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The Impact of Digital Technologies on Kazakh archivists in the Age of Globalization

Abstract: *Based on the survey questionnaire and interviews with employees of the state archives across Kazakhstan, this article examines the impact of digital technology on Kazakh archivists. Although the impact of information technology on human life in the information age is growing, there is a lack of research in Kazakhstan about how the deep transformation in society engendered by digital technology has affected the national archival system and archivists. It is therefore not fully understood how they can influence and what changes they bring to the archival system in Kazakhstan and archivists. Hence, this study aims to fill the gap in this specific area and contribute to the scholarship on archival science. The results of the study empirically confirm the positive impact of information technology on the work of archivists. The obtained data require a critical approach to the role of information technology in the work of archivists.*

Key words: Digital Technologies, Globalization, Kazakhstan, archivists

Introduction

Digital transformation of society has become a key and inevitable trend today. The rapid development of information technology has affected both archives and archivists. At the same time, it sets difficult tasks for the theory and practice of archival affairs. Every specialist in the archival field is expected to master the information culture and digital skills to realize their potential and achieve professional success. Created under the influence of digital transformation in the world, the introduction of e-government in Kazakhstan has led to the rapid spread of electronic documents, which in turn has led to the automation of traditional archives inherited from the USSR. Like other spheres of society, the influence of computers on archives is growing from year to year. The number of documents is

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growing rapidly, and this process is certain to persist for many years.[1] This study hence is guided by the following research questions: What is the impact of computer technology on the work of archivists and how can it be in the future? Will Kazakh archivists, who positively assess the impact of computer technology, become dependent on digital technology? Or do archivists with digital skills develop archival technological methodology? In any case, in the current situation, computer technology dominates the work of Kazakh archivists. The digital transformation has brought technical changes to the work of archivists. Are these changes likely to have other effects? The implications of this study may be useful and important for archivists, and archival management in the age of digital technology.

Background information

In the classical sense, the archive is an institution that preserves social memory, being an attribute of statehood that reflects the stability of the state. The reason why Kazakhs have not been able to create a national archive for centuries is due to historical circumstances. This was due to the tradition of oral history, which has been integral part of the nomadic civilization. The beginning of the history of archives in Kazakhstan dates back to the end of the 18th century. It is connected with the history of the archive organized by Bokei khan in western Kazakhstan. In the following years, the initiative of the archive continued during the reign of Zhangir Khan, who ruled the Bukey Horde. During the Russian colonization of the Kazakh steppe in the 19th century the colonial archives were established. The archives organized in connection with the system of regional and provincial authorities were the departmental archives primarily related to the activities of civil, police and military-public administration. The archival work was performed by archivists with military ranks.

The system of state archives of modern Kazakhstan was formed in the Soviet era. In the first quarter of the twentieth century, a new Soviet model of governance was introduced, which, along with political reforms, led to profound administrative, territorial, economic, cultural, and social changes. The principle of centralization was followed in the organization of archives. The Unified State Archive Fund was set up, and state management and control over archives was established.[2] Compared to the Polish archives, there are both differences and similarities. During the empire, the departmental archives of the metropole were not engaged in academic activities. And in the Soviet era, from the very beginning, special attention was paid to the academic activity of the archives, their scientific organization. Changes in the system of public administration in the context of the transformation of society also affected the archives. The archive, like a mirror of society, was not only a reflection of

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[1] Zhakypov, 2008.
[2] Seksenbayeva & Makanbaev, 2021.

its development, but also a tool to influence it. The influence of the Soviet ideology made the system of state archives consistent, a common methodology was developed, and it was strictly centralized.

