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## **OPTIMIZATION OF THE MANAGEMENT OF THE HIGHER EDUCATIONAL INSTITUTION: PROBLEMS AND PROSPECTS**

### *Abstract*

In the article, the author shares the experience of transforming the traditional document management system in a higher educational institution through the introduction of electronic document management. Working with documents in the traditional format has a number of problems, such as the loss of documents, the accumulation of a huge number of unused documents, the lack of storage places, confidentiality, difficulties in finding the right document, barriers to creating and reconciling. All these factors have a direct negative impact on the work of employees, thereby increasing the workload. The introduction of electronic document management at the university can help solve the above problems. The transformation of the university's documentation system is aimed at improving the quality and efficiency of management, centralizing office work, reducing the cost of maintaining paper workflow, and saving the working time of university staff.

*Keywords:* digitalization; transformation; electronic document management; platform; cyber security; automation.

**Introduction.** The global digitalization process has affected all areas of human life. By participating in it, we observe the integration of physical objects, works and digital processes. In higher education institutions, it became possible to monitor work processes online, de-bureaucratize decision-making processes, delegate a number of works, improving the interaction of machines between themselves and employees of departments [1].

The successful implementation of new digital solutions will significantly increase the productivity and efficiency of business processes, as well as the competitiveness of universities in the educational market. In Kazakhstan, one of the impetuses in the transition to a digital society was the state program «Information Kazakhstan-2020», approved in 2013. At the beginning of 2017, the President of Kazakhstan, in his message to the people, announced the third modernization, in which he identified the key role of digitalization.

**Main body.** The digitalization process does not bypass the participants in the education process and sets new challenges for the entire university community. One of the tasks is due to

the fact that educational institutions are faced with the need to optimize the document management system. The growth of documentation requires greater formalization of business processes and the transfer of paper workflow to an electronic platform. Electronic document management provides the process of creating, managing and distributing digital documents on the digital platform of the university [2].

An automated corporate document management system reduces the time for creating and processing an electronic document, reduces the risk of losing documents and makes it possible to monitor the execution of instructions by the administration of an educational institution. All this in general, increases the efficiency of the functioning of all departments of the organization [3]. In the process of introducing electronic document management, it is necessary to take into account the likely technological, regulatory and organizational barriers [4].

**Methodology.** The current research is primary, longitudinal, mixed methods research in that it aims to collect, analyse, and integrate qualitative original data. Author

intends to study qualitatively the response of the university to electronic documentation system implementation, learning experiences, and educational process. The faculty work-related outcomes, on the other hand, shall be investigated quantitatively. The research approach that author has chosen to adopt for the project is case study. The case under the study is higher education institution in the Republic of Kazakhstan. Author intends to understand a particular phenomenon in depth within its natural environment of manifestation. Working with documents in the traditional format has a number of problems, such as the loss of documents, the accumulation of a huge number of unused documents, the lack of storage places, confidentiality, the laboriousness of finding the right document, the difficulty in creating and coordinating [5]. All these problems require immediate solutions.

It is necessary to find out whether the introduction of electronic document management at the university will solve the above problems? The expected results from the introduction of electronic document management include a noticeable more coordinated work of departments, an increase in the speed of execution of instructions and employee satisfaction [6]. The traditional type of workflow organization requires automation of the processes of receiving, processing and distributing incoming documents; signing, registration and distribution of outgoing documents; registration and sending of intra-university documents; correspondence with external organizations.

The transformation of the workflow system is aimed at improving the quality and efficiency of management, centralizing office work, reducing the cost of maintaining paper workflow, and saving the working time of university staff [7].

In the article, the author shares his experience of implementing an electronic document management system at the university. The author pays attention to the need to pay reverent attention to each participant during transformations. The participants in the transformations of this implementation include the founders, top management of the university, teaching,

administrative and management and economic staff. The complete success and achievement of the goals of the implementation process directly depends on the full due attention to the interests of the participants and the satisfaction of their needs [8]. This principle was the core in all processes related to the implementation of new solutions at the university. It is likely that non-compliance with this principle leads other universities and organizations to fail to achieve their originally set goals.

**Results.** This case can be applied in the process of transition from a traditional document management system to an electronic one, not only by universities, but also by other organizations. Or those organizations that wish to switch to a “full-fledged” electronic document management. By the word “full-fledged” the author means the possibility of switching to electronic document management by all employees of the organization [9]. To date, there are organizations that practice the experience of “hybrid” business processes, where a limited number of employees can use electronic document management. The main reason for this decision is the high cost of software. In this case, the author shares the experience of the university in solving pressing problems in the implementation of electronic document management in modern conditions.

