to create or join a conference, check that your system or device meets the required requirements.

Requirements for creating a video call session

The very process of creating a videoconference in Skype is easy. At the same time, it requires certain conditions:

- beautiful, modern personal computer;
- Internet speed is at least 1 Mbps.

To create a videoconference, it is best to use a computer with high connection speed and good system parameters. This will help to avoid interruptions in the connection, and the process of communication to make it as comfortable as possible.

4.7.3. Organization of a Webinar on YouTube

Blogs, social networks, forums – these are some channels promoting your first person or the sale of goods Intern ETI. But if you like to work directly with the audience, then you can always organize a webinar, tell and show how to do it quickly, qualitatively and free of charge.

Preparation

Connect to Google +, and you will be given access to all the necessary features. In addition, you no longer need to worry about the number of searchers, bothering ads and spending, especially if you rarely do similar activities. To begin with, I'll show you how to create, customize and run webinars in Hangouts.

Note. To authorize Google +, you need an account on Google, as well as Google Apps, if you want to use your own domain. If you do not have all this, then you need to start with signing up for Google.

1. Create a Webinar on Google Hangouts

First of all, you need to create a *Hangout on Air* on your Google+ page. To do this, hover your cursor over the side menu where you want to choose Hangouts.

You can start Hangouts either from your profile or from a page in Google +. On the main Hangouts page, you'll see 3 tabs: *Tape. Live and Video Meetings.* As in the film, and tab *Cams* you can see the blue button that will start a video call in a live broadcast. Click on it to start creating your own event.

A white window will appear in front of you, in which you will need to make adjustments. Enter the name of the webinar, description, and specify whether to start the broadcast right now or postpone it for a certain period of time. If you want to schedule the broadcast time, be sure to set the correct time zone, date and time, and specify the duration. At the very end, you can specify whether the webinar will be public or access restricted to a particular audience or your circles in G+.

When finished, click the green Share button.

Note. If this is the first video call, Google will ask you to confirm your account on YouTube. This will allow you to share and download the webinar on the channel on YouTube. After recording the video, it can also be edited and downloaded.

2. We complement the webinar with applications and trailer

Consider organizing a webinar as an event that you should like and remember your audience. Stream could be adjusted by using templates or events or by uploading video or photo screensaver that can be viewed prior to the event.

Next, we recommend activating 2 very important applications that should be on every on-line event: *Q & A (FAQ) and Showcase.*

- The Q & A application allows viewers to ask questions and interact with you in every possible way. You receive questions from people, respond to them, and mark the ones that are answered.
- The showcase allows you to send links to articles, sites, products and other on-line content. If you are selling something, then this is an excellent opportunity to redirect people to free resources, landing pages or provide them with the necessary information.

3. We Invite Viewers to the Webinar

Broadcast can be embedded in other sites using the Embed option (embedded video).

Once you are satisfied with the page for your webinar, it is time to invite viewers. There are three ways to do this:

1. Invite people manually using the «Invite More» feature (at the bottom right of the page).

2. Share a direct link to the YouTube page.

3. Embed live stream or page on your site.

Let's say you've done a lot of work promoting your webinar and inviting people. Once a sufficient number of spectators is set up, it will be possible to prepare for the broadcast.

4. Holding a Webinar

So, you are ready to host a webinar and present your ideas to the audience. In order for the live broadcast to be successful, you need to check the settings and performance of all the necessary programs.

Click on the blue Start button. It will launch a new window in which you can change the real-time broadcast settings. Google will suggest you to invite guests to a conference or a video call (you can invite up to 10 people). If you just want to host a webinar for your audience, then you can skip this step.

To change the default settings or add new apps, hover your mouse over the sidebar to the left to view available options.

Try to reduce the number of open windows in order not to get confused.

5. Edit and download the webinar entry on YouTube

You just made your first webinar with Google + Hangouts! If you want to share a recorded webinar with those who cannot attend, then go to the *Video Manager* in your YouTube account, find an entry there, and click on the Edit button. Here you can add audio tracks or annotations, as well as record subtitles. Edit videos from your Video Manager in YouTube.

4.8. WORK IN EDMODO AND NICE SYSTEMS

4.8.1. Work in the Edmodo System

Edmodo is an educational site, which is a social network such as, Facebook, allowing communication of teachers and students band together around learning process.

For students:

1. Let's go to the main page https://www.edmodo.com. And choose «I'm a Student» profile.

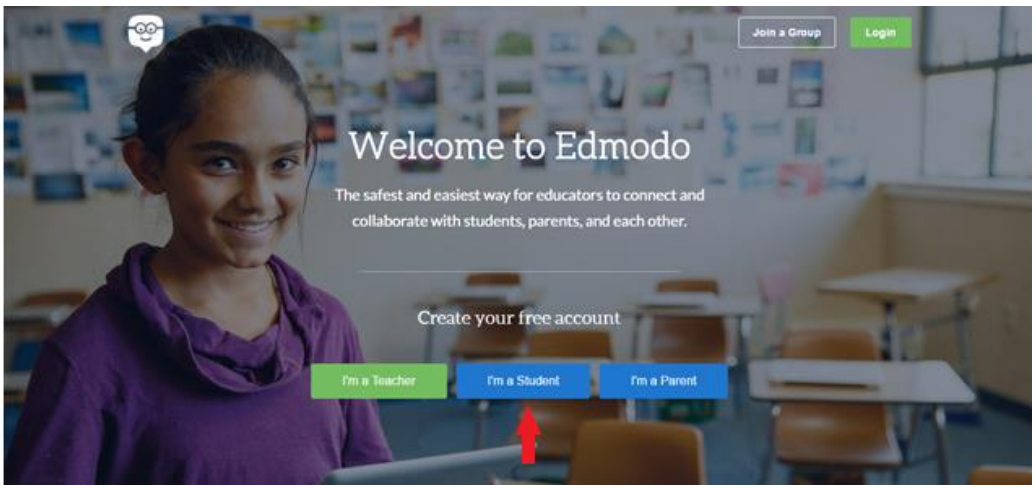


Figure 4.43 – Edmodo platform homepage

2. Register on the site. Enter the group that your teacher recognizes (Figure 4.44).

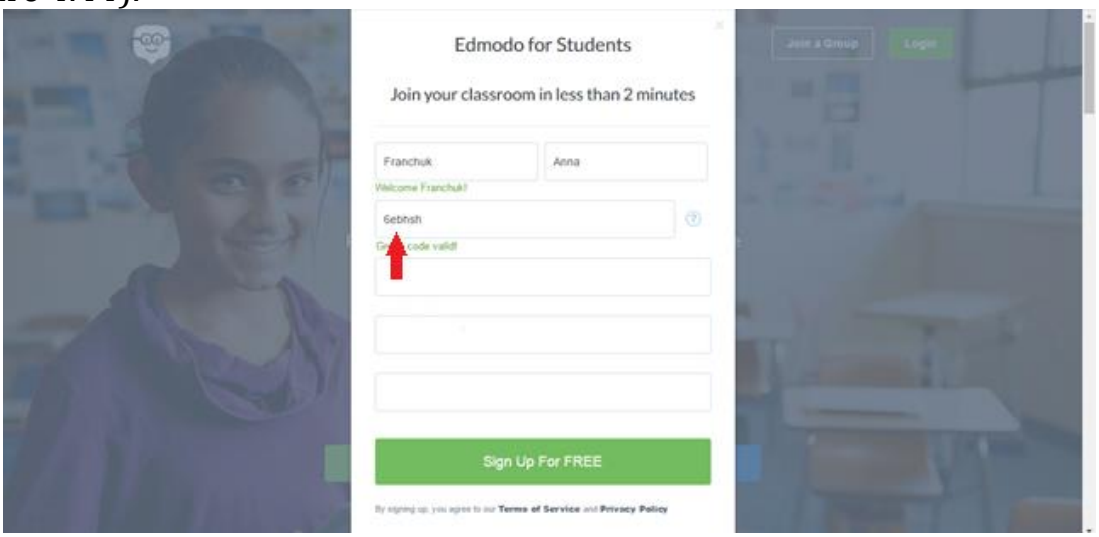


Figure 4.44 – Registration on the Edmodo platform

3. Come in with login and Latin letters (more than 6). If ' I vytsya inscription Username taken (named' username accepted) go on, if not – change login, so exists. Think of a password with Latin letters and numbers (more than 6). It is not obligatory to indicate the electronic mail. It is needed to recover the password and messages (Figure 4.45).