The Regional Archive, established in 1921, was transferred to the Presidium of the Kazakh Central Executive Committee two years later.[3] During this period, there were some difficulties in the organization of archives in the country. Gathering and storing archival documents in one center took time and effort. On the other hand, the issue of establishing provincial archives on the ground was also on the agenda. The shortage of professional archivists was obvious. The archives had the advantage of being under the jurisdiction of the Central Archives of the Russian Soviet Federative Socialist Republic (RSFSR). Centralized management unified the work of archives. Courses of archival departments, Central Archives were organized at Petrograd and Moscow universities to train archival staff. The practice of archival work and the teaching of historical disciplines corresponded to the areas of archival activity, in particular, the history of Soviet institutions, the history of pre-revolutionary and post-revolutionary Russian archives, Western archives, the theory and practice of archival work, the archival part of proceedings, archival legislation, reading ancient manuscripts, librarianship, museum studies.[4] This approach, firstly, led to the involvement of scientific personnel in the archives, and secondly, to engage in research work. In fact, archivists turned to scientific research and the direction of the archives was correctly determined. Particularly, in the evening courses, in-service trainings, seminars, clubs scientific processing of documents, use of documents and in-depth study of individual issues of document storage methods were provided.[5]

Gradually, new subjects of political content were introduced into the curriculum, in particular, the basics of Marxism-Leninism, philosophy, political economy and international issues, the history of the Communist Party of the Soviet Union (CPSU), archeography and a series of special lectures on current politics. The party had an urgent task to organize scientific and publishing work in the archives. The influence of the party authorities began to gain momentum in the work of the archives. The work of propaganda of communist ideology was intensified by the publication of research works. In 1945, in accordance with the order of the Council of People's Commissars of the USSR, the archives were included in the list of research institutions.[6] The reading rooms of the archives became a center for the advancement of historical science and the creation of new ideas. In fact, the scientific and publishing work of state archives was politicized, and archival documents became a political tool. The actions of archivists with the status of administrative staff were based on three principles such as collection, storage, and use.

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[3] Sarieva & Abdulina, 2006.
[4] Akkali, 2010.
[5] Sarieva & Abdulina, 2006.
[6] *Archives and archivists of Kazakhstan*, 2015.

This situation changed with the collapse of the Soviet Union, like in Poland, with the independence of Kazakhstan. The period from 1991 to the present is still a 'turning point'. The centralized system of archives and the unity of the National Archive Fund have been preserved.[7] Gradually, the academic activities of state archives began to expand as a state institution. This was due to the integration of the then party archives with the state archives, on the one hand, and the formation of a new independent consciousness in society, on the other hand. The task was to open the blank pages of Kazakh history and systematically study historical events from a new perspective. The archives served to form the historical consciousness of the nation in a rapidly changing political situation.[8] The publication of new historical data, with the help of historians and archivists, allowed to show the work of archives in a new light.

Although Kazakhstan's archives were affected by the 'microcomputer revolution' in the 1990s, the level of computerization of the workplace was rather limited.[9] In 1997, the Central State Archive had only three computers, and the situation in the regional archives was similar. First of all, the computer was used to record documents. It was planned to create an industry of automated archival information system. Working on a computer was a step-by-step process for archivists. Most of the work in the archives was based on traditional methods. The rapid development of information technology over the next decade has contributed to the emergence and rapid growth of electronic documents. In 2003, the Law on Electronic Documents and Electronic Digital Signatures was adopted. With the implementation of the Unified Electronic Document Management System, the issue of storage of electronic documents was put on the agenda.[10] In the 1990s, archivists used computers only to record documents, but now every archivist cannot imagine working without a computer. In fact, this is not a new phenomenon in the world, especially in the work of archives. At the same time, it is important to remember that electronic document management and electronic archives are two separate worlds. For many, this is a new unexplored topic, and it should be noted that "some cultural or national traditions do not stand in front of the all-encompassing power of information technology, and even amazing IT achievements shock the legacy of the past and change in this irreversible branch".[11]

It is no secret that the universal impact of technology on human civilization is a big problem. In this regard, archivists did not fall into the state of 'cognitive dissonance', realizing that the real situation, the use of archival technology requires

[7] *Analytical review*, 2012.
[8] *National Archive of the Republic of Kazakhstan*, 1992.
[9] *Government of Kazakhstan*, 2001.
[10] Mustafina, 2020.
[11] Manarbek *et al*., 2020.

