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EDUCATIONAL INSTITUTIONS IN GENEALOGICAL STUDIES ON THE HISTORY OF SCIENCE AND TECHNOLOGY

The purpose of the study *is to analyse the peculiarities of using the archives of research and educational institutions as an integral part of the source base of genealogical research on the history of science and technology and to identify the degree of digitalisation of archival collections.* ***The research methodology*** *is based on theoretical developments in history and related sciences, as well as the use of basic approaches to cognition and dialectics, the application of the principles of historical science such as objectivity, scientificity, historicism, universality, systematicity, specificity; the principle of a specific historical approach – historicism – the integrity of the source. The organic blending of general scientific and special research methods in the complex makes it possible to carry out a comprehensive analysis of the topic. The methods of generalisation, analogy, synthesis, analysis, formal logic, as well as historical and chronological, historical and comparative, historical and genetic, historical and typological methods were used in the scientific search, which contributed to obtaining new results in the study of this topic.* ***The scientific novelty*** *of the article is to actualise the issue of using the funds of archives of research and educational centres in conducting genealogical research on the history of science and technology. The systematisation of historiographical sources containing information of genealogical nature is proposed, their information potential is characterised. The reliability degree of the identified sources and the need to introduce new components of the source base of genealogical research on the history of science and technology are determined. The methodological foundations for reconstructing the genealogies of Ukrainian scientists on the basis of representative, diverse sources have been further developed. The necessity of digitalisation of the archival collections of scientific and educational centres, the introduction of information technologies as the main factor in improving the quality of scientific research is substantiated.*

Keywords: *archive, source base, genealogical research, electronic resources, information technology, librarianship, document.*

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АРХІВИ НАУКОВО-ДОСЛІДНИХ ТА ОСВІТНІХ УСТАНОВ У ГЕНЕАЛОГІЧНИХ ДОСЛІДЖЕННЯХ З ІСТОРІЇ НАУКИ І ТЕХНІКИ

Мета роботи *– проаналізувати особливості використання архівів науково-дослідних та освітніх установ як важливої складової джерельної бази генеалогічного дослідження з історії науки й техніки та встановити ступінь цифровізації архівних фондів.* ***Методологія дослідження*** *базується на теоретичних напрацюваннях з історії та суміжних наук, а також залученні основних підходів пізнання та діалектики, застосуванні принципів історичної науки, а саме: об'єктивність, науковість, історизм, всебічність, системність, конкретність; принципу конкретно-історичного підходу –*

історизму – цілісності джерела. Органічне поєднання загальнонаукових і спеціальних методів наукових досліджень у комплексі надають змогу здійснити всебічний аналіз означеної теми. У науковому пошуку використано методи узагальнення, аналогії, синтезу, аналізу, формальної логіки, а також історико-хронологічні, історико-порівняльні, історико-генетичні, історико-типологічні методи, що сприяло отриманню нових результатів у розкритті зазначеної теми. ***Наукова новизна*** *статті полягає в актуалізації питання використання фондів архівів науково-дослідних та освітніх осередків при проведенні генеалогічних досліджень з історії науки і техніки. Запропоновано систематизацію історіографічних джерел, що містять інформацію генеалогічного характеру, охарактеризовано їх інформаційний потенціал. З'ясовано ступінь достовірності виявлених джерел та необхідність упровадження нових компонентів джерельної бази генеалогічних досліджень з історії науки і техніки. Набули подальшого розвитку методологічні основи відтворення родоводів українських учених на основі залучення репрезентативних, різнотипових джерел. Обґрунтовано необхідність цифровізації фондів архівів наукових та освітніх осередків, упровадження інформаційних технологій як головного чинника підвищення якості наукового пошуку.*

Ключові слова*: архів, джерельна база, генеалогічне дослідження, електронні ресурси, інформаційні технології, бібліотечна справа, документ.*

Topicality of the research theme. Biographical and genealogical research is an integral part of historical and technical developments. The current stage of development of research in the field of history of science and technology involves focusing not only on the history of the formation of scientific theories and the emergence of innovative technical inventions, but also on the life history of the people who made these discoveries. That is, the reconstruction of historical processes through the perspective of the life and work of specific individuals and their family ties, the humanisation of the history of science and technology is a rather important task. This is especially true for those individuals who pioneered certain fields of science and technology. The study of genealogies can provide new perspectives for rethinking traditional historical processes, i.e., it provides an opportunity to conduct a historical and technical analysis of the development of technical sciences through the experience of specific individuals. The study of migration, life stories of individuals, family lines, and family histories of leading scientists helps to expand the horizon of knowledge of the patterns of development of technical sciences, as well as the personification of the scientific and educational space of Ukraine by prominent figures. Increasing interest in genealogical research necessitates the introduction of new components of the source base of genealogical research on the history of science and technology.