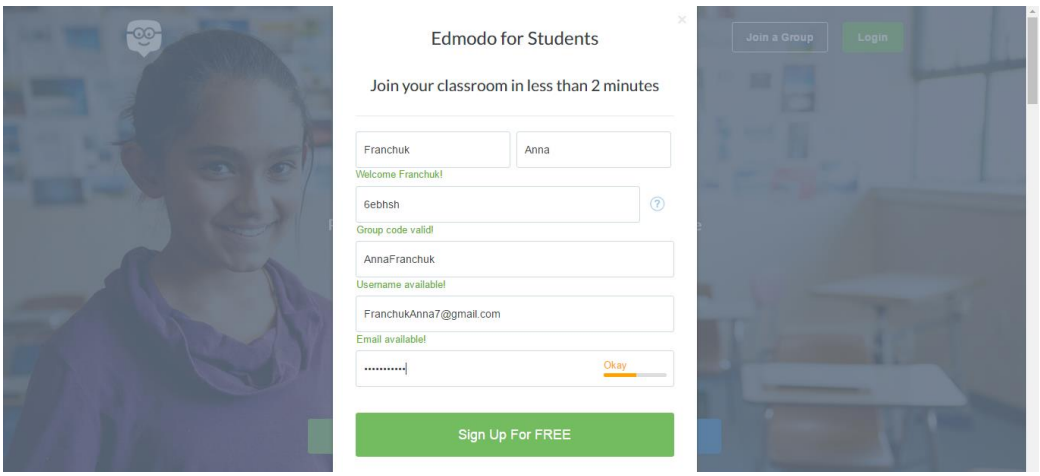


Figure 4.45 – Continued registration on the Edmodo platform

4. Your profile was created (Figure 4.46).

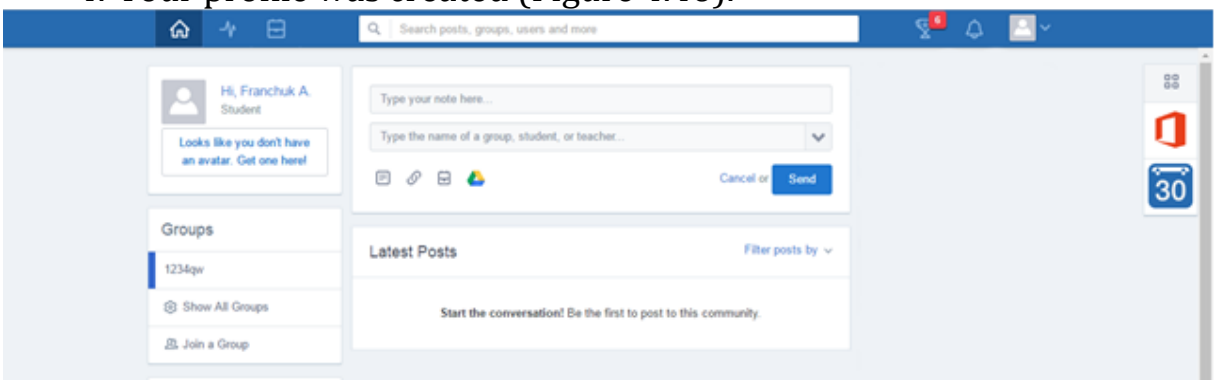


Figure 4. 46 – Succeeded the system after registration

5. You can go to other groups (Figure 4.47).

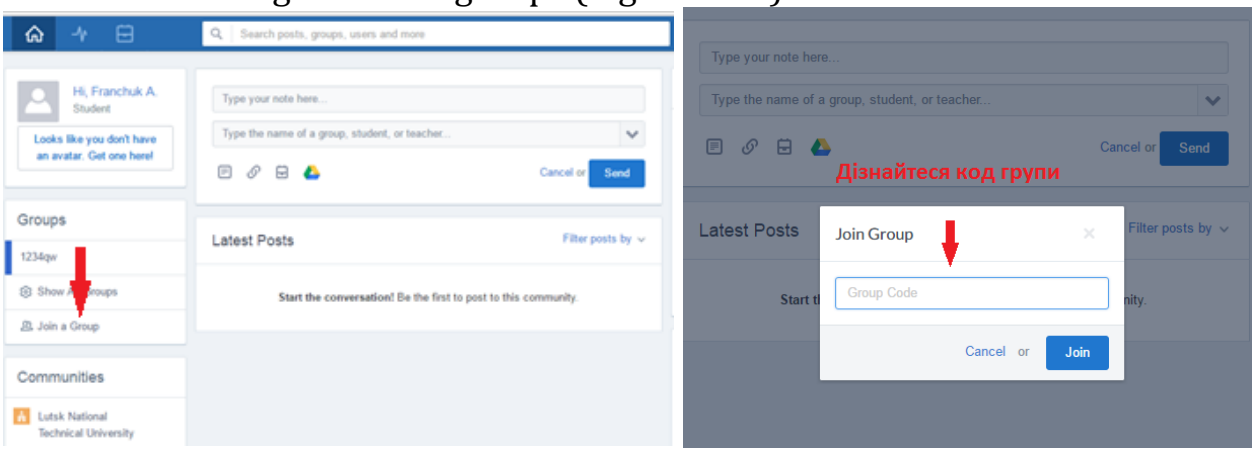


Figure 4.47 – Joining other groups

For teachers:

1. Register on the site.

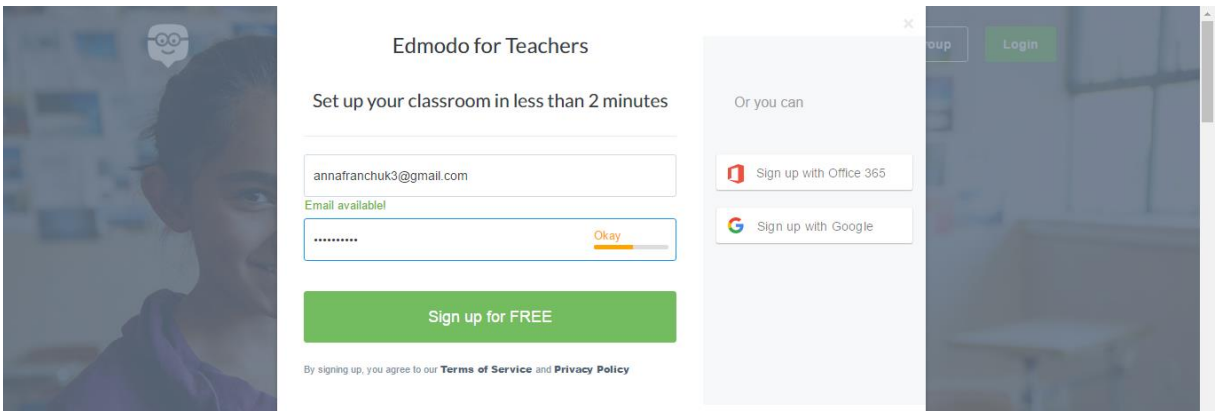


Figure 4.48 – Registration for the teacher on the Edmodo platform

2. We select the training from the accumulator (Fig 4.49).

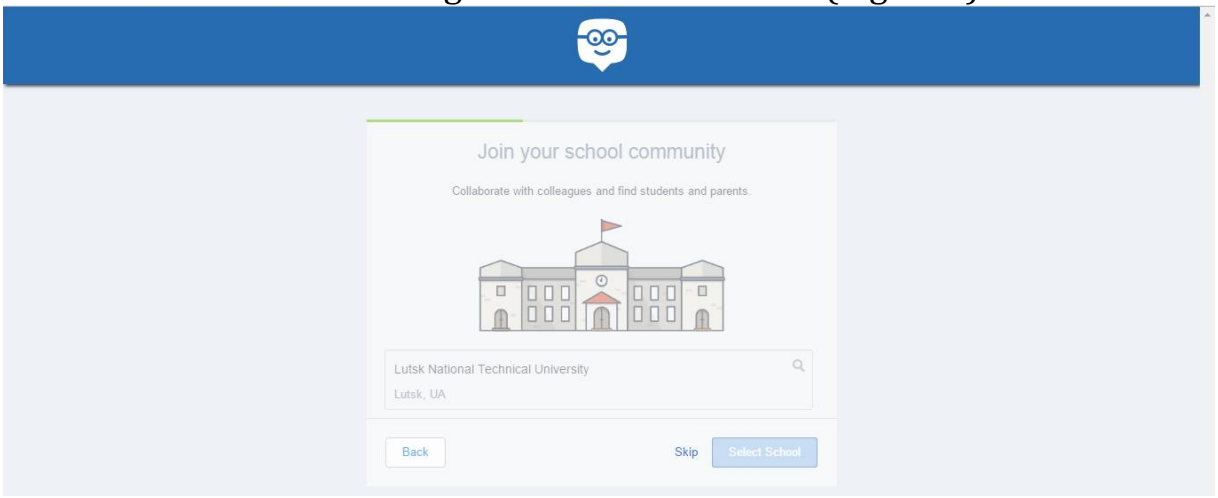


Figure 4.49 – Choice of educational institution

3. Your profile is created (Figure 4.50).

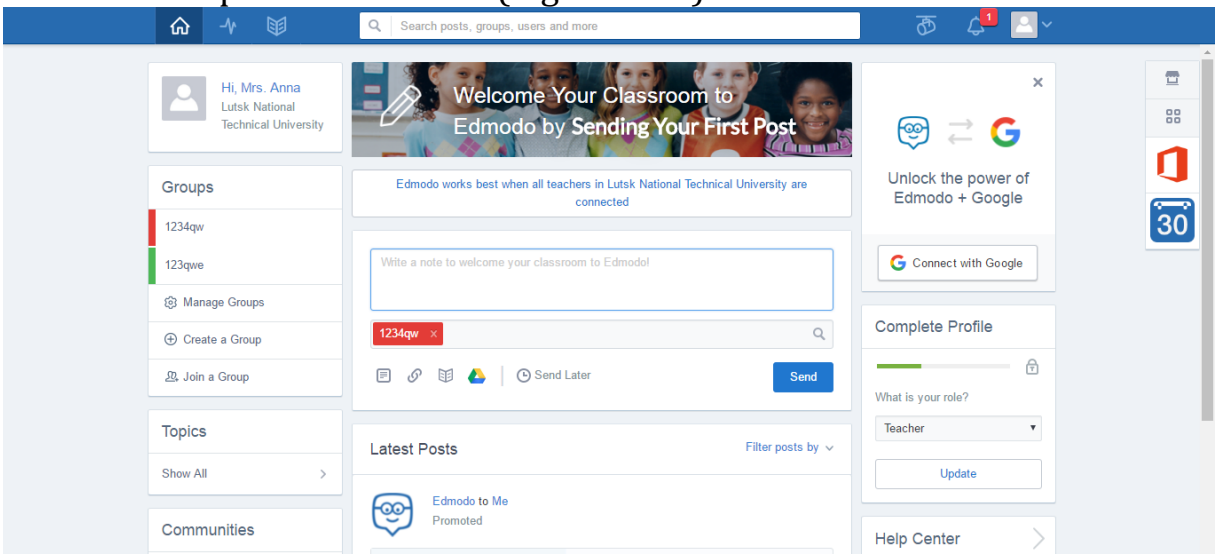


Figure 4.50 – Created user profile on the Edmodo platform

4. Create a group (Figure 4.51).

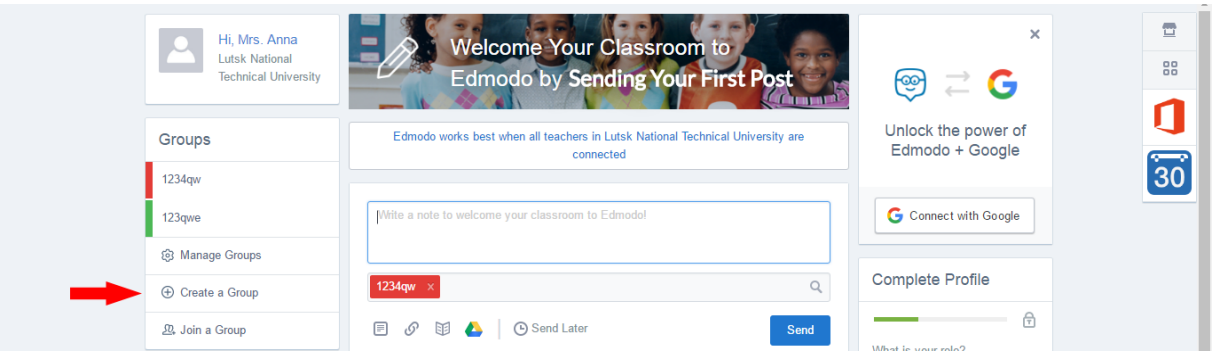