a change in traditional methods.[12] But the influence of computer technology on Kazakh archivists, like Polish archivists, is growing. Yesterday, the gap between the computer and the archivist was significant, but today it is rapidly shrinking. There are many problems for Kazakhstan. Due to the lack of websites of some regional state archives, computerization of archives and lack of monitoring of their quality, it is impossible to assess the level of computerization. Still, it is hard to imagine archiving something meaningful without a computer. Therefore, the vast majority of archivists (96%) believe that the impact of computer technology on the work of the archive is positive.

The study

The purpose of the study is to consider and evaluate the impact of information technology on the work of archivists and changes in their minds and attitudes, along with the development trends of state archives in Kazakhstan. The research is based on scientific works on archives, archival documents, the results of surveys and interviews with employees of state archives in Kazakhstan.

Research context and participants

Data for this study was collected from participating Kazakh archivists who were selected among employees working in central and local state archives of Kazakhstan. Their opinions and views allowed to correctly understand and answer research questions. In total, 600 archivists of Kazakhstan voluntarily took part in the survey, 180 of them answered in Russian and the rest in Kazakh. Participants were selected virtually from most state archives throughout Kazakhstan, namely from Karaganda, Turkestan, Mangistau, Pavlodar, Zhambyl, Akmola, Kyzyl-Orda, East Kazakhstan region, Almaty, Nur-Sultan, Taraz, as well as the Archive of the President of the Republic of Kazakhstan, the Central State Archive of the Republic of Kazakhstan, Central State Archive of Scientific and Technical Documentation. 28% of the participants are young archivists with up to five years of experience. The survey was conducted between 13-21 December 2021 through Google Forms. Questionnaires were prepared in Kazakh and Russian. The questionnaire included twenty-three items, and was divided into several sections, of which six items were designed to obtain background information from participants, and the remainder was constructed to collect data related to professional work of participants.

The four key findings were found due to an in-depth analysis of the results of the survey. First, computer technology has a widespread and total impact on archives and is positive. Second, Kazakh archivists are experiencing difficulties with the implementation of the E-Archive project. Third, a modern archivist should be

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[12] Vernon, 1985.

engaged in scientific research. Fourth, in the context of digital transformation, the status of the archive and the modern archivist should be raised. An interview was conducted to further analyze these findings. In order to solve the research problem, an interview was required to clarify and supplement the findings from the survey data. To get participants' consent they were asked to be interviewed. As a result, 14 participants agreed to be interviewed, which was conducted online through the Zoom platform. The interviews were conducted from December 20, 2021, through March 10, 2022, with 9 participants in Kazakh and 5 participants in Russian. The interview was transcribed, followed by an analysis of the transcripts. A coding was performed through rereading the transcripts.

Since this study was the first research undertaken on the impact of digital technology in Kazakhstan, this research may lead to a clearer understanding of some of the issues, and may inform future research. And this is the first sociological survey organized for the purpose of the study. With the help of combined methods of sociological research, surveys and interviews, an internal content, qualitative assessment was achieved in answering research questions. The qualitative interpretation paradigm was used in data analysis.

The findings and discussion

First, computer technology has a widespread and total impact on archives and is positive.

Should archives adapt to new changes in the context of digital transformation of society? Of course, they should. Informatization touched archives too. If at first the archives lagged behind, today we see the result of their gradual transition to computerization. There are certain well-established rules for working with documents, the receipt and transmission of correspondence is carried out through *Egov*, *E-Otinish* and documents are compiled on the same computers, a database is maintained, and digitization is carried out. Compiling, storing, recording, issuing certificates and using documents in archives can no longer be done without computer technology. This means that in all areas of the archive, the work of each section is automated. Once upon a time, computers were used only for printing papers, but today it is difficult to imagine an archivist without them. In today's digital transformation, the influence of computers on archives, as in other sectors of society, is growing from year to year. The introduction of computer technology in the archives is a matter of time.

