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Educational resources in historical research: of Kazakhstan in written sources of the XIX century

In article questions of creation of electronic catalogues and full-text historical databases of scientific and educational resources of the cultural heritage of Kazakhstan in written sources of the XIX century. These collections are separated from each other by time and the task is great, given the opportunity to analyze various aspects of cultural heritage of Kazakhstan in written sources. The comparison of these ensembles allows you to vividly reconstruct the peculiarities of the situation and to trace through their history the individual elements of the cultural heritage in written sources of that period in Kazakhstan. Development of a virtual environment through the organization of operational search, data processing and remote access to the required sources on the basis of new information technologies allow not only to raise the level of scientific research and education, but also to organize an efficient work to provide users with relevant information.

Key words: cultural heritage; written sources of the XIX century; electronic catalog and database; virtual library and corporate network; digital environment; electronic collections; methods, algorithms and program complex; historical full-text scientific and educational collections.

Informatization process deeply affected also modern historical science, led to basic changes of its information environment and structure. Emergence and accumulation of new types of the resources created on the basis of information technologies became expression of these changes. Historical information resources are various on a perspective and represent both products for scientific studying, and the products intended for historical education.

The certain experience of the solution of questions of classification and the description of historical information resources at the theoretical and applied level connected with discussion of problems of their creation, preservation, the description, documenting, cataloguing, the analysis, use, etc. has already been gained. However, complete complex systems of classification and standards of the description of historical information resources don't exist. The problem of their creation is caused by a number of factors, among which: considerable functional and substantial variety of resources; a considerable difference in the description of traditional and electronic resources, emergence of new types and types of resources; difficulty or impossibility of adaptation traditional (for example, bibliographic) attributes of the description to new types of resources; need of creation of the systems of the description suitable for various purpose (scientific researches, education, the account in the organizations of storage, cataloguing and documenting).

Current trends of informatization of public life of Kazakhstan, integrative processes in scientific and educational spheres have more and more broad access for humanists to computers and new information technology. The increasing development is gained by use of multimedia technologies, technologies of an optical identification of texts in researching cultural history, archeology, archive science, museum studies, in creation of electronic educational editions on national history. The state archives and libraries which work mainly in financial support of the state and in line with state programs of informatization of the cultural sphere of the country systematically are engaged in system work on preservation of cultural heritage.

Informatization of historical science and education in Kazakhstan has a positive tendency, however, it works extremely slowly. In our opinion, basic problems of it are lack of coordination of scientific activities for application the new information technologies in historical researches and historical education; insufficiently developed system of preparation of future specialists in the sphere of historical informatics and a certain inertness of the research associates preferring to be engaged with researching in traditional level; insufficient information culture of historical scientific community and weak promotion of opportunities of receiving essentially new results in the application of methods, means, techniques and technologies of historical informatics; the non developed using environment and use of the computer for printing of scientific works and searching information in local networks, libraries, archives and the Internet.

For today, one of the most actual problems of historical informatics are development of theoretic-methodological aspects and technologies of the source study analysis of electronic sources, placed in Internet networks. Not resolution of these source study questions leads to an exception of research space of source

materials. Requirement for historians of this case of sources and their judgment are a strategic problem of scientific and analytical ensuring processes of governmental structure, formation of historical consciousness in the conditions of a new information and innovative paradigm.

Source studying of electronic written sources on the basis of extensive source base of cultural heritage of Kazakhstan for previous years of formations scientific and educational historical and cultural resources for researches on the basis of interdisciplinary interaction historical and natural sciences in a domestic historiography are one of topical issues of a modern historiography of Kazakhstan.

The sixth priority Strategy of Kazakhstan in the 50 most competitive countries in the address to the nation, President of the Republic of Kazakhstan N.A. Nazarbayev outlined, «We maintain and develop the centuries-old traditions, language and culture of the Kazakh people, while providing international and intercultural solidarity and progress of a single nation of Kazakhstan». To realize these goals, the results of which are in the public domain, foreign archives and scientific organizations were received thousands of archival documents concerning the history and culture of the country. Comprehensive study, the introduction in the educational process of archival documents of scientific and historical value, historical and cultural heritage — an important issue on the agenda. From this point of view in contemporary reinterpretation of the historical realities and values of these fundamental scientific works of the nineteenth century, As well as ensuring universal accessibility of information affects the goals set by the state program «Cultural heritage», «The people in the flow of history». Proposed theme of «Historical research and educational resources of Kazakhstan in written sources of the XIX century» can be considered one of the major steps towards achieving these goals above programs.

