

МРПТИ 14.01
УДК 378



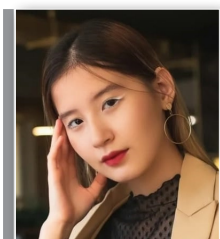
ИСКАКОВА Д.
PhD, ассистент профессора
Astana IT University,
Нур-Султан, Республика
Казахстан

ISKAKOVA D.
PhD, Astana IT University,
Nur-Sultan, Republic of
Kazakhstan



ЕРЛЕШ М.
Astana IT University,
Нур-Султан, Республика
Казахстан

YERLESH M.
Astana IT University,
Nur-Sultan, Republic of
Kazakhstan



АЗЕМХАН А.
Astana IT University,
Нур-Султан, Республика
Казахстан

AZEMKHAN A.
Astana IT University,
Nur-Sultan, Republic of
Kazakhstan

EDUCATIONAL INSTITUTES AND DISTANCE LEARNING: CURRENT ANALYSES AND PROSPECTIVE

БІЛІМ БЕРУ МЕКЕМЕЛЕРІ ЖӘНЕ ҚАШЫҚТЫҚТАН ОҚЫТУ: АҒЫМДАҒЫ ТАЛДАУ ЖӘНЕ ПЕРСПЕКТИВАЛАР

ОБРАЗОВАТЕЛЬНЫЕ ИНСТИТУТЫ И ДИСТАНЦИОННОЕ ОБУЧЕНИЕ: ТЕКУЩИЙ АНАЛИЗ И ПЕРСПЕКТИВЫ

ABSTRACT. The task of joining the Republic of Kazakhstan among the 50 most competitive countries in the world can be resolved in the event that the country has highly qualified specialists with knowledge of high technologies, managerial skills, able to navigate the market economy if an effective system is created and education that meets the needs of the global market economy. Research was conducted with aim to provide brief analytical observation and made a prediction of the future distance study development. During the research was conducted an interview and questioning, provided international statistic of COVID -19 impact to the education process.

KEY WORDS: *education, distance learning, COVID impact, quality of remote study.*

АННОТАЦИЯ. Задача вхождения Республики Казахстан в число 50 наиболее конкурентоспособных стран мира может быть решена в случае наличия в стране высококвалифицированных специалистов, владеющих высокими технологиями, управленческими навыками, способных ориентироваться в условиях рыночной экономики, при наличии эффективной системы и образовании, отвечающим потребностям мировой рыночной экономики. В статье проведено исследование с целью дать краткий анализ и сделать прогноз дальнейшего развития дистанционного обучения. В ходе исследования было проведено интервью и анкетирование, предоставлена международная статистика влияния COVID-19 на образовательный процесс.

КЛЮЧЕВЫЕ СЛОВА: *образование, дистанционное обучение, влияние COVID, качество дистанционного обучения.*

АҢДАТПА. Қазақстан Республикасын әлемдегі бәсекеге барынша қабілетті 50 елдің қатарына қосу міндетін егер елімізде жоғары технологиялы, басқарушылық қабілеті бар, нарықтық экономикада жолға түсе алатын, тиімді жүйесі бар, жоғары білікті мамандар болса, шешуге болады. Әлемдік нарықтық экономиканың қажеттіліктерін қанағаттандыратын білім беру. Мақалада қашықтан оқытуды одан әрі дамытуға қысқаша талдау жасау және болжам жасау мақсатында зерттеу жүргізілді. Зерттеу барысында сұхбаттар мен сауалнамалар жүргізіліп, COVID-19-ның білім беру үдерісіне әсері туралы халықаралық статистика ұсынылды.

ТҮЙІН СӨЗДЕР: *білім, қашықтықтан оқыту, COVID әсері, қашықтықтан оқыту сапасы.*

INTRODUCTION. Education is the process of acquiring a set of certain meanings and senses, such as knowledge, skills, habits, beliefs and values. People are implementing their personal development and critical thinking through getting knowledge. This process, which can continue throughout a life gives us techniques, and understandings about the world,

culture and duties, which our nation and country appreciate and gives value. An educated person can make mostly the right decisions, relying on fundamental knowledge and analytical skills, and it makes them a great person in society. Education is the main priority and the main indicator of development in all civilised countries of the world.

Indeed, countries compete not only in goods and services - they compete in systems, social values and education systems.