It should be noted that since 2006, all state bodies have been working with electronic documents.[13] The number of electronic documents is growing

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[13] Zhakypov, 2021.

and the volume of correspondence in state bodies today is 400 terabytes. This is data only for state bodies at the initial stage and it will constantly have an increase factor. In reality, today in the archival sphere one cannot do without high specialized computer technology. Everyone understands that the impact of computer technology on archives is enormous and the automation of the work of archives would facilitate the work of archivists. However, how archivists themselves look at it. Most archivists point to an increase in the number of electronic documents, the emergence of which is associated with the introduction of electronic document management and, accordingly, the creation of electronic archives is inevitable. Despite the backlog of the archival sphere at the initial stage, today the archives keep up with the time and development. With the introduction of electronic document management system in government agencies, the question arose as to how the collection, storage, and use of electronic documents. Currently, archivists and clerks are faced with two types of documents – paper documents and electronic documents.[14] Despite the fact that the archives, which are preparing for the transition to e-archives, are provided with the necessary equipment (modern computer, scanner), archivists believe that it is important to master special programs. At the same time, archivists understand that it is important to know any program when creating a database. Yet most archivists see the positive side of computer technology in service delivery. In the age of digital technologies, the number of services provided via the Internet, computers in a geometric projection are only growing. Within the framework of E-government, the percentage of services provided to the population is growing and people have already forgotten about the concept of long queues for some kind of information. This is a good trend. Now about 700 online services are provided through the E-gov portal, and this is not the limit, it is developing. For example, more than 1,400 online services are provided in South Korea, and they are already moving to the third model of receiving online services through a mobile phone. Kazakhstan should also strive for this, and the trend is such that sooner or later we will come to this.

It is obvious that the transfer of paper documents to electronic format is not carried out by centuries-old traditional methods. The problem lies in the technological methodology. While it is important for an archivist to gain a wealth of experience, digital skills and experience are also needed to develop a technological methodology. Will Kazakh archivists in such a turbulent situation remain completely dependent on computer technology, or, conversely, are they ready to develop a technological methodology? And what changes can this lead to in the work of the archive. Despite today's development trends, there is a difference between a document stored on an electronic medium (especially disks) only a decade ago and a modern medium. Archivists as supporters of the traditional method of storage and IT specialists, can come to an agreement on the storage of electronic documents. This is because

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[14] Zhakypov, 2008.

the technological methods of creating, storing, and using documents cannot be solved by a specialist other than an archivist.[15] Archival software products should be aimed at facilitating human work. This is confirmed by the opinion of respondents, and 94% of respondents confirm that the influence of computers on archivists is gradually increasing over time.

Despite the large percentage of recognition of the positive impact of computers, archivists highlight partly a negative character. Any data created in the electronic document management system has versioning and it will be necessary to constantly change their versions so that the documents are always in a readable form. The second question is the long-term storage of data carriers as servers, computers, which have their own life cycle (service life) often does not exceed 5-6 years and must be constantly updated. According to the measurements made by some scientists about the financial profitability of servers and paper offices, statistics show that it is more profitable to maintain on paper than servers. And of course, we must not forget about information security, which is also an important component. There are three factors, such as directed attack and undirected attack by hackers, human negligence, on which the safety of data in storage depends. The impact of technology on human health, in particular on vision, has not been fully stated. Along with the opinions expressed, the need for progress from which there is no escape was indicated optimistically. Be that as it may, negatively or positively, we need to look for a methodology, approaches to work, go with the flow, rather than trying to go back. But at the same time, care should be taken, since an important task of archives is to preserve information.

Second, Kazakh archivists are experiencing difficulties with the implementation of the E-Archive project.