The idea of the project is to create conditions for the provision of technological scientists, teachers and students of the Republic of wide access to a wealth of information materials relating to the history, culture, economy and other aspects of the life of the Kazakh people, and other ethnic groups living in Turkestan in the past century, is the cornerstone and the main ideas of the study.

The aim of the *research* is to collect, digitization and preservation of rare books and manuscripts to create a digital library, as well as providing users greater access to valuable historical documents in written sources the XIX centuries.

To achieve the goal, the project will address the following tasks: data collection, analysis and systematization of the material written sources in the XIX century; create electronic version (digitization) and or agreements for the purchase of ready-made electronic versions and related documents; development of an electronic catalog and the database structure of rare documents; development of methods, algorithms and models formation, retrieval and processing of information resources of rare books and manuscripts in the electronic library; development of software on the basis of «cloud technology».

The research aims at the completion of specialized databases virtual university unique full-text library of scientific and educational resources on the cultural heritage of Kazakhstan, which are reflected in the written sources of the XIX century and the development of a virtual environment through the establishment of an effective and efficient search of remote access to the necessary sources. In addition, the e-library will be open to all researchers of the Republic, who is interested in the study of its cultural heritage.

The significance is the need to establish process conditions for a wide range of consumers, access to rare fund relating to the cultural heritage of the Kazakhstan, by digitizing and storing in electronic format. In use of new information technologies in the creation specialized databases of databases of materials past of our region, would not only increase the level of research and education, but also to organize the effective work of collecting, managing, systematization rich cultural heritage and to provide people with relevant information.

Many of the materials of the past centuries with time subject to deformation and other damage, as a result come to unsuitability. That is why, digitalized historical documents and manuscripts in electronic format, and also made technological conditions for the study cultural heritage of the Kazakhstan by means of modern information technology in virtual IT environments is important.

Conducted a preliminary review of our previous research shows that the main written sources of the XIX centuries, are the cultural heritage Central Asian Turks, which are given a unique full-text materials are stored in libraries and archives of the former Soviet Union, and abroad.

These collections are separated from each other by time and excellent on the tasks given an opportunity to examine various aspects of the cultural heritage in written sources in Central Asia. Comparison of these ensemble allows to reconstruct the specific situation of the Turkestan Region and traced through the history

of the creation of the individual elements of the cultural heritage in the written sources of the period of Kazakhstan and the Central Asian republics as a whole.

Preliminary review of previous research carried out in the world related to the subject in question and their relationship with the project is to the features, which is expressed in a community studied archival source, object of study is the same sources, studied from different angles. Some see these written sources (archives) as «cultural heritage» of Central Asia, while others, especially foreign researchers — as a model of «colonial archives of Russian Turkestan» [1; 635].

In contrast to other countries, «the Russian colonial archives» of any Soviet or post-Soviet period is not regarded as colonial. They are still sprayed across territory former Soviet space and wait for the other currents of mature («vision»).

Research and study of material relating to the cultural heritage of Kazakhstan in the written sources of the XIX century and stored in the libraries and archives of the former Soviet Union, are expected to be considered based on the following three types of archives. This is — a collection of published materials, original documents and photos — «Turkestan Collection» and «Turkestan Album».

Turkestan album. The album was created on the orders of the first governor-general of Turkestan Konstantin Petrovich Von Kaufman. Gathering materials for a multivolume edition of more than two years was carried out in the military-topographical department of Tashkent, where they were printed of each lithographic plate. Album was published in St. Petersburg in 1872 and consists of four parts: archaeological (two volumes), ethnographic (two volumes), crafts peoples of Central Asia (fishing) and historical, which includes more than two hundred thousands of photographs with descriptions. In fact, this is the earliest in the history of the visual panorama of Central Asia that clearly tells us about ethnography, social life, architecture, and politics of the time.

Each of the six volumes of «Turkestan album» is a huge tome, upholstered in green leather, size 45 by 60 centimeters. Nearly half a century after the publication of «Turkestan Album» has a tremendous scientific and historical, and artistic value because it contains material about the historical and architectural structures in Central Asia, about the people's land, their lives and living conditions, and is truly a «golden fund» Central Asian documentary photography.

This edition — not just a «rare book». Its circulation, printed a hundred and forty years ago, is unknown, and a complete set of all volumes and parts of the book is stored today in only three collections: the National Library of Uzbekistan in Tashkent, in the State Library named after Lenin in Moscow and the Library of Congress in Washington, DC.