In order to bring out a worthy future for the country, it is necessary to pay attention and strength not only to universities but also to schools. Make sure that all schools and pupils have access to the Internet, a sufficient number of books and other essential things for school children. Having access to the Internet has become urgent during the last two years since the pandemic situation took place and students and school pupils all over the world switched to online education.

The paradigm of mainstream schooling has changed dramatically over the past few years, due to the COVID-19 situation. With the introduction of the Internet and new technology, existence in the classroom is no longer the sole method to study.

MATERIALS AND METHODS OF RESEARCH.

By late March 2020, educational institutions globally were partially or completely shut down to help contain the spread of COVID-19. Combined with similar approaches from businesses in addition to social distancing, masks, and other measures, only temporary containment of the virus was achieved for many countries, COVID case counts resurging for many as restrictions were lifted. According to UNESCO, educational institutions in 52 countries were closed due to COVID-19 as of September 30, 2020. Schools and universities in an additional 44 countries are partially closed.

As we can see from the graph above, the number of affected learners is estimated as the sum of

registered students across all education levels (pre-primary, primary, secondary and tertiary) in countries in "closed for COVID" - "19" or "Partially closed" in UNESCO monitoring database [1]. This shows how universities were not ready to implement such drastic changes, and subsequently suffered critical consequences.

The pandemic has had a significant impact on the way the world works, leading to the adoption of new innovative solutions to new problems. During this time, many professional spheres were in danger of reducing the quality of education. While self-preservation has been a key coping strategy during the pandemic, adaptability and change management has played a significant role in decision-making. Thus, the field of education can be called one of the areas that has remained under the greatest influence of the epidemic. Moreover, this sphere was one of the less prepared to transfer its activities to an online format.

Pareto Chart, this graph may be used to show the most common or accountable issues for service faults. It will assist the team in narrowing the scope of a project or improvement area to the most impactful area, or in determining the most important area. So, here also 10 problems that a frequent appear during the online education.

At the same time, referring to the "Coursera" report for 2021, it can be clearly seen that after the COVID-19 and during the pandemic period, the number of online learners grew rapidly and significantly. Coursera - massive online education project founded by Stanford University computer