At the initial stage, a working group headed by the rector at the university studied a number of issues related to the organizational structure of the university, the features of the work of the departments and their set of documents. The entire set of documents is presented in the nomenclature of the university affairs. Some documents are external, and some are the result of the activities of departments. The working group for each of these documents prescribed digital routes with the possibility of specifying deadlines for continuous monitoring of the execution of instructions. One of the limitations is the insufficient formalization of the processes taking place at the university, the periodic transfer of functions from one department to another. In addition, many orders are issued orally.

The proposed document management system was discussed at the academic council of the university, where it was decided to give

official force to electronic documents. Based on the decision, the rector issued an order on the admissibility of using documents in electronic form. Each employee, as a user, was given logins and passwords. The user's personal account is integrated with corporate email.

There were difficult tasks on the shoulders of IT specialists. Work on software support and timely prompt elimination of problems on program issues played a big role in preventing the creation of a negative image of the electronic document management system. Work was carried out to analyze the workplaces of employees and their technical equipment.

It is noteworthy that the university did not abolish paper workflow. Still, this is a transitional period. It would be a huge risk to switch to electronic document management overnight completely. For the convenience of employees, an alternative was created. And at the moment, it is actually more convenient for employees to work on an electronic document management platform, which is confirmed by almost 98% of the employees of the educational institution. The university is not an isolated organization and has connections with numerous companies and departments of the country. The digitalization process is not moving at the same pace everywhere. In this regard, a number of problems arise, namely, the support of electronic documents with paper ones, as well as with a "live" signature from the hand of the first head. Regulatory documents related to digitalization still need to be finalized. At the university, internal documents, such as orders, are printed out after electronic approvals. These are the final products of the work of employees and only in a single copy, which still led to a significant reduction in the number of paper documents.

The working group plays a significant role in the introduction of innovations. In the experience of the researched university of the author, it was headed by the first head of the organization, the rector. A clear distribution of responsibilities among the team members, which included IT specialists, HR employees and top managers, helped to convincingly and painlessly implement the new platform.

Numerous meetings and seminars of employees with the rector as a person with sufficient authority, and support for his activities by the heads of departments of the university played a decisive role in the positive outcome [10]. At the initial stages, groups were assembled that included the most proactive representatives of all structural divisions. Numerous training workshops have been held for this group. Further, these initiative groups conducted a series of trainings in their units. All this was done for high-speed implementation, participation of employees in innovation. IT-specialists now have the opportunity to work only with rare issues. Among conservative employees there were a number of resistances of various kinds. The working group promptly analyzed situations and applied individual approaches in solving problematic issues. It must be understood that any organizational transformations force people to reorganize to another way of working that is completely unusual for employees. The task before the working group was colossal: to convince employees of the need to switch to electronic document management and explain the main advantages of electronic document management, making the transition minimizing possible stress and preventing the development of conflict situations. The main thing was not what was implemented, but the way it was implemented.

The issue of choosing the program itself requires special attention. There are many different offers on the market. The selection criteria for the study university were the difficulty of using the program and the cost of the program. Ten programs were tested. Despite the statements of the development companies about the intuitiveness of the interfaces, in reality they turned out to be very difficult to understand and even more so to use. This was revealed through trial use of test beta versions of programs by employees of the university under study. It was also noted that the software does not fully cover the entire necessary range of functionality of a higher educational institution. The reason is that these programs were not originally written for the business processes of the organization under study. Regarding the cost of programs, it was

noticed that pricing is formed from the number of users. The amount of time and business were not taken into account. In fact, some employees spend almost half of their daily working hours in the program, while others spend only once or twice a year. Pricing based on the number of users is focused on the profit of the company only [11]. It's very expensive for a university. In a number of higher education institutions, the experience of a limited number of users is practiced. In the studied university, the task was to make a «full-fledged» transition to electronic document management. In the proposed programs, the number of users should not play a role. If necessary, the organization should be able to make changes in the encoding of the program for its needs [12]. The purchase was made in favor of a program that answered the two most important parameters: cost and intuitiveness of the interface. The annual cost is up to one million tenge and the number of users is not limited. Based on the results of the test group, the interface was rated positively. Moreover, full-time programmers had the opportunity to make changes to the software. Questions regarding cyber security have not gone unnoticed [13]. The supplier has provided security monitoring tools. In addition, the university purchased a server for all kinds of occasions. The Department of Information Technology monitors the cyber security of the platform.