Regardless of the National Library of Uzbekistan in 2001, and the National Library of Congress in 2007, we completed the full digitization of all the pages of «Turkestan album». Today, these materials in high resolution are publicly available to everyone. It should also be noted that there are no restrictions on the use of these photographs related to copyright, and is not all that visual richness of the middle of the XIX century is available to virtually every person who has access to the Internet.

Turkestan Collection. This work was conceived as a monumental original «encyclopedia» of Central Asian issues. Acquires and collects all publications relating to Central Asia and its neighboring East edition. Newspaper articles were cut, pasted on white sheets of paper, magazine articles and books razbrushyurovyvalis and sheets of paper glued in the frame. All material collected and pasted intertwined in the same volume, which is in the same binders and supplied with a printed cover sheet printing. All publications were selected as the output of a light, observing the thus chronological sequence. In 1868 there were published four volumes of the collection covering material for 1867 Next to 1877 in St. Petersburg, went volume of the collection, which is sent to the Library. By 1888 he published 416 volumes, including 4713 titles.

It's kind of a huge encyclopedia. All that came out in Russia and abroad on Central Asia for 20 years, was included in the compilation. Preparation and the publication of a collection of Turkestan continued regularly until 1887 in average annual yield to 20 volumes. Mezhev compiled a collection for 25 years. But the decision of the administration of Turkestan (the Governor-General I.O.Rozenbaha) in mind the high cost of publication of the collection was discontinued. Over the next 20 years Collection not published. Only in 1907 it was resumed work on its development.

During 1907 in Tashkent published 34 volumes for 1908 - 45 volumes for 1909 - 44 volumes, etc. There were also possible, collect all the most important materials for the time since 1888. Drafting a compendium was stopped at 591 volume in 1917. Later, a scientist orientalist, bibliographer EK Boettger added another 3 volumes.

Central Scientific Library of NAS RK (now the Scientific Library of RSE «Science horde») was established by local lore Filing «Kazakhstan in the pages of «Turkestan collection»» catalog of 20 boxes. In the following years due to a number of reasons (financial difficulties, the breadth of diversity developed bibliographic subjects, lack of travel on mission to collect materials and additions to the file cabinet, the lack of equipment for the publication of printed materials) CSL almost 40 years could not bring the pointer to the publication. All these years the material to function as a service catalogs and was easily accessible broad scientific audience.

CSL published in 2002 an annotated bibliography of, includes 2117 references — books, scientific articles and reports, travel writing, essays, statistical materials, articles from periodicals of the time, maps, illustrative materials [2; 155].

Currently, one of the most important scientific and applied areas of computer science is to optimize the retrieval of necessary data in a vast array of data virtual libraries, which increases exponentially with each passing year. This is particularly important in the search of scientific and educational information, where the search efficiency is particularly relevant [3; 214]. The increase in the volume of publications and information complicates the search for relevant information. The development of information technology has led to a significant increase in the efficiency of production of library and information resources, efficiency of information retrieval has increased by hundreds and thousands of times. But the creation of own information resources (e-catalogs, full-text databases) is quite an expensive process [4; 130].

Created powerful tools to find information, such as Google and others, can not meet the needs of the users because of the huge level of information «garbage» too much information, view which takes a lot of time and money. User research and educational information needs of accurate, valuable data digital libraries, where the most valuable sources [5; 133].

Of course, modern means of information retrieval gives a huge advantage over traditional. It is above all increase the speed data retrieval in a huge array of information and diverse and not always systematic. As studies, if you enter the search in the form of keywords, authors or sources of names and other criteria often we get a fairly large amount of data processing that take a substantial period of time. But today, a user requires not only speed data acquisition, but also the accuracy of the data, the concentration of useful information and not varied in the desired topic. This is especially true when working with information and library systems [6; 191].

Comparative analysis of the above archival sources of the XIX century and the information management systems of educational and research institutions on the state of historical materials, rare books and manuscripts show that: many of the materials of the past centuries in time are subject to deformation and other damage, thereby become useless; efficiency of information retrieval in the electronic, virtual and corporate libraries in the hundreds or thousands of times faster than traditional methods; Modern automation can significantly expand the boundaries of knowledge dissemination through databases, electronic catalogs and online access to both intranet and internet networks; Many computerized systems that store, process and transfer of scientific and educational information are local in nature, allowing through automated library system to access databases only in local networks or via the Internet without the organization of a corporate network; low level of intellectualization interface, making it difficult to work for untrained users; lack of effective mathematical models, algorithms and methods for parallel processing to speed up your work in corporate networks.