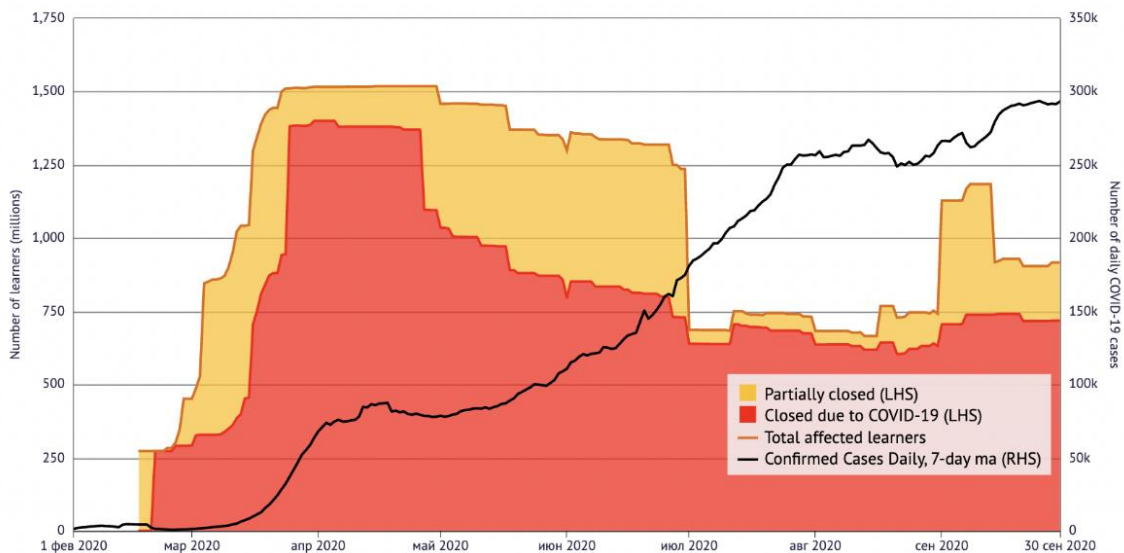


Figure 1 - COVID-19 impact on students

PROBLEM ANALYSIS - PARETO CHART, EDUCATION APP

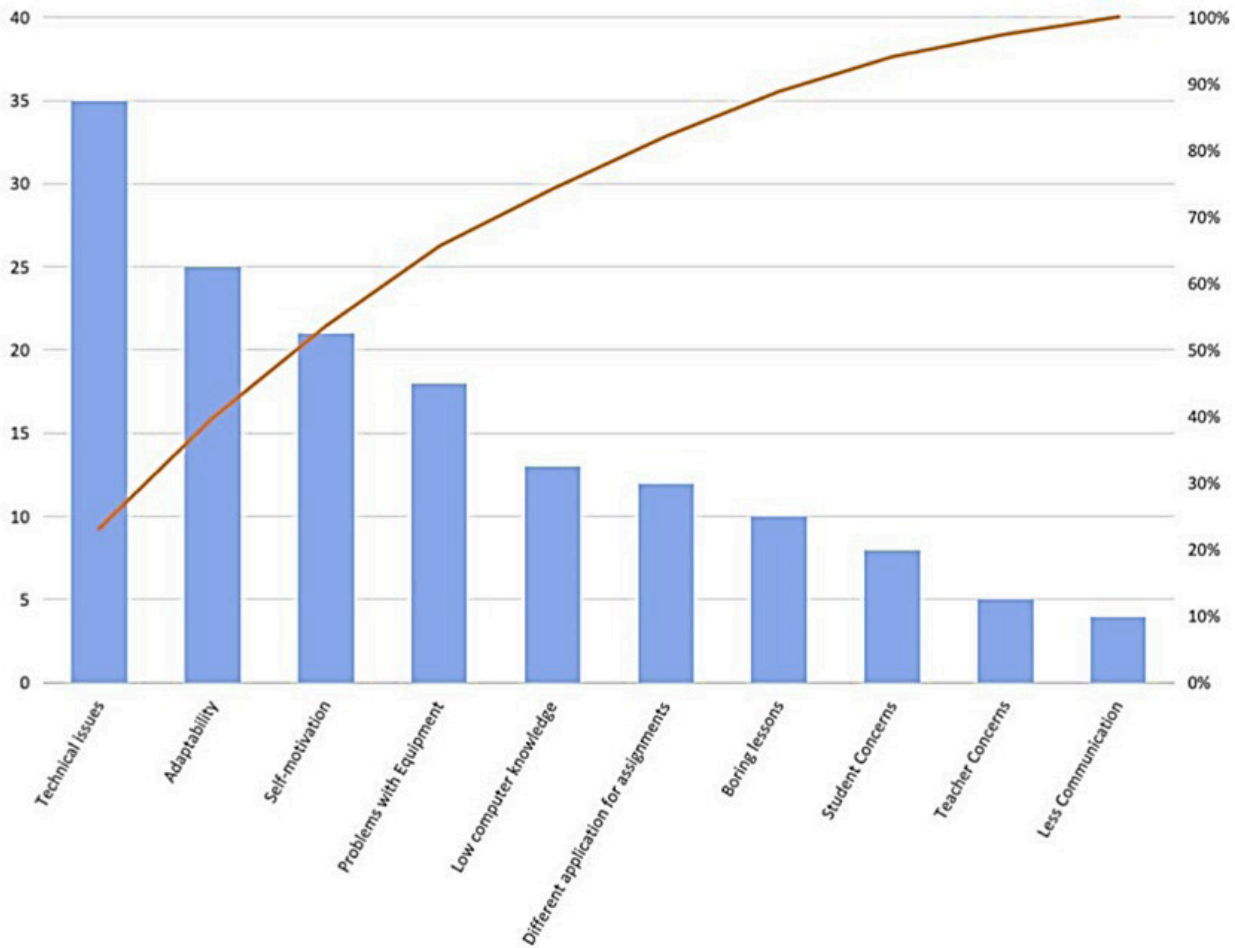


Figure 2 – Online education problems

science professors Andrew Ng and Daphne Koller [2].

RESULTS AND THEIR DISCUSSION. Table 1 openly demonstrates how Kazakhstan leads the list of closed schools in distance learning. In Kazakhstan,

coronavirus restrictions have affected schools more than in other Central Asian countries, the EAEU, as well as some European countries, including developed ones. Thus, the schools of the Republic of Kazakhstan were closed for a record 11 months and

More learners are accessing online learning

The demand for online learning on Coursera continues to outpace pre-pandemic levels.