Figure 4.51 – Creating a group on the Edmodo platform

5. Asking claim cookie domain groups (Fig. 4.52).

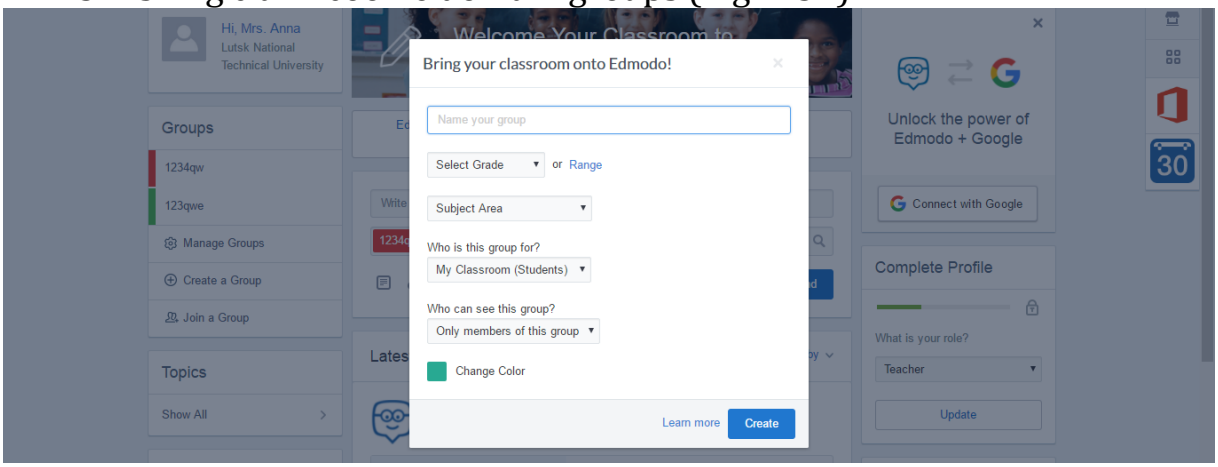


Figure 4.52 – Specifying group parameters

6. Distribute the group code to the students and, if necessary, change the parameters (fig. 4.53).

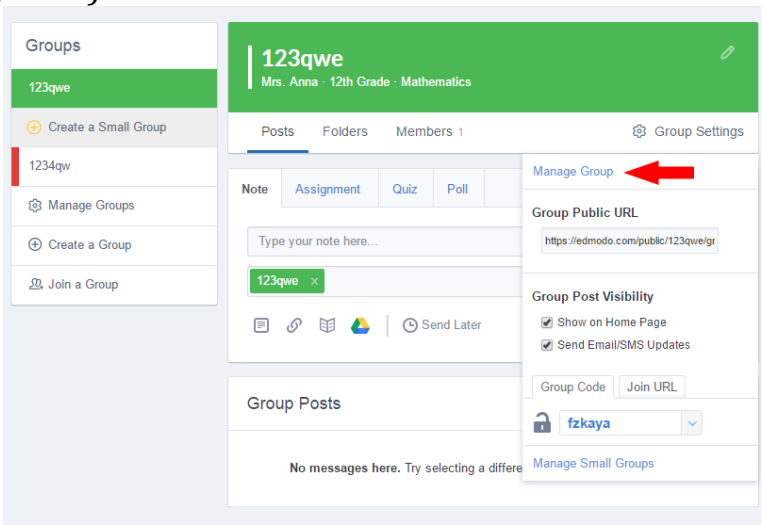


Figure 4.53 – Changing group settings on the Edmodo platform

7. Edmodo provides storage and file sharing services. You can create thematic collections and share it with students and colleagues (Figure 4.54).

