



Студенттер мен жас ғалымдардың
«ҒЫЛЫМ ЖӘНЕ БІЛІМ - 2018»
XIII Халықаралық ғылыми конференциясы

СБОРНИК МАТЕРИАЛОВ

XIII Международная научная конференция
студентов и молодых ученых
«НАУКА И ОБРАЗОВАНИЕ - 2018»

The XIII International Scientific Conference
for Students and Young Scientists
«SCIENCE AND EDUCATION - 2018»



12th April 2018, Astana

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Л.Н. ГУМИЛЕВ АТЫНДАҒЫ ЕУРАЗИЯ ҰЛТТЫҚ УНИВЕРСИТЕТІ**

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БАЯНДАМАЛАР ЖИНАҒЫ**

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The proceedings are the papers of students, undergraduates, doctoral students and young researchers on topical issues of natural and technical sciences and humanities.

В сборник вошли доклады студентов, магистрантов, докторантов и молодых ученых по актуальным вопросам естественно-технических и гуманитарных наук.

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relationships, as well as in criminal cases of small and medium gravity. With an active appeal to the mediation of both citizens and legal entities, it is possible to significantly reduce the burden on the judicial system, thereby improving the quality of the solution of the most important cases. According to international statistics, 30-40% of all disputes pass through the mediation procedure, 85% of them achieved positive results. In Kazakhstan the institution of mediation is only being formed, while in Western countries it has long spread and shows its effectiveness. It is believed that due to the positive experience and history of resolving disputes in the traditional legal system, we have the opportunity to achieve the same peaks of fair justice through mediation.

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DIGITAL KAZAKHSTAN: HYPE OR REALITY?

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Introduction. Nowadays Kazakhstan aims to be in the list of the top thirty countries. To reach this goal, one of the criteria is to implement digitalization process and make it work successfully. So the issues whether Kazakhstan is ready to become ‘digital country’ is among the heated debates. For that reason, this research focuses on expanding knowledge about digitalization and assessing the extent to which we are ready for this process. Moreover, the article contains some recommendations of actions that are relevant and needed to be taken to increase effectiveness of digitalization. The relevance of digitalization can be even noticed from the fact that the President took the responsibility to monitor the implementation process and even take strict measures in case the current government fails to reach this goal: *“Can this government fulfill it? If not, we will appoint another government to implement the concept “Digital Kazakhstan”. Digital Kazakhstan is our future. There is no other way,”* says N.A. Nazarbayev. It was announced during the national teleconference “New industrialization of the country: leap of Kazakhstani leopard”. In his speech, the head of state reminded that he had already instructed the government to develop the program. He highlighted that currently it is important not to lag behind, not to “blunder”. [1]

Actually, his position is justified, because the unpredictable rapid development of the digitalization has already become a weighty world trend. Foreign experience shows the effectiveness and improvement in economy: the growth of Gross Domestic Product, creation of new job places, and development of IT. In view of the positive results we should accelerate digitalization. This article investigates the feasibility and effectiveness of the concept “Digital Kazakhstan”.

Research question. The article attempts to investigate the following research questions:

1. Is the concept of “Digital Kazakhstan” hype or reality?
2. What are the strengths and weaknesses of digitalization?
3. What are the opportunities and threats of digitalization?

To begin the discussion we should first define the concept of “digitalization” and buzzword

“hype”? Digitalization can be defined in many different ways, but the most common is —the mass adoption of connected digital services by consumers, enterprises, and governments—has emerged in recent years as a *key economic driver* that **accelerates growth** and **facilitates job creation**. [2]

Gartner provides a more business-oriented definition of digitalization: “Digitalization is the use of digital technologies to change a business model and provide new revenue and value-producing opportunities; it is the process of moving to a digital business”. [3]

In the context of this article digitalization is an integration of internet computer technologies into all aspects of daily life. Among the bright examples of digitalization are smart mobility, e-commerce, smart houses, e-healthcare, e-government and smart cities.