Information technology is seen as a tool that simplifies and optimizes the work of archivists and researchers. The main task of archivists is to store documents. With the development of modern information technology, it is necessary to change the existing stereotypes in the organization of the use of documents and facilitate maximum access to archival documents. The priority is to create a single information resource.[16] In the fall of 2021, the information system *Single Electronic Archive of Documents* was put into operation. The project envisages three areas of archival work – replenishment of documents, their accounting and storage, as well as automation of the use of documents of the National Archive Fund. The implementation of four goals is expected: 1) automation of interaction processes in the transfer of documents from departmental archives to the state archives and the creation of a single database;

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[15] Sarsenova, 2016.
[16] Abilova, 2015.

2) automation of processes of rendering of the state service in the field of archival affairs; 3) increase the efficiency of government agencies and state archives; 4) ensuring the safety of documents on digital media. A total of 1,574 government organizations, including 223 state archives, are connected to the information system *Single Electronic Archive of Documents*, which consists of 9 modules. Work is underway to integrate with the information system *Cloud Document flow*.

According to archivists, the difficulties are primarily related to the lack of development of the system, and the state archives of Kazakhstan cannot now completely switch to this system. It is known that the customer of the E-Archive project is the Ministry of Culture, the developer is the Iserv company. Of course, there are advantages of the system when searching for information and issuing documents to the same researchers. During the quarantine, archivists were forced to fulfill requests through *E-gov* and the lion's share of requests from citizens and government agencies was made in electronic format. It was an experience of accustoming people to new technologies by force, on the one hand. On the other hand, people wrote the program, and of course, there are flaws, in the process of work they are identified, and in the working order something is eliminated, but something is not. This is supportive in the beginning. The main tasks, for example, the array of documents that the archives managed to digitize before the introduction of the program, their integration with the system is painless. There are blocks that do not work as expected, but they will be improved. Archivists directly working in this system have a completely different approach. In their opinion, good, qualified methodologists, having seen this system, already want to bring it to a level that would allow both archivists and researchers to work comfortably. They are well aware that any system, including the Unified Electronic Document Management System (UEDMS), at the initial stage is rough and they have always been improved.

The lack of qualified personnel who are experienced in IT technology is another difficulty that state archives often face. Young people do not go to the regions because of low wages, many prefer to work in central cities and in private companies. At the same time, when connecting the work with departmental organizations (archives) in the E-archive, it was difficult not to receive a response from those organizations. This is because they are fully equipped with the necessary computer technology, and some institutions are not even equipped with ordinary computers. The next difficulty is related to the insufficient development of the methodology. Any information system should not be introduced separately on its own, a methodology should go with it. Along with the methodology, amendments to the existing regulatory legal acts should go in parallel. It is very important to take into account the intersectoral nature of the archival sphere and not to forget the introduction of amendments and additions to all regulatory legal acts relating to part of the work of the E-archive. In general, comments and suggestions for improving the system are transferred to the developers and the supervising body to take into account all

the shortcomings with the specifics of the archive. Is it possible to agree with the view of other archivists who argue that due to the untimely adoption of the system, archives do not experience difficulties, understanding the evolution of work processes well and treat them normally? It is important to recall the problem when the developers of the program do not quite know the theory and methodology of archiving, and the need for joint work was obvious. Ensuring the reliability, uninterrupted operation of the system and how the system will cover all areas of the archives' activities is the prerogative of the E-archive, since there must be uniformity, one platform and everyone must work with a single standard. When working with a single standard, there should be a Document Information Classifier. Most importantly, archivists are striving to develop and learn to respond to the changes brought about by the total impact of computer technology on archives.

Third, a modern archivist should be engaged in scientific research.

Archivists serve as the golden bridge that connects the past and the present as well as their task is to make sure that the link between various generations is continuous and is not interrupted. This is their historic mission. The advantage of a researcher over an archivist is that he publishes the results of his research and makes them available to the public. The survey data showed that only 6% of archivists have an academic degree while 94% do not. Among them the share of candidate of science is 0.5%, PhD is 0.2%, master is 5.3%.