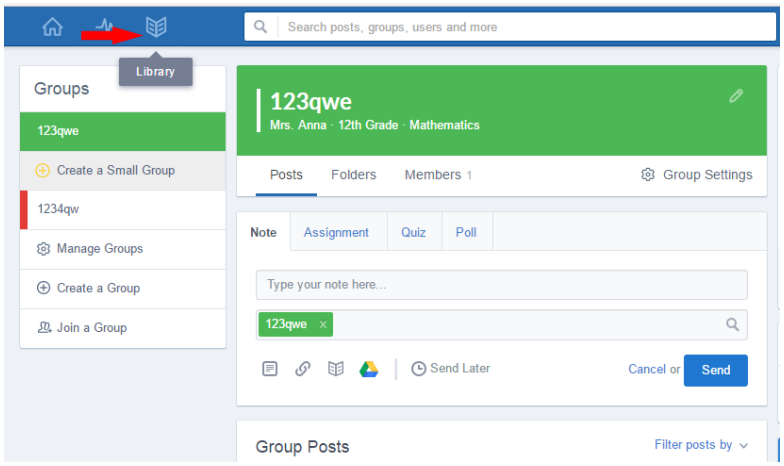


Figure 4.54 – Creating a collection on the Edmodo platform

8. You can download files of different formats and links to the library (see Figure 4.55).

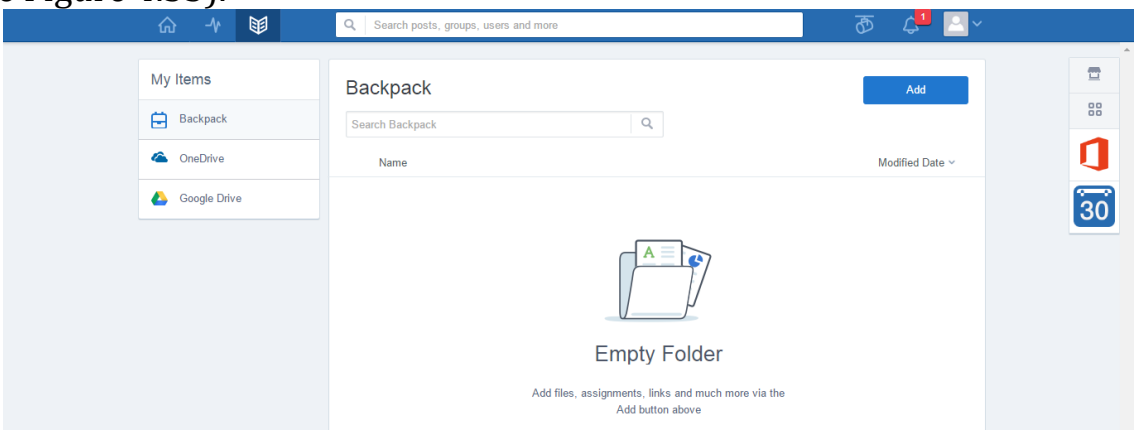


Figure 4.55 – Download files to the library

9. Edmodo provides the ability to create Microsoft Office files directly in your account (see Figure 4.56).

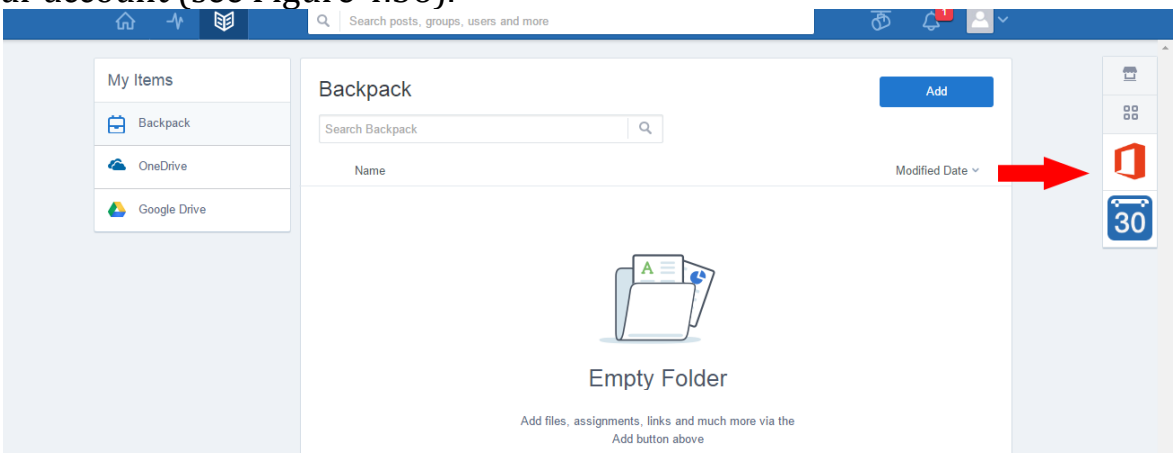


Figure 4.56 – Creating Microsoft Office files on the Edmodo platform

4.8.2. Ning

Ning allows any user to create personalized social networks that can be used both for lecturers and students.

1. Go to the main page (Figure 4.57).

Figure 4.57 – Ning platform homepage

2. In the «WHAT IS NING?» We can find the following sections « Customer Stories « (Customer Stories), « Resources « (resources), « Pricing « (Tsinoutvo Rennes), « Blog « (Blog) (Fig. 4.58).