Analysis of research and publications. Genealogical research is increasingly attracting the attention of both national and foreign scientists. Researchers' achievements are characterised by a wide range of scientific interests. This is a study by Rafaela Siqueira Costa Schreck, Kênia Lara da Silva [1] on the development of special professional medical education in Brazil based on the use of genealogical research methods. The result of the study was the remodeling of the genealogical path of the participants of this training system, the identification of the unique historical pattern of professional nursing education. An additional interesting publication is the one by Angelica Lo Duca and others on the identity of local society based on the use of the archives of the local Jewish community. The archives' collections are represented by a wide range of documents dating back to the sixteenth century. They contain various genealogical information: dates of birth, death, marriage certificates, and family lines. The authors raise the issue of digitalisation of the archive documents to preserve this unique fund of cultural heritage and improve the work of the centre [2]. The theoretical and methodological issues of source processing and the practice of historical source studies are outlined in the works of Y. Kalakura [3], Y. Legun [4], S. Ustych [5]. The peculiarities of using sources in genealogical research are covered in a number of publications. Thus, the researcher N. V. Lobko actualised the issue of using the information potential of genealogical sources, focusing on accounting and statistical documents of the period of XVI-XVIII centuries. The author emphasises the need to introduce new approaches to the systematisation of genealogical sources. The involvement of accounting and statistical information will promote the expansion of the source base of genealogical research [6]. The issue of expanding the source base is raised in the work of N. A. Bachynska, O. M. Artemenkova [7]. The article by R. Rudenko and L. Zhurylo analyses the involvement of reference publications in genealogy research. The authors emphasise the significance and expediency of involving reference and memoir works devoted to different families, but note that they contain many factual inaccuracies, differ in content, style of presentation, which certainly affects their scientific value [8]. The problems of digitalisation of archival and librarianship, expanding the list of electronic information resources are outlined in the study by O. Tverytnykova and H. Salata [9] as well as V. Petrovych [10]. The generalisation and critical analysis of scientific literature on the issue of expanding the source base of

genealogical research gives grounds to assert the absence of special scientific works on this issue.

The purpose of the work is to identify the peculiarities of using archival funds of research and educational institutions and to find out the features of their use in genealogical research.

Presentation of the main material. The methods of using the funds of archival institutions of Ukraine in genealogical research are quite effective. Central and regional archives, in particular the Central State Archive of the Higher Bodies of Power and Administration of Ukraine, the State Archive of Kyiv, the Archive of the Presidium of the National Academy of Sciences of Ukraine, the Central State Historical Archive of Ukraine, the State Archive of Kharkiv Region, etc. are valuable for genealogical research on the history of science and technology. The collections of institutions accumulate a significant amount of material, including the history of generations of a certain family in the form of special tables, trees; genealogical and metric books, censuses, documents of state and public institutions, and more [7].

The representative source base of genealogical research on the history of science and technology should include such sources as family and personal archives, materials from museum collections and scientific libraries, genealogical reference publications, interview materials, and statistical collections of various kinds (*Fig. 1*).

Fig. 1. ***Components of the source base of genealogical research on the history of science and technology***

Among the components of the source base for genealogical research on the history of science and technology, taking into account the specifics of the study, a special place is occupied by the archival collections of research and educational institutions. These collections, which are large and rich in information, are underutilised by researchers, yet they contain a lot of useful information. Genealogical research is based on special information, such as names, surnames, date of birth, date of death, place of residence, place of employment, relatives, etc.

The practice of using the collections of scientific and technical archives can be seen in the example of researching the electrical industry of Ukraine during the twentieth century [11]. The Institute of Electrodynamics of the National Academy of Sciences of Ukraine was the leading academic institution of the scientific basis for the development of the electrical industry in Ukraine. In addition to reports on scientific and scientific-organisational work, postgraduate studies, and the Department of Invention and Patent Studies, the funds of the institution's scientific and technical archive contain personal files and documents of scientists who worked effectively during the period mentioned above. Familiarisation with the personal collection made it possible to identify little-known, forgotten names of scientists whose contribution to the development of electrical engineering science in Ukraine is no less significant. In particular, for the first time, materials on the scientific biography of one of the students of Corresponding Member O. M. Milyakh, founder of the Kyiv Scientific School of Conversion Engineering Y. I. Drabovych; talented researcher-experimenter in the field of magnetic measurements N. E. Fevralova were introduced into scientific circulation; facts from the life of Professor V. L. Tsukernyk were clarified. The processing of the archive materials made it possible to reconstruct the family line of O. M. Miliakh (he was married to K. V. Khrushchova, who was the daughter of academician V. M. Khrushchov).