Hype is a slang that means extravagant or intensive promotion. When you google the word “hype”, you will get about 20 million sources referring to this buzzword. Cambridge Dictionary defines the word “hype” as “a situation in which something is advertised and discussed in newspapers, on television, etc. a lot in order to attract everyone's interest”. [4]

Methodology. For the empirical part of the article we conducted an online survey consisting of questions to identify the concept of “digitalization”. The survey could be accessed at this link: https://docs.google.com/forms/d/e/1FAIpQLSfbpaa-hC_tIU3uqxvi7bK3zYQH9QZ1VoOaXJE4WSOOF4Q/viewform

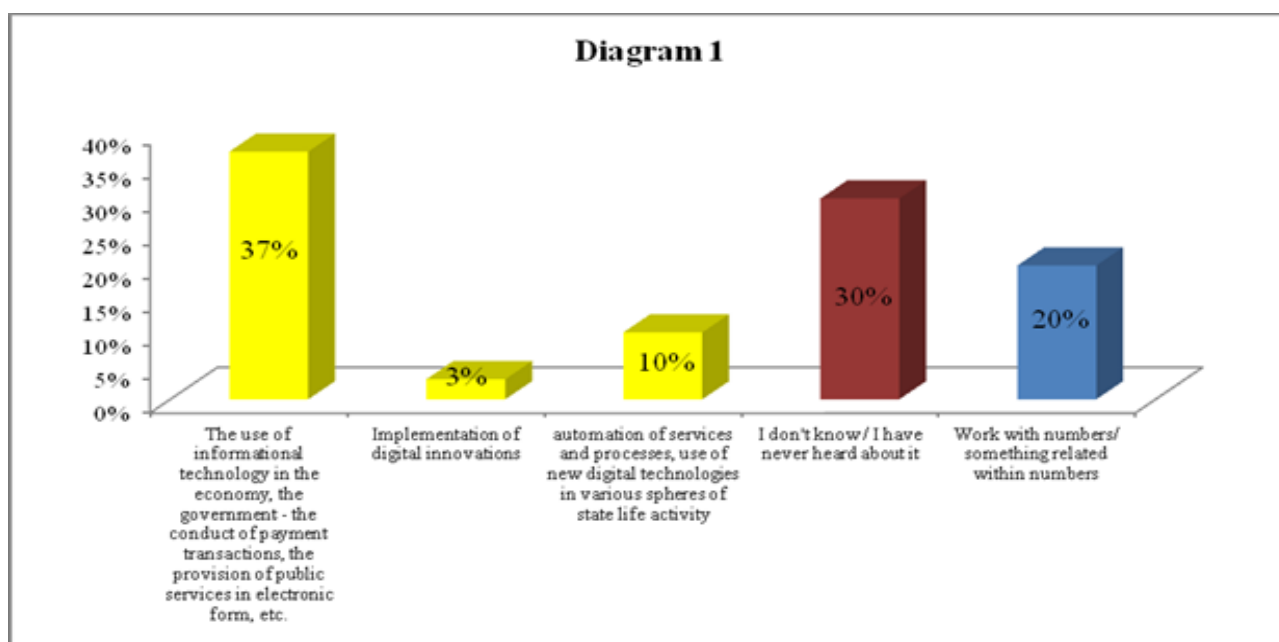
The survey attempts to define the concept of “digitalization” and seeks an answer to the question whether the concept of “Digital Kazakhstan” is a hype or reality, i.e. whether Kazakhstan is ready for digitalization. The number of respondents: 20, aged between 16 and 35. The percentage by sex: 40% male; 60% female.

Moreover, to strengthen the findings we conducted SWOT analysis on the term “digitalization” and revealed strengths, weaknesses, opportunities and threats of digitalization.

Analysis and results.

First of all, we asked the respondents to define the word “digitalization”, because currently one of the relevant tasks of the government on the agenda is to inform Kazakhstani people about it. This question will help to analyze: do people know about digitalization and how well do they understand the meaning of it?

Diagram 1. Q-1: Define the word “digitalization”



The Diagram 1 shows that 50% of the respondents understand the meaning of the term, which is colored in yellow: 3 acceptable definitions. While 30% of them have never heard about it and 20% defined it incorrectly.

Diagram 2. Q-3: Do you think Kazakhstan is ready for a full transition to digitalization?