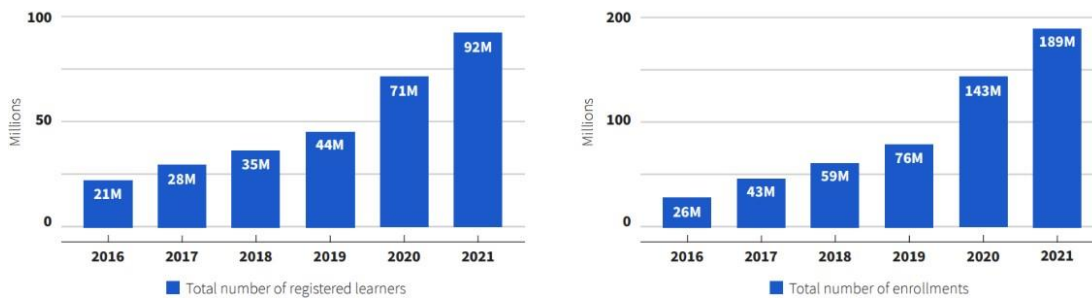


Figure 3 – Demand of online education on Coursera

3 weeks, of which almost 2.5 months - completely, 8 months and 3 weeks - partially.

Accordingly, the load on the infrastructure due to distance learning in the Republic of Kazakhstan was noticeably higher than in other countries. For example, in Kyrgyzstan, school closures lasted only 6.5 months, in Russia, Armenia and Uzbekistan - about 3 months. And in countries that are "covid-dissident" (for example, Tajikistan, Turkmenistan or Belarus), they did not switch to distance learning at all, and schools did not close [3].

When the quarantine began, every educational institution transferred to remote study. After a year of remote study most of the users indicate that remote teaching and learning is comfortable.

The Figure 4. shows that most people like online learning and it is convenient for them (50.7%), also there are the number of those who like, but experienced difficulties is also quite large (34.7%). There is another category of people who do not like

and find it difficult to study remotely, their number is 6.7% in the survey. If we correlate these indicators with age, then basically people aged 12 to 19 prefer online learning, but some difficulties arise for them in the process. Thus, we can make a prediction that in the future remote education will develop.

Internet access and IT technologies create a midst of a new era in education. Where are many advantages of e-Learning: flexibility, a wide selection of programs, accessibility, cost-effectiveness and other positive sides.

Also, the impact of COVID-19 on educational institutions can be seen as an opportunity to restore education at a higher level. While the pandemic has significantly disrupted the education system and exacerbated inequalities, it has also presented opportunities for changing pedagogies: new ways of teaching and learning, new ways of communicating with students and new roles to increase the overall level of concern for student well-being in

Table 1 – School closure during the pandemic Feb 2020 - July 2021 (weekly)

Country	Total restriction of school activities	Partly closed	Completely closed
Kazakhstan	44,3	35,0	9,3
Poland	43,1	18,7	24,4
Germany	37,9	23,6	14,3
Italy	37,6	24,3	13,3
Denmark	34,1	26,4	7,7
Netherlands	30,7	19,1	11,6
Norway	29,4	24,6	4,9
United Kingdom	27,0	11,4	15,6
Kyrgyzstan	26,6	12,1	14,4
Portugal	24,1	12,3	11,9
Spain	15,0	5,0	10,0
Russia	13,0	13,0	0,0
Armenia	12,4	3,4	9,0
Uzbekistan	11,7	1,0	10,7
France	11,7	4,9	6,9
Switzerland	6,4	0,6	5,9
Tajikistan	0,0	0,0	0,0
Turkmenistan	0,0	0,0	0,0
Belarus	0,0	0,0	0,0

Are you comfortable teaching/learning remotely?