Interestingly, the number of Kazakh archivists with academic degrees did not exceed 1% in the Soviet era and in the first quarter of independence. How can an archivist organize historical research based on the three principles of *collection, storage, and use* of professional work? Can an archivist help shape history? If possible, will the professional work of an archivist be secondary? An archivist develops the use of documents in archival practice, such as document collections, databases, various thematic queries. In the current situation, Kazakh archivists are familiar with the development of collections of documents as a basis for research. It is carried out as planned. 89% of respondents believe that research work determines the historical role of the archivist as a profession. Historical research is based on archival data. Although archivists are well aware of this, to this day they have not been able to engage in science and research.

Although access to historical data is an advantage for archivists, it is important to know the methodology and new areas of research, which requires constant scientific research. Over the years, the transformation of state archives into a state administrative institution has led to a decline in research. The quality of archival work, which is logically disconnected, has also decreased. It has become an institution that fulfills the social needs of citizens in society, the needs of government agencies in the implementation of important activities. Weakening and even cessation of research,

scientific and methodological work on archival science and documentation is one of the reasons for the decline in the quality of archives. Another reason is the lack of a thematic manual based on the experience of archivists.[17]

As a result of the interview, the following was revealed. An archivist can write good instructions, rules, and a memo. To engage in research, either the staff needs to be increased by giving them such an opportunity and at the same time taking into account the desire to do this with archivists. In archival practice, some of the work requires knowledge of the basics of scientific research, for example, when compiling a scientific reference apparatus, each archivist already does this. Today, few leaders have the desire to involve science as archives once treated as scientific institutions and consider this a prerogative. Archives should be closer to science and the status of a researcher should be returned to archivists as before. Archives, in fact, as the center of auxiliary historical disciplines, should be tied to educational and research processes.

It is difficult for a modern archivist without a scientific degree to write a large scientific work, therefore, a person with basic scientific knowledge is needed. To write a scientific article, a team of 3-4 specialists is needed and they must be led by a specialist (even an archivist) with a scientific degree. All archivists agree on the motivation of scientific work, for example, receiving a honorarium, and of course this would not prevent the archivist from doing his main work. Now Kazakh archivists are loaded according to the norms at low salaries and it will be additional work to involve them in scientific research, since mental work is primarily research like searching in libraries and archives. The view of the archivists that they need to create a database for historians is interesting.

Scientists do not always have the opportunity to work in archives, especially in foreign archives. Archivists should prepare collections of documents on research topics. Despite not having a scientific degree, archivists study the types of documents and their content. An archivist is engaged in scientific research on a daily basis, because getting acquainted with the content of the document and working is a study. This means that they are going through the initial stage of scientific work. There is no limit to the archivist's interest in science. The advantage of archivists' research is that they strengthen their knowledge, innovate, communicate with scientists and achieve professional growth. In today's realities, lack of time and low wages do not allow this.

Fourth, in the context of digital transformation, the status of the archive and the modern archivist should be raised.

In general, it is necessary to raise the status of archives, with the increase in status, the attitude towards the archives themselves will change. The year is 2022

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[17] Sarieva & Mustafina, 2019.

and the old stereotype still exists. This area is not given much attention. The status of archives in society is underestimated, but with digital transformation it needs to be raised. An archive is an information center. The task of archives is to provide information that everyone needs. To ensure the transparency of the archive to the population in full, which requires the implementation of comprehensive measures at the state level.

Until 1996, the authorized body for the management of the archive sector was the Main Archives Department under the Cabinet of Ministers of the Kazakh SSR. Due to the improvement of the administration, the abbreviated archival body was reorganized in 1999 as the Committee for Archives and Documentation Management of the Ministry of Culture of the Republic of Kazakhstan. Until 2014, the Committee's governing body was removed from the Ministry of Culture and remained at the department level, which had a negative impact on archival policy.