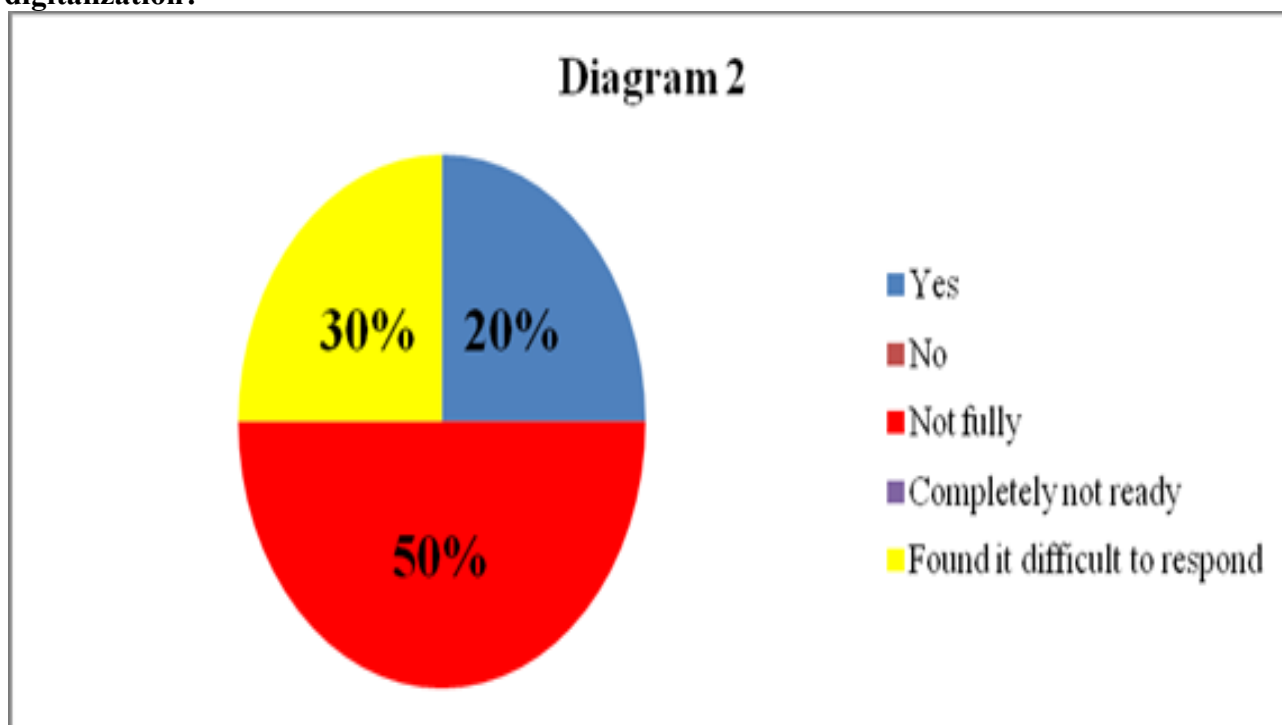


Diagram 2 represents public opinion on the level of readiness for a full transition to digitalization. As can be seen from the pie chart there are only 3 options that were chosen out of 5. In addition, if the respondent chose the second, third or fourth options, we asked to identify the possible solution to be completely ready to implement digitalization. Table 1 directly connected within Diagram 2, because 50% of the respondents recommended solutions as follows:

Table 1. What are the solutions to implement digitalization?

Solution	Percentage (%)
Training the population	10%
Providing with the accessible Internet and technology to schools, villages, cities and regions	40%
Availability of digital technologies and ease of use, the digital literacy of the population	20%
Informing the public about the importance, convenience of using technology. Simplification of bureaucratic apparatus for quick access to technology.	20
Implementing the subject	10%

According to the survey, only half of the respondents understand the meaning of the digitalization. Moreover, this 50% of the participants realize the problem of it and able to recommend valuable solutions that can help to make it successful. It should be noted, that answers mostly focus on two points: 1) educating people and 2) providing with the accessible Internet and making digital technologies available. The combination of all those solutions can be very useful to the government, to find a better way of solution. However, as it was mentioned before, the 50% is not enough, this indicator must rise, it can be done by educating people via TV, workshops, social media and other tools, because 30% of the respondents have never heard about it and 20% think that digitalization is something related to the numbers and math only. In addition, informing people

about digitalization should not be limited by the age, so the older generation also is able to make a contribution.