**Discussion.** Discussing the results of the introduction of electronic document management, it is possible to state the following

convenience outcomes for the university: registration of incoming, outgoing and internal documents of the university, monitoring the execution of instructions on time; automatic archiving, a database of ready-made template documents in the program, saving time and bureaucratic barriers in the circulation of documents, quick access to the necessary documents, ensuring the confidentiality of documents, transparency of departmental interactions, reducing problems with the need for paper sheets and filling printer cartridges, reducing the overall workload of employees, access to all documents outside of work [14].

**Conclusion.** Two years of experience on the electronic document management platform has justified and continues to justify the initial expectations. The initially set goal of reducing the workload of university employees through the optimization of the document management system has been achieved. In addition, funds were saved on printing paper and replacement of printer cartridges and their technical support, bureaucratic barriers were overcome, sanitary and epidemiological requirements were met by minimizing face-to-face interpersonal contacts, and the transparency of the document management system was ensured. The high rate of use of electronic document management by employees is the main indicator of effective implementation [15]. The higher education institution managed to improve the quality of the document management system without increasing the staff members.

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### **Жоғары оқу орынын басқаруды оңтайландыру: проблемалар мен мүмкіндіктер**

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*Аңдатпа*

Мақалада автор электронды құжат айналымын енгізу арқылы жоғары оқу орнында дәстүрлі құжат айналымы жүйесін трансформациялау тәжірибесімен бөліседі. Дәстүрлі форматтағы құжаттармен жұмыс істеуде құжаттардың жоғалуы, пайдаланылмаған құжаттардың көптеп жиналуы, сақтау орындарының болмауы, құпиялылық, дұрыс құжатты табудағы қиындықтар, құру мен үйлестірудегі кедергілер сияқты

бірқатар мәселелер бар екендігі жоғары оқу орнының қызметкерлеріне мәлім. Осы сияқты факторлардың барлығы қызметкерлердің университеттегі жұмысына тікелей кері әсерін тигізіп, сол арқылы жұмыс көлемін арттырады. Университетте электронды құжат айналымын енгізу жоғарыда аталған мәселелерді шешуге алып келуі әбден ықтимал. Университеттің жұмыс процесі жүйесін өзгерту басқарудың сапасы мен тиімділігін арттыруға, іс жүргізуді орталықтандыруға, қағаз айналымын жүргізуге кететін шығындарды азайтуға және университет қызметкерлерінің жұмыс уақытын үнемдеуге бағытталған.

*Түйін сөздер:* цифрландыру; трансформация; электронды құжат айналымы; платформа; киберқауіпсіздік; автоматтандыру.

### Оптимизация менеджмента высшего учебного заведения: проблемы и перспективы

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#### *Аннотация*

В статье автор делится опытом трансформации традиционной системы документооборота в высшем учебном заведении путем внедрения электронного документооборота. Работа с документами в традиционном формате имеет ряд проблем такие как потеря и накопление огромного количества неиспользуемых документов, отсутствие мест хранения, соблюдение конфиденциальности, сложности в поиске нужного документа, барьеры в создании и согласовании. Все эти факторы напрямую оказывают негативное воздействие на работу сотрудников, повышая тем самым трудовую нагрузку. Внедрение электронного документооборота в университете может помочь решить вышеперечисленные проблемы. Трансформация системы документооборота университета направлена на повышение качества и оперативности управления, централизовать делопроизводство, сократить затраты на поддержание бумажного документооборота, экономия рабочего времени сотрудников университета и снижение трудовой нагрузки сотрудников.

*Ключевые слова:* цифровизация; трансформация; электронный документооборот; платформа; кибербезопасность; автоматизация.

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### ШАЛА ТУЫЛҒАН РЕНИНОПАТИЯСЫ БАР ЕРТЕ ЖАСТАҒЫ БАЛАЛАРДЫҢ ӘЛЕУМЕТТІК-КОММУНИКАТИВТІК ЖӘНЕ ҚИМЫЛ- ҚОЗҒАЛЫС ДАҒДЫЛАРЫН БАҒАЛАУ

#### *Аңдатпа*

Қоғамдық ұйымдардың бастамасымен Қазақстан мүмкіндігі шектеулі адамдарды қолдаудың әлеуметтік-білімберу моделіне көшуде. Осы үлгіге сәйкес, мүгедектіктің денсаулық және жұмыс істеу қабілетін халықаралық классификациясы (ICF) шеңберінде бағалау және көмек көрсету қажет етеді. Функционалдық қызметтің халықаралық классификациясы – бұл бүкіл әлем мамандары мойындаған