Hence the need for the development of areas associated with the tasks of creating effective methods of imaging, scanning and processing of rare and valuable information resources, providing them online access to virtual IT environments and enterprise networks and relevant [7; 240].

In comparison with similar data base and software system is characterized in that: will contain valuable information about the heritage of the republic in the past century, which has not only a high scientific and educational value, but cultural and educational value; will have a universal structure and focused on international standards describe bibliographic information (MARC and DUBLIN CORE); allow end-users (teachers, assistants, and others.) without special education (the library) to introduce (describe) the source of information (books, articles, etc.) and enter data in digital libraries and work in the corporate network; will enable students to have online access to electronic resources, search the complete heterogeneous information through an electronic catalog and improve information content of the topic; software package will work both offline and on the corporate network, creating a virtual library that will enable users to quickly provide the information you need, regardless of their location.

Scientific novelty of the study is: to develop methods, algorithms and software systems for the formation of the electronic catalog, databases, and operational support, users of rare unique scientific and educational information about the cultural heritage; development of an electronic library with rare unique scientific and educational information about the cultural heritage of the Central Asian republics, which will be implemented in a corporate network of university and mode (virtual library) replenished on a regular basis with new and valuable documents; development of software protection module electronic resources from unauthorized access to valuable information resources.

The project will: greatly improve the level of research and education at the expense of real-time access to valuable information sources on the cultural heritage of Kazakhstan; Implementation of the project will provide valuable information necessary to scientists, teachers and students, which will raise the level of scientific results and the quality of dissertations. The project will have a significant impact on science, technology and social services for the following reasons: to provide important information and scientific and educational institutions, and improving the reliability, simplify the wording of queries in enterprise library networks.

The basic methods of solving the problems are historiography, source, archive, because data collection and comparison of sources will allow for the system analysis of objects providing information, search and data processing. Due to the fact that the material consists of 594 volumes that need quick and clear navigation, it all means the digitization and OCR missing parts. Assuming that eventually for users will be developed software or website to apply graph theory; mathematical optimization techniques: methods of mathematical statistics and Web technology.

Expected results are virtual Library containing valuable information about the heritage of the country, having a scientific and cultural value; software package that focuses on international communication formats, the creation of a virtual library of rare books, which can provide users with the necessary scientific, educational, and other information.

Summarizing the above, we can say that The use of new information technologies in the creation of databases of written source allow not only to raise the level of research and education, but also to organize the effective work of collecting, managing, rich cultural heritage and to provide people with accurate and relevant information.

Potential consumer results of project are scientists, teachers, students and other categories of citizens of the republic, who will be able to have access to a wealth of information materials about the history, culture, economy and other aspects of life of the peoples of Kazakhstan in written sources of last year.

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Тарихи зерттеулердегі білім ресурстары: XIX ғасыр жазба дереккөздеріндегі Қазақстан

Мақалада XIX ғ. жазбаша дереккөздеріндегі Қазақстанның мәдени мұрасы тарихының толықмәтінді ғылыми және білімдік ресурстарының электрондық каталогтары мен деректер базасын құру қарастырылған. Бұл коллекциялар сол дәуірдегі қалыптасқан жағдайдағы ерекшеліктердің түрлі қырларын талдап, рельефті реконструкциялауға және қазақстандық мәдени мұраның элементтерінің қалыптасуын тарихи тұрғыдан бағамдауға мүмкіндік береді. Авторлар қажет болған дереккөздерді жаңа ақпараттық технологиялар негізінде жедел іздестіру, деректерді қайта өңдеу және оларға қашықтықтан қолжетімділікті қамтамасыз ету арқылы виртуал ортаны дамыту тек қана ғылыми зерттеулер мен білім беру деңгейлерін ғана арттырып қоймай, пайдаланушыларды тиісінше сәйкес ақпараттармен қамтамасыз етеді деген қорытындыға келді.

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Образовательные ресурсы в исторических исследованиях: Казахстан в письменных источниках XIX века

В статье рассмотрены вопросы создания электронных каталогов и баз данных исторических полнотекстовых научно-образовательных ресурсов культурного наследия Казахстана в письменных источниках XIX в. Эти коллекции дают возможность проанализировать различные аспекты культурного наследия, рельефнее реконструировать особенности ситуации и проследить через историю их создания отдельные элементы культурного наследия того периода Казахстана. Авторами подчеркнуто, что развитие виртуальной среды путем организации оперативного поиска, обработки данных и дистанционного доступа к необходимым источникам на основе новых информационных технологий позволяет не только повысить уровень научных исследований и образования, но и организовать эффективную работу обеспечения пользователей релевантной информацией.

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