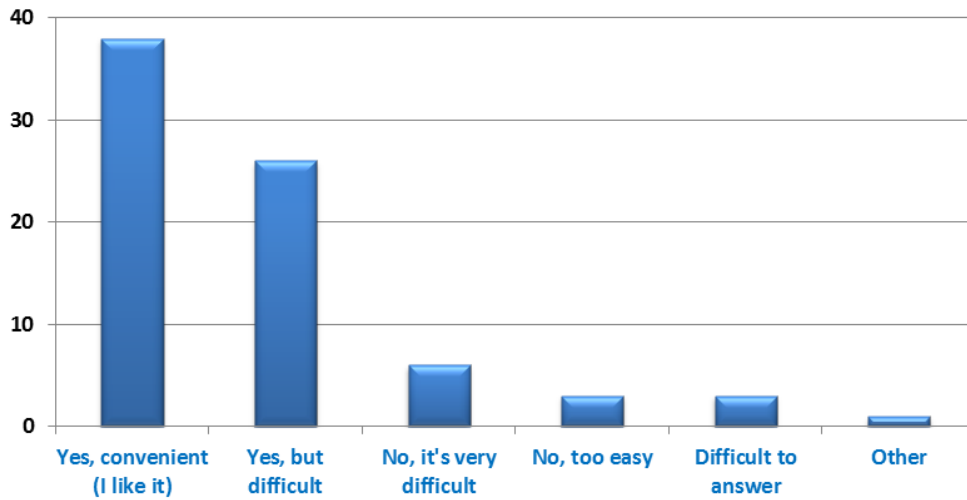


Figure 4 – Respondents' preferences for online education

education. The experience and lessons learned from this workshop will be valuable for years to come in reforming education. This is an opportunity not to be missed that requires a planning process that constantly assesses the situation, plans to address inequalities, encourages recording and documenting processes and outcomes of actions, and monitors and evaluates approaches to improve their effectiveness and support what works.

As we see in the table above, according to the change management principle, it is possible to make significant changes in the field of education according to the proposed scheme: Access -> Planning -> Assessment -> Actions.

A PESTLE analysis is a tool used to gain a macro picture of an industry environment. PESTLE stands for Political, Economic, Social, Technological, Legal and Environmental factors [4].

PESTLE Analysis of the project was identified to gain more information about the industry environment. Political forces are only about tax regulations, especially the minimum wage and new tax regulations. Economic forces show that there attracted 67 billion tenge in Kazakhstan startups, which means the project has the opportunity to be realised. Social factors are about the new trends of e-learning among people. But according to the Technological forces still exist with internet

Table 2 - 4 stages of planning under uncertainty

Access	Analysis of the case in terms of credentials, activity, well-being, and security (ALL children, disaggregated gender data, ethnic accessories, level of payment, disability, and location of residency).
Planning	Action planning is based on existing strengths, eliminating imbalances in education, prioritizing schools and the needs of the larger group.
Assessment	Monitoring and evaluation to help identify areas where improvements can be made and to save what is working.
Actions	Realize the set goals; record and document progress and results

Table 3 – Macro-environment forces (PESTLE) Analysis

Political forces:	Amendments to the Tax Code, increase in the subsistence minimum, pension surpluses. From January 1, 2022, the minimum wage increased from 42.5 thousand tenge to 60 thousand tenge [5]. A new special tax regulation for private entrepreneurs was introduced using the E-Salyq Business mobile application [5].
Economic forces:	67 billion tenge attracted investments in Kazakhstan startups [6]. In the international Global Competitiveness Index ranking on the indicator "Ability to innovate" Kazakhstan took 63 place (+21 position) [6].
Social forces:	New trends among the students, bring new methods to teach them; The growing number of the country's population is a good indicator of potential consumers.
Technological forces:	Lack of electronic devices; Poor or lack of Internet Connection.
Legal forces:	Amendments to the law of the Republic of Kazakhstan on personal data and their protection; Privacy policy.
Environmental forces:	ECO-friendly, reducing paper waste.

connections in the villages and some districts of the cities. Legal forces explain the privacy and personal data retrieving policies. The last is Environmental forces, the project is eco-friendly, because it can decrease paper waste.

The key issue areas remain: insufficient

distribution of computer equipment to the people, complete or limited availability of broadband Phone and internet services to the population and an insufficient level of public services in electronic format. The former program has been phased down in favour of the new "Digital Kazakhstan" initiative,