With the adoption of the program *Archive – 2025* in 2020, the following year the Committee for Archival Affairs and Documentation Management was re-established within the Ministry of Culture. In 2018, the Law on the National Archive Fund and Archives legalized the provision of paid services by state archives and the fact that the proceeds will be on the archive balance. However, although the hiring of academic staff is not provided, for the first time the Center for Advanced Training of employees of State Archives was opened under the Ministry of Culture. The Concept for the Development of Archives in the Republic of Kazakhstan for 2001 -2005 identified priorities for long-term development of this sector. The main goal is to transform the National Archives into an information system that meets modern requirements. The processes of collecting, processing, storing, retrieving, and delivering information are complex systems that are logically interconnected. It was planned to create a single information space by gradually automating them with the help of information and archival technologies. In the implementation of this goal, priority was given to improving the situation of archivists and raising the prestige of the profession.[18] It is hoped that the revival of the Committee, the opening of the Republican Center for Advanced Training of employees of State Archives will ensure the realization of this goal.

Computer technology in archives requires several skills. In this case, let us assess the impact of the diversification of the work of archivists, the combination of several tasks. At first glance, the diversification of work helps develop archivists in every way. They can gain invaluable experience by getting experience from other jobs and doing it responsibly. It is possible to combine technical and creative work and become a professional archivist for some time. The second approach, of course, has a great impact on the quality of work. It leads to poor performance, without completing the actual work. However, the question is how long it will take to learn

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[18] *Government of Kazakhstan*, 2001.

everything. The third approach is that the work of archives is planned, one has to perform the task for several days. In the state archives, tasks are given from a higher authority, and they are strictly executed. Without performing one function, they do not see a good performer in the archivist, and the management often, without risking the performance of other tasks in the old manner, entrusts the employee who previously performed this at a good level. Over time, an employee, not performing parallel functions, does not develop a skill, experience that would help him advance in the future. All this is connected with interest, you need to motivate something, without motivation there is hardly any movement. Often this leads to such consequences as a negative impact on the quality of work, leading to the ineffectiveness of the assigned task, and as a result, young cadres do not stay long. In recent years, there has been a growing trend of young people in the central archives. According to pragmatic young people, it is better for an archivist to perform the functions assigned to him. There must be adequate staff for quality work. Digitization of priority documents is a requirement of today. However, the adoption of documents, their description, storage, and use are also important. Special attention should be paid to the condition of documents, especially in the field of storage. The survey data confirmed that while 31% of respondents perform the tasks assigned to them, 69% of them are assigned to perform several other tasks in addition to their main job. The order of work in which several tasks are performed simultaneously:

> execution of applications – 31%
> digitization of documents – 22%
> scientific and technical processing of documents – 14%
> work with a new founder – 8%
> publication of documents – 7%
> media coverage – 4%
> research – 2%
> reprography – 1%

A very small minority of respondents (1%) reported that they do all the work, because they feel obliged to do additional urgent tasks. At the same time, the topical issue raised by archivists of all state archives is low wages. Only 28% of respondents are satisfied with the salary level whereas 77% are dissatisfied.

From the position of archivists, if one looks at the archives from the inside, then each of them has the main areas of activity and each has its own nuances. It does not matter what exactly the archivist does, but it is important that they should know the entire archival system, the complex of archival works. The archivist should not be limited to his functional task, since technology has advanced far in each direction of archival work and, accordingly, they must know the changes in the principles and approaches in the work of other structures. The materials (carriers) of storage have

changed and therefore the archivist must be versatile. In safeguarding, they must know the methods of preservation, the operation of large data processing centers (DPCs), how data is stored in local servers and how it is filled in, who fills in and how digitization takes place to fill the servers, how safety is ensured in local servers and how archival documents are issued. The issuing department also uses modern technology. There are a lot of narrowly focused specialists, and in order to get an education, a modern archivist needs to turn to several practitioners in his field.

