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Digital technologies for organizing an independent work of students

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***Abstract* — The ways of use of digital technologies in activity of the higher school, the history of development of the telecommunication environment in domestic education are considered in this article. In the historiographic review top trends in synthesis of experience of use of IT technologies are noted: from assessing a contribution of computer science teachers to inclusion in the process of teachers in other subject areas, from use of private digital methods to understanding the prospects for the development of domestic education as part of its digitalization. The purpose of work consists in attempt to prove expediency of use of digital technologies in formation of common cultural competence and historical worldview of a future teacher. The study methodology is to use digital technologies to organize students' independent work in the process of mastering the "History" educational subject. Results of the study. Attracting students to prepare competitive local history projects using telecommunication tools. Conclusions. The formation of a digital culture of students requires, first of all, the readiness of the faculty to use new methodical receptions, to increase their own digital culture. It must be remembered that no technical, technological methods can bankrupt the idea of humanistic principles of education.**

Keywords — competence, teacher, education, telecommunication technology, digital culture.

I. INTRODUCTION

The introduction of digital technologies in the educational process at all levels is not the future, it is today. Of course, the effectiveness of new educational technologies depends on their consistency. Affordable education for residents of all regions of our immense country is not achieved by introducing a single state examination, but by the openness of the information environment.

In domestic education, digital space began to take shape in the 1990s, initially, on the basis of secondary schools which were pilot sites, students in universities who studied computer science and mathematics, some engineering areas, were immersed in this environment. IT-technologies began to be widely used at all stages of domestic education in the 21st century. The practice of forming digital schools began to spread in large cities, so teachers had to prepare for work in the modern information space not only in the study of computer science, but also in other subjects.

Lately, there have been many works devoted to the synthesis and popularization of digital technologies in the educational process. The situation with the introduction of various digital technologies used at the stage of general secondary education was analyzed in detail in the article N.I. Anurova [6]. The paper considers a joint problem-search work of a teacher and a student is considered in the context of the "competence multilevel approach".

High school teachers cannot ignore the digital educational environment, because at the previous stages of education it was widely used not only in computer science classes, but also in other subjects, our task is to preserve the continuity of information communication, to motivate the educational and research activity of students, both already accumulated information users and new information producers. Digital resources provide the formation of all types of activity of future specialists, provided for by the federal state educational standard.

Understanding the importance of digital technologies in the domestic educational space refers to the turn of the XX – XXI centuries, the time of widespread digital infrastructure in educational institutions. The pioneers were computer science teachers who shared their accumulated experience of using IT-technologies in organizing students' in-class and independent work [8, 9, 13].

Teachers of various subject areas joined the discussion of the scientific and methodological basis of digital environment modeling by the end of the first decade of the XXI century [16]. The desire to synthesize the experience of using digital technologies accumulated at different levels of education and in different subject areas, to predict the prospects for the development of domestic education has resulted in the organization of large-scale events: forums, conferences, seminars of international, All-Russian, regional level [7, 10, 11, 12, 15].

The tendency to reveal the universal and intersubject capabilities of digital technologies is international in nature, however, like the educational environment itself. This is evidenced by study topics in the field of education, both in Russia and other countries of the world. Scientists and practician teachers analyze various means of increasing the effectiveness of learning, for example, the educational capabilities of social networks [1], digital tools of visualizing the information being studied [5], and others.

The studies aimed at understanding the educational technologies, with the help of which personal qualities and

professional competencies of any specialist develop without reference to a specific subject area are dominant in modern pedagogics [2, 3, 4, 17].

For a pedagogical university, of course, the educational technologies that contribute to the formation of a real TEACHER from a student, a professional who would comply with the slogan of the Ural Pedagogical University "To teach and to learn!" is a priority.

The ability to independently create a digital environment is something unreal for a particular subject teacher, but at the university level there is a digital environment for organizing distance learning and control: there are educational portals, the opportunities of social networks are used, etc.

One of the universal subjects which makes it possible to give a future teacher high moral and ethical qualities, erudition, ability to navigate in the social space is "History". Moreover, the federal state educational standard grant it a binding status, i.e. history teachers are faced with a very high responsibility in choosing the means of shaping the students' historical worldview.

The purpose of this work is to prove expediency of use of digital technologies, the separation of information components relevant to the formation of common cultural competence "the ability to analyze the main stages and patterns of historical development for the formation of patriotism and citizenship (CD-2)" in accordance with the current federal state standard 3+ in the direction of "44.03.2005 Pedagogical education (bachelor degree)" [14].