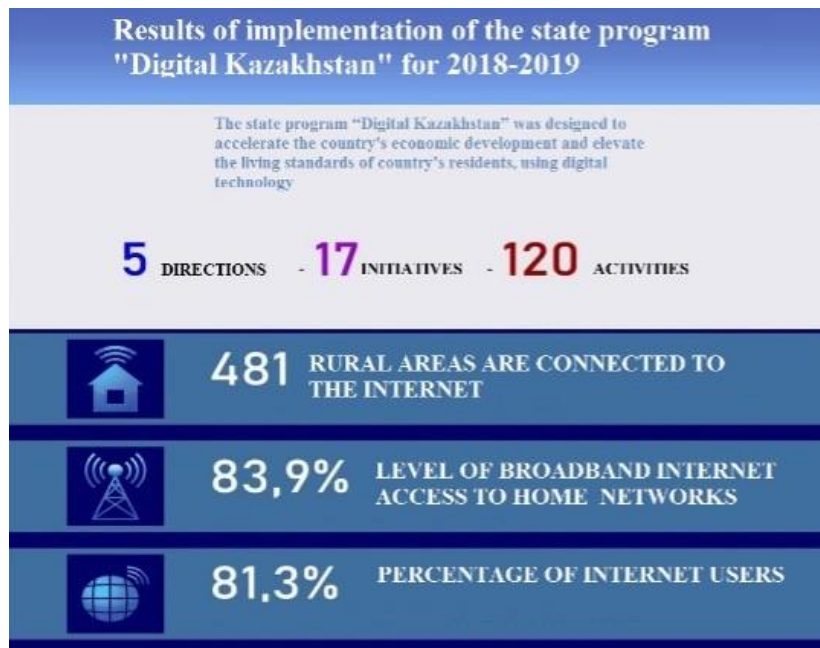


Figure 5 - State program results

which was planned to run from 2018 to 2022. The Figure 5 describes the results of the implementation of the state program "Digital Kazakhstan" for 2018-2019.

CONCLUSION. Even though since 2018 there were significant development, technology still have a great potential to grow in education field. New methods and innovative approaches to the implementation of education in a digital format are being actively implemented by education institutions. In this regard, it is especially important to consider how education institutions of Kazakhstan coped with the forced changes in the educational process to note the positive practice in this direction and identify problematic issues that should be paid closer attention to in the future.

For this reason, given a large number of Kazakhs

who have been subjected to forced distance learning, changes in this area are just as important. The most important change that must be made to maintain the quality of education is the change in the procedures and criteria for assessing knowledge in accordance with the new format of education and pedagogical approaches. During the pandemic, the main task of change management is precisely this point and the transition to a distance form of teaching.

To success adaptation of distance study educational institute need develop a proper Learning Management System which should create a high quality, availability for study process, additional communication with staff and students, e- tutorial and materials. Well-developed system will stimulate achieving high academic results.

REFERENCES:

- 1 Maldonado, J.E., & De Witte, K. (2020) The effect of school closures on standardised student test outcomes. Department of Economics, KU Leuven.
- 2 Huma Shafiq, Zahid Ashraf Wani, Iram Mukhtar Mahajan & Uzma Qadri. (2017) Courses beyond borders: A case study of MOOC platform Coursera. Library Philosophy and Practice, 1–15.
- 3 Инфраструктура дlja дистанционного обучения [Infrastructure for distance learning] / Ranking.kz. [Electronic resource]. — 2021. — Available at: <http://ranking.kz/ru/a/reviews/infrastruktura-dlya-distancionnogo-obucheniya-2021> (date of access: 06.06.2022)
- 4 Alanzi, Salem. (2018) Pestle Analysis Introduction.
- 5 Zhmagulova, A.B. (2022) Obespechenie kachestva obrazovaniya: celi i rezul'taty [Education Quality Assurance: Goals and Results]. Education. Quality Assurance, 1(26), 8-16 [in Russian].
- 6 IT-Сектор / Official Internet resource of the State Program "Digital Kazakhstan" [Electronic resource]. — 2022. — Available at: <https://digital.kz/it-sektor/> (date of access: 06.06.2022)
- 7 Zhmagulova, A.B. (2022) Obespechenie kachestva obrazovaniya: celi i rezul'taty [Education Quality Assurance: Goals and Results]. Education. Quality Assurance, 1(26), 8-16 [in Russian].
- 8 Janovskaja, O.A. & Kydyrmina, N.A. (2021) Arhitektura cifrovyyh tehnologij v obrazovanii [Architecture of digital technologies in education] Education. Quality Assurance, 4 (25), 33-39 [in Russian].

Деянира Искакова

PhD, ассистент профессора,
Astana IT University,
г. Нур-Султан, Республика Казахстан

E-mail: deyanira.iskakova@astanait.edu.kz

Меруерт Ерлеш

Студент, Astana IT University,
г. Нур-Султан, Республика Казахстан

E-mail: meruert.yerlesh@astanait.edu.kz

Арайлым Аземхан

Студент, Astana IT University,
г. Нур-Султан, Республика Казахстан

E-mail: arailym.azemkhan@astanait.edu.kz

Deyanira Iskakova

PhD, Assistant Professor,
Astana IT University
Nur-Sultan, Republic of Kazakhstan

E-mail: deyanira.iskakova@astanait.edu.kz

Meruyert Yerlesh

Student, Astana IT University,
Nur-Sultan, Republic of Kazakhstan

E-mail: meruert.yerlesh@astanait.edu.kz

Arailym Azemkhan

Student, Astana IT University,
Nur-Sultan, Republic of Kazakhstan

E-mail: arailym.azemkhan@astanait.edu.kz