Obviously, in the advanced courses of the Institute of Archival Technologies, archival staff often improve their qualifications in their function and do not try to develop, there is no desire to expand the range of education. They are professionals though. In this regard, it is interesting to explore how IT specialists and analysts work. An analyst who comes to the archive becomes a specialist in all areas and he knows 70-80 percent of the work of each specialist, since he must analyze everything to write an information system. Unfortunately, among archivists there are those who do not deeply know what their colleagues in the archive are doing. Sometimes this leads to misunderstandings and conflicts. In fact, knowing everything is necessary to discuss issues, propose and make an ideal solution. It is impossible to achieve this, while according to the job description, each professional specialist is required to perform four to five functional tasks. During automation, a number of archives faced a problem, although automation meant changing the form of management a little, the form itself is changing, without deviating from the standards prescribed in laws and regulations. In fact, this was only a modification of the work, and according to some archivists, this was perceived as a change in the work itself and the whole mechanism of work would change. This indicated a lack of trust. With knowledge of the work of each section, trust will also appear, which will lead in a logical sequence to the development of the following points. And so training for archivists should be comprehensive. In general, the archivist must know and own everything that the archive does.

The views of other archivists on this matter should be noted as well. Sometimes one can hear that all in one voice say archivists must be prepared. In the 1990s, people, who knew the basics of computer literacy, knew Word, Excel, were valued. Often in job advertisements, this could be found. Now there is a tendency towards progress and a whole generation has a powerful command of new technologies, active users of various programs and are well versed in this. Archivists first of all need to get a basic fundamental understanding of the work of the archive, that is, working with documents. Understand the essence of the work, work with the scientific reference apparatus, look for something, find it. On the other hand, while supporting the innovation of Internet technologies, everything is drawn to electronic, information technology, conferences in recent years only about electronic document and electronic archive. The worst thing is that for many people the understanding of the very essence of the archive is lost, firstly, the storage

of information and the presentation of this information to society, the acquisition of the archive. A young specialist does not need to be loaded with electronic ones, put him at the computer and he himself will deal with the program in a day. Ultimately, whoever comes to the archive to work in their specialty will have to understand for several years how this mechanism works, what kind of state system works, how files are formed and from what, how the nomenclature of files is compiled. A person must understand how it is formed, by what criteria documents are selected, what is written off, what is transferred to permanent storage, where is valuable information. In the head and in practice, to make an examination of the value of documents. The task of archivists is how to determine for the same historians which document is valuable and how to preserve it so that they can work with these documents.[19] Undoubtedly, all this is based on the academic understanding of the archive, the knowledge of which can be achieved through the acquisition of academic knowledge from archival thought to the theory and methodology of archiving.

Conclusions

This study contributes to the literature on the possible impact of computer technology on the work of archivists in the context of digital transformation in Kazakhstan. It is worth noting the following. Only a quarter of the total number of Kazakh archivists were involved in this qualitative study, so it is necessary to be careful in interpreting the results. The results are based on information provided by respondents. And it would be useful to observe the long-term study (longitudinal) of real changes in the impact of computer technology on the archives and the work of archivists, their consciousness. However, despite such limitations, a number of important points can be made. First, computer technology has a universal impact on archives and carries a positive character. In the current state of Kazakhstan's archives, computer technology has a dominant role. Along with their positive impact, the archives took the negative impact as an appeal and showed their readiness to develop a technological methodology without giving up progress. Second, it was found that the difficulties of the archives in the transition to the E-archive are due to shortcomings in the development of the system at the initial stage and the need to correct deficiencies in the work process, as well as the development of new methodologies and amendments to existing legislation. Third, it became clear that modern archivists do scientific research in their work with everyday documents, and their research is primarily a priority for their professional growth, which in turn contributes to the academic development of archives. Fourth, in the context of digital transformation, government support is needed to enhance the status of archives and archivists. As the archive is a center for providing information, the public should

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[19] Vernon, 1985.

be more involved in explaining the meaning of the archive. Archives should become a center for research, a platform for the exchange of archival experience. Academic status should be preserved, and classical education should be its backbone. Innovative technologies should be considered as a tool, and it is important to ensure the combination of traditional methodology and technological methodology. This task can be solved only by archivists who are always ready for new changes associated with the digital transformation, constantly eager for development and innovation.

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