The materials of the scientific and technical archive of the Pukhov Institute for Modeling Problems in Energy contributed to the research of the family of Academician H. E. Pukhov. The funds contain materials that cover different stages of the scientist's life. The first stand presents family photographs during the scientist's residence in Sarapul (Udmurtia) and schooling, as well as photographs of his parents. Many photographs from his studies at the Tomsk Electromechanical College and the Tomsk Electromechanical Institute of Railway Transport are on the second stand. These are unique photographic documents that highlight the process of H. E. Pukhov's formation as a scientist. The exposition presents the first scientific works of the scientist, the dissertation for the degree of Candidate of Technical Sciences and the manuscript of the dissertation for the degree of Doctor of Technical Sciences, copyright certificates, and the manuscript of his autobiography. H. E. Pukhov was a participant of the Second World War, and the exhibition presents his awards.

A significant place in the development of electrical engineering science in Ukraine in the second half of the twentieth century was occupied by research conducted by scientists of higher education institutions. In addition to the regional archives, materials from the archives of the National Technical University "Kharkiv Polytechnic Institute" (NTU "KhPI") and Lviv Polytechnic National University were additionally used to expand the source base and provide full coverage of the theme. The personal files of representatives of the electrical engineering research community were studied in the collections of polytechnic universities. The value of using these materials is that it helped to draw attention to once world-famous, but now undeservedly forgotten Ukrainian electrical engineers.

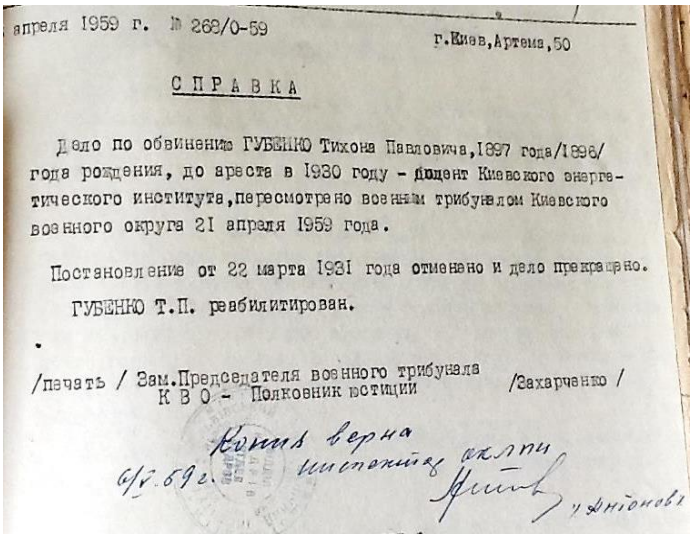
The archive of NTU "KhPI" contains documents that have facilitated the reconstruction of the history of the founder of the field of electronic modeling and design of computing devices V. H. Vasyliev. He was a descendant of two well-known families, the Vasilievs and the Karpinskys, whose roots can be traced back to the 18th century. The Karpinsky family, from which V. H. Vasiliev's mother, Veronika Mykhailivna, came, was a rather unassuming family. The scientist's grandfather, Mykhailo Petrovych Karpinsky, was a famous linguist, philologist, and teacher. His grandmother, Tetiana Viktorivna Karpinskaia, raised ten children, whose fates turned out differently. The history of the Vasyliev family dates back to Mykhailo Vasyliev, a participant in the Patriotic War of 1812. The scientist's grandfather in this family line, Mykola Ivanovych Vasyliev, was a teacher and philologist who worked in Poltava.

In particular, based on the materials of the NTU "KhPI" archive, a scientific biography of the founder of the scientific school for the study of unipolar and alternating pulse generators of various types, Professor I. S. Rogachov, was created and the scientist's family ties were established. His daughter, Doctor of Physical and Mathematical Sciences, Professor of NTU "KhPI", Academician of the International Thermoelectric Academy O. I. Rogachova and son, Doctor of Technical Sciences, Professor of NTU "KhPI", specialist in the field of automation and telemechanics, supplemented the information on the formation of their father's personality.