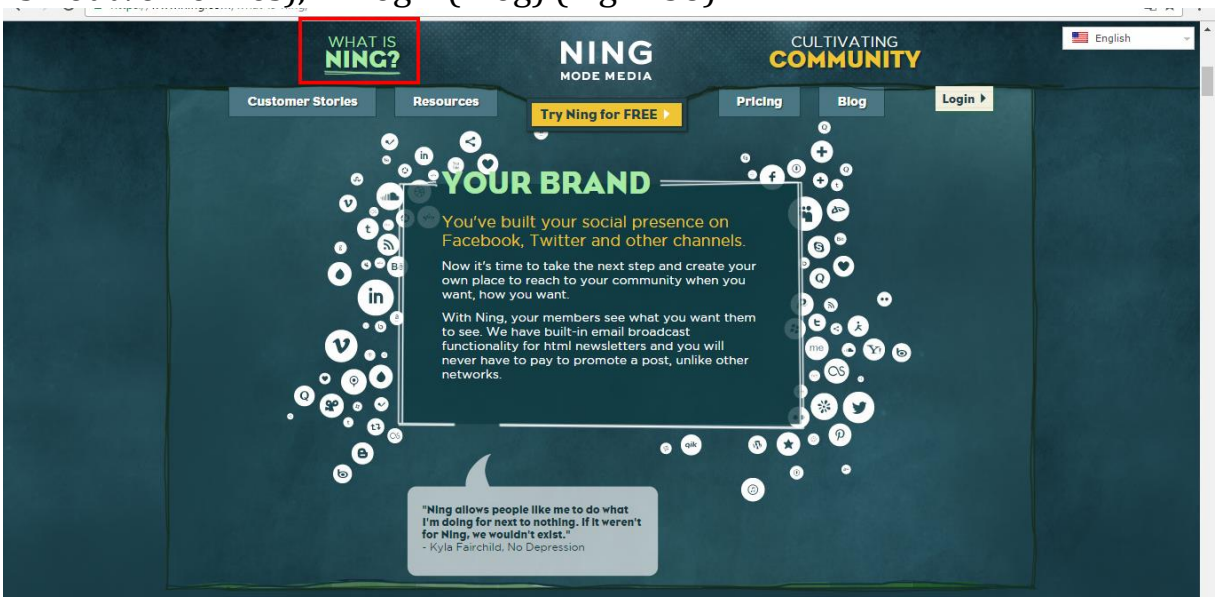


Figure 4.58 – WHAT IS NING?