II. Research Methodology

Digital technologies in modern education make it possible to effectively form the competences declared by the federal state educational standard for a future teacher, both within the framework of the in-class and independent work of students. Digital space makes it possible to identify information resources, process and present them in in-class learning or research, publicistic and socially significant projects. Information technologies make it possible to motivate students by offering them to create the educational environment itself.

It is the project activity of the teacher and the student using information technologies that is relevant in the life of a modern higher school, provided that according to the curriculum, between 40 and 60% of study time is set aside for the classroom hours. The organization of an independent work of students should be well thought out, effective, one of its results should be the formation of a digital culture of a future teacher.

III. Results of the Research

Teachers of the Department of Russian History of the Ural State Pedagogical University regularly attract students studying on non-historical educational programs and profiles to participate in the competitions of the International Historical, Educational, Charitable and Human Rights Society "Memorial". In 2018, the topic “Man in History. Russia - XX century" was declared. USPU students were offered to turn to the history of their small motherland, to evaluate the role of their countrymen, relatives in significant, crucial events of the recent past of a large Motherland.

The work on the projects posed serious problems before the participants of the competition: to determine the topic, determine its relevance for the present, collect the material, present it in the most attractive form for the younger generation.

The contestants widely attracted Internet resources for collecting historical and local history material, used digital technologies for processing documents and photos from family archives, used various computer technologies to present the results of their work.

It should be noted the work of a first-year student of the Institute of Philology, Cultural Studies and Intercultural Communication Tatiana Anokhina, who, as a high school student, began a lot of local history work on collecting materials about her countrymen who survived the Great Patriotic War as soldiers, homefront workers or children. All of them had to go through military hardship which they should have told to descendants about. It is important that the voice of these ranks will be not lost in time. Many of the respondents soon died, i.e. the author managed to record the historical memory about the difficult years of their life. The author felt the importance of his work, which kept the collective memory of the residents of a small village Gorki, Sverdlovsk region, unfortunately, this was the last interview for some of the respondents in their lives.

The result of the work of Tatiana Anokhina was the memory book “Heroes of the Irbit region”, the collected materials will be kept on digital media for many years, the names of the inconspicuous characters will not go away with time.

A particular attention should be paid to the project of Alexandra Semakina, a first-year student of the Institute of Special Education, “The Heroes of My Family”, devoted to the heroic story of her father, with whom she was not destined to meet. Alexander Alexandrovich Semakin died during the second Chechen war. The author has collected a large source material: articles from newspapers, medals, military uniform, the Memory Book of the Chelyabinsk Region, an album with photos and presented the past of her country through the testimonies of loved ones very acutely and personally.

Participation in competitive projects allows students not only to get to know their roots better, turning to the history of the family, their city or village, but to get along far pages of the past, to feel their involvement in the fate of a large country. This emotional component helps to form professionally necessary personal qualities: empathy, humanism, civil responsibility, social activity, etc.

Participation in the competition allows the student and teacher to receive a particular finished product, and the competitive basis for his grade is a good incentive for work. The result of the competition was modest, but still the awards: three certificates of appreciation and four participant testimonies.

IV. Discussion of Results

The work on the project makes it possible to strengthen the basis of the future teacher’s digital culture, develop research skills, form professionally significant personal qualities and the general cultural competence of a future teacher aimed at developing the ability to analyze the main stages and regularities of historical development to form patriotism and citizenship planned by the federal state educational standard [14].

V. CONCLUSIONS

The domestic education system is one of the most conservative elements of the sociocultural structure, defining it as a "service sector" deprives it of its initiative, technologizes. On the one hand, such a vector of development is predetermined by the whole course of human development, the figure "rules" not only in the sphere of production, information, but also in the field of interpersonal communications. On the other hand, nothing can replace the effectiveness of human communication.

In this regard, it is necessary to improve the competence of the faculty of universities in the use of digital technologies in the organization of the educational process through the system of further vocational education. To support the grant activity of interdisciplinary teams solving the problems of generalizing and expanding the experience of creating and using the digital environment for mastering various educational subjects. More actively use the possibilities of distance sharing of the obtained research achievements through video conferences, webinars and other online events.

Forming the professional competence of a future specialist and especially a teacher, we should not forget about the education of an individual. It is necessary to give preference to such forms of work, in which digital technologies contribute to the development of a citizen and a patriot, a professional, who has priority goals and objectives for all participants in the educational process: for yourself as a teacher, students and their parents.

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