The search for genealogical information in the archives of NTU "KhPI" contributed to the reconstruction of the Liubchyk family dynasty, whose representatives have been working in NTU "KhPI" for more than 80 years. The ancestor of the powerful dynasty is Mykhailo Abramovych Liubchyk, a leading scientist in the field of electromechanics, Doctor of Technical Sciences, head of a joint research project with the United States of America on the creation of an electromagnetic motor for an implanted artificial heart. His son is Leonid Liubchyk, Head of the Department of Computer Mathematics and Mathematical Modeling, Professor, Doctor of Technical Sciences, Academician of the Ukrainian Academy of Sciences, Laureate of the State Prize of Ukraine, Member of the New York Academy of Sciences. The third generation of the family is represented by Mariia Liubchyk, a graduate student at the Department of Systems Analysis.

The archives of Lviv Polytechnic National University have studied the personal files of one of the first graduates of the Kharkiv Institute of Technology, Head of the Department of Electrical Machines, Professor V. M. Kyianytsia; Rector of Lviv Polytechnic Institute and Kyiv Polytechnic Institute, Corresponding Member H. I. Denysenko; and Academician H. E. Pukhov. These materials made it possible to clarify and supplement little-known facts about the period of scientists' work at Lviv Polytechnic, to find out the family ties of scientists, and to clarify biographical data.

For the first time, materials covering the stages of the life of the Dean of the Faculty of Electrical Engineering, Head of the Department of Theoretical Foundations of Electrical Engineering at Lviv Polytechnic, Associate Professor S.I. Kyrpatovskyi were introduced into scientific circulation. On the basis of these documents, a scientific biography of the scientist was created, and the history of his family was researched.



апреля 1959 г. № 268/0-59 г.Киев,Артема,50

СПРАВКА

Дело по обвинению ГУБЕНКО Тихона Павловича,1897 года/1896/ года рождения, до ареста в 1930 году - доцент Киевского энергетического института,пересмотрено военным трибуналом Киевского военного округа 21 апреля 1959 года.

Постановление от 22 марта 1931 года отменено и дело прекращено.

ГУБЕНКО Т.П. реабилитирован.

/печать / Зам.Председателя военного трибунала К В О - Полковник юстиции /Захарченко /

Копия верна

Fig. 2 ***Certificate on the rehabilitation of Professor T.P. Gubenko (Archive of the National University "Lviv Polytechnic". F. R-120. Op. 1-1. Ref. 97)***

Valuable information was found in the personal file of the founder of the scientific school in the field of the electric machine theory, Professor T. P. Hubenko. It is worth paying attention to some important factors from the biography of the scientist. He held the position of professor and head of Lviv Polytechnic, being already an experienced and well-known specialist in the field of electric machines, an honoured worker in the field of science and technology of the Uzbek Republic, but without a degree. T. P. Hubenko's scientific career was influenced by the political situation. In 1930, the scientist was repressed for his active participation in the development of Ukrainian electrical engineering science and the creation of Ukrainian terminology systems and was forced to leave Kyiv.

He moved to Kharkiv, where, with the support of Professor P. P. Kopniaiev, he worked at the Kharkiv Electrotechnical Institute as the head of the Electric Drive Department. Professor T. P. Hubenko was rehabilitated only in 1959. The archive of Lviv Polytechnic National University contains a certificate (Fig. 2) (first introduced into scientific circulation) of the military tribunal of the Kyiv Military District, which shows that the case against T. P. Hubenko was reviewed and the scientist was rehabilitated.

Conclusions. Consequently, the analysis of the use of sources containing genealogical information provides an opportunity to assert that in addition to traditional components such as family archives, materials of museum exhibitions, archives of personal origin, genealogical reference publications, accounting and statistical documents, interview materials, statistical collections of various directions, it is worth using the funds of research and educational institutions. This group of sources contains diverse and useful information, including photographic documents, autobiographies, family letters, holiday greetings, award documents, marriage certificates, employment records, lists of family members, information on place of residence or military service, business trip reports, etc. Certainly, when evaluating the informative content of these sources, one should use them in the reconstruction of family trees. This is especially true for genealogical research on the history of science and technology. Therefore, it is necessary to introduce information services that will ensure the effective use of archival collections, organisation of search work, and scientific genealogical research.

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