3. To try Ning free press «Try Ning for FREE».
4. Choose the optimal plan for us (Figure 4.59).

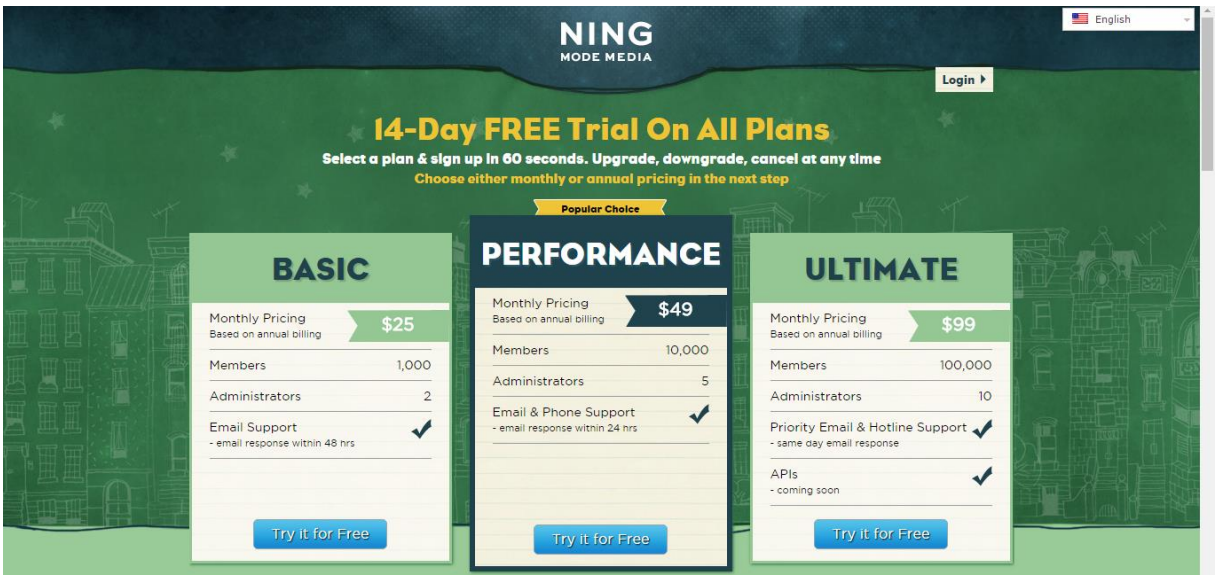


Figure 4.59 – Choosing the best curriculum

5. Sign up on the site (Figure 4.60).

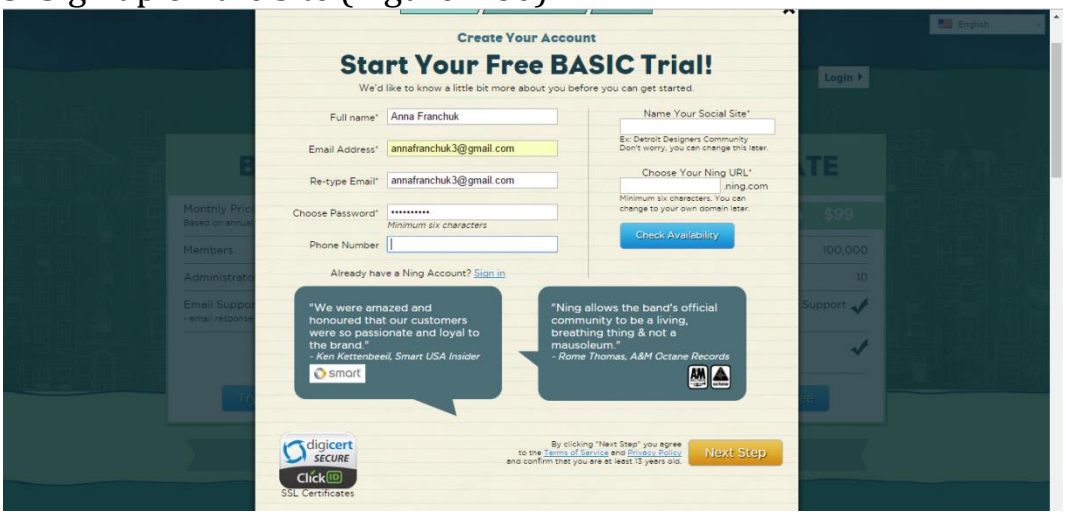


Figure 4.60 – Registration on the Edmodo platform

6. Creates my own account (4.61).

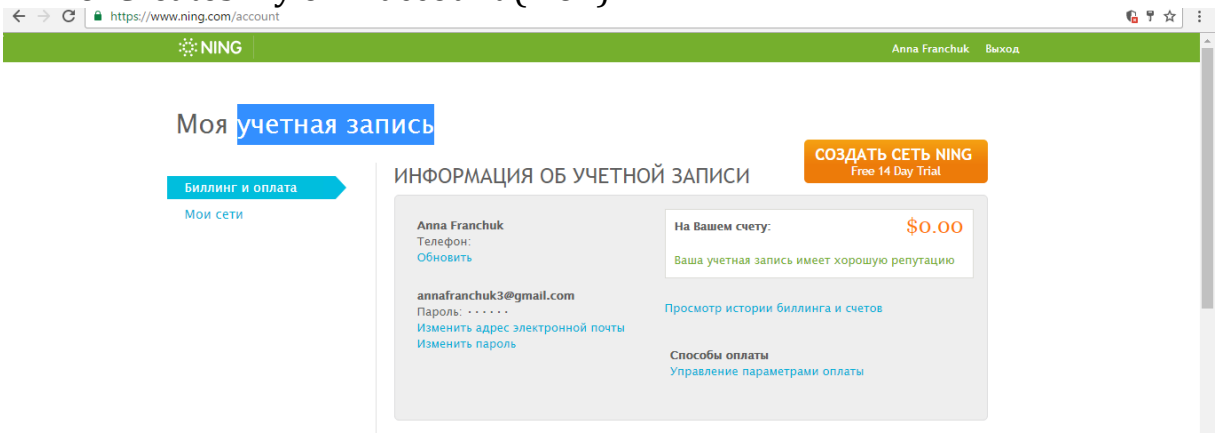


Figure 4.61 – Signing in to Ning

7. To create your new network, enter its name, subdomain, then determine whether the network will be closed or open to anyone to read. Next,

describe the network with tags and write a short description, select a language and add an avatar (Figure 4.62).

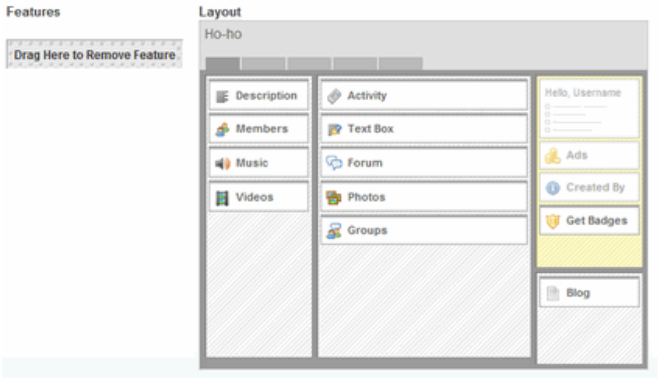


Figure 4.62 – Network, created on the platform Ning

Control questions

1. Give recommendations for creating an effective E-learning course.
2. What do you know about finding relevant information online the Internet?
3. Describe the systems of learning control Trello and Asana.
4. Give examples of the use of gymnastics for training.
5. What are the platforms for learning programming, etc. is used gamification you know?
6. Tell us about MOOC-system of Prometheus and Coursera.
7. What platform conducts online training only with usage of video lectures?
8. Give the characterization of LMS Moodle and Atutor.
9. Explain the difference between a videoconference and a webinar. Give examples of video conferencing and webinar systems.
10. What do you know about social networking sites?

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The manual deals with the educational material, which will facilitate the formation of the knowledge and skills necessary for the successful use of media technologies by teachers of technical disciplines in their professional activities, as well as scientists and workers in different sectors of industry. An important place is given to outlining the practical aspects of the use of media technologies, since they play an essential role in people's lives in general, and in the educational process in particular.

The publication is intended for undergraduates, master students, graduate students, and pedagogical and scientific-pedagogical workers of higher educational institutions of Ukraine.

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