Table 2. The results of SWOT analysis

Strengths	Weaknesses
<ul style="list-style-type: none"> • boost the economy • new work places • absence of human factor (less mistakes that will provide better quality of the product) • improving the quality of the service, for example in medicine: collaboration of machine and doctor • better access to the education, online courses, based on the foreign experience: coursera, edX and etc. • development of agriculture in accordance within the international experience: <i>One of such vivid examples is the Israeli system of exact agriculture Taranis, which is based on technologies for processing large data. This system has allowed Israel, with its complex conditions for agriculture, not only to fully provide itself with food, but also to become one of the exporters of agricultural products. This reform also led to a multiple increase in labor productivity: today, one farmer in Israel feeds more than 100 people.</i> • acceleration of the information exchange • emergence of new business opportunities • creation of new digital products 	<ul style="list-style-type: none"> • economy should be ready for digitalization to boost it • loss of workplaces like: clerks and administrative staff, truck drivers and etc. • focus on young and future generation only • absence of IT startups, because of low salary and unpromising quality of education • reeducation of white-color workers • insecurity of private information (<i>For example, the incident happened at the one-stop shop in Kazakhstan when all personal data of the woman was made publicly available</i>) • bureaucracy • some projects have already started. However, they are not developed enough: e-gov (see the work of Maxat Kassen, E-Government in Kazakhstan: Realization and Prospects) • absence of qualified human resource • the vulnerability of state information networks and companies to hacker attacks, the risk of data loss or theft.
Opportunities	Threats
<ul style="list-style-type: none"> • to be in the list of top 30 countries of the world • develop a computable economy • less harmful work places: Only one example, for the first quarter of 2017, in the case of accidents at work, 342 people suffered, the number of deaths was 43. Compared to the previous year, there is a decrease in injuries by 14.7%, death by 8.5%. 	<ul style="list-style-type: none"> • job losses • pressure on the budget • IT illiteracy • lack of IT specialists • unaffordable digital technologies

Digitalization is a step for the future that will help Kazakhstan to be in the list of top 30

countries. It will definitely be beneficial. However, it depends on the goal that we set. If we want to reach the development goals announced by the President as it was mentioned before, digitalizations should be implemented step by step, because there is a chain of measures to be done. For example, informing citizens about digitalization, training specialist in all spheres, since in the era of digitalization they will have to work with new technologies, which demands huge amount of money to buy it, and train people how to use it. Moreover, we need to find alternative ways to compensate the job places lost, which will impact on unemployment rate of Kazakhstan negatively for a time, because government will have to consider workers who have been working in the factories for a long time and now their job will change completely. Moreover, the international experience shows that countries which reached better results, are the countries which has well-developed service. Status quo shows that Kazakhstan has some problems with the service. Therefore, there are huge pressure on analytics and government, which have to find a way to overcome the weaknesses, take into account national, regional features and launch the implementation mechanisms.

Conclusion. Over the last 20 years, the world is creating digital systems, i.e. setting digitalization – we translated documents into electronic versions and learned to work with them. An inevitable preparatory stage has successfully completed. Now, we raise a question in terms of using smart elements in the technology management and production processes has become increasingly acute. First and foremost, we need human resources, high-class professionals for successful implementation. Sufficient funding is required. For the time being, Kazakhstan spends only 0.2% of its GDP for these purposes, whereas the developed countries invest over 3% to digitalization. [5] It is real to become digital and competitive country, if we hold the right direction. Overall, we conclude that the concept of “Digital Kazakhstan” is reality with some challenges which should be overcome rationally and cost-efficiently.

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PUBLIC-PRIVATE PARTNERSHIP IN KAZAKHSTAN: PROSPECTS AND CHALLENGES

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Introduction. Nowadays every developed country or a country that aims to be on this list draws attention to the economic and social issues. Public-private partnership (PPP) gives an opportunity to connect business and government to solve socio-economic problems. Public-private partnership can be defined in many different ways. For example, the [PPP Knowledge Lab](#) defines a PPP as “a long-term contract between a private party and a government entity, for providing a public asset or service, in which the private party bears significant risk and management responsibility, and remuneration is linked to performance”. [1] However, every country upon the