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MODERNISATION OF HIGHER EDUCATION
IN CENTRAL ASIA
THROUGH NEW TECHNOLOGIES
(HiEdTech)



The results of the survey of teachers of universities-members of EMM-PMT ATU "Online competencies of teachers"

Data as of May 30, 2022

The survey involved teachers from 20 member universities of EMM-PMT ATU of Kazakhstan.

A total of 593 people.

In total, 5 groups of online competencies were proposed. Teachers were asked to rate on a 5-point scale the importance of each competency and the level of their skills in them. We calculated the average score for each group of competencies.

The results are shown in Figure 1.



Rice. 1 - Results of the survey by groups of competencies

According to the results of the survey, teachers consider the most important competencies in the field of organizing learning in a digital environment and communication and cooperation - a score of 4.24 points. Slightly less important are security and information literacy - respectively 4.22 and 4.17 points. And finally, the least important competencies are the ability to create digital content, and they rated their skills in this area significantly lower than other groups, with a score of 3.42. Apparently it is assumed that you can use ready-made content.

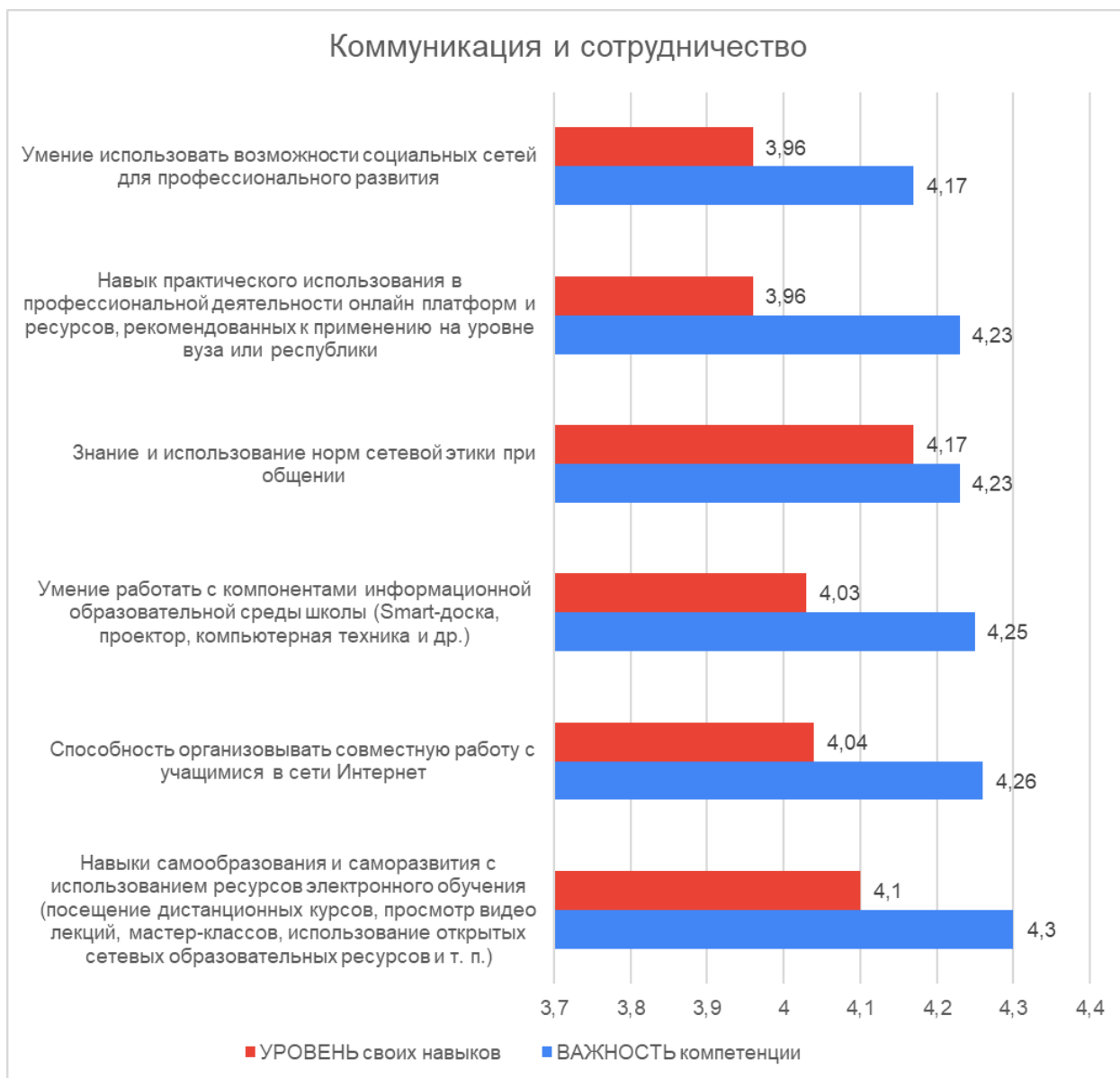
According to the respondents, they have quite high competencies in the field of communication and cooperation - 4.04 points and organization of training in the digital environment - 3.94. Next - security and information literacy, at an average level - 3.83 and 3.84,

respectively. All this corresponds to the assessment of the importance of competencies, i.e. the more important the competence, the better the teachers master it.

Consider the results of the survey for each group of competencies separately.

Communication and collaboration

The results are shown in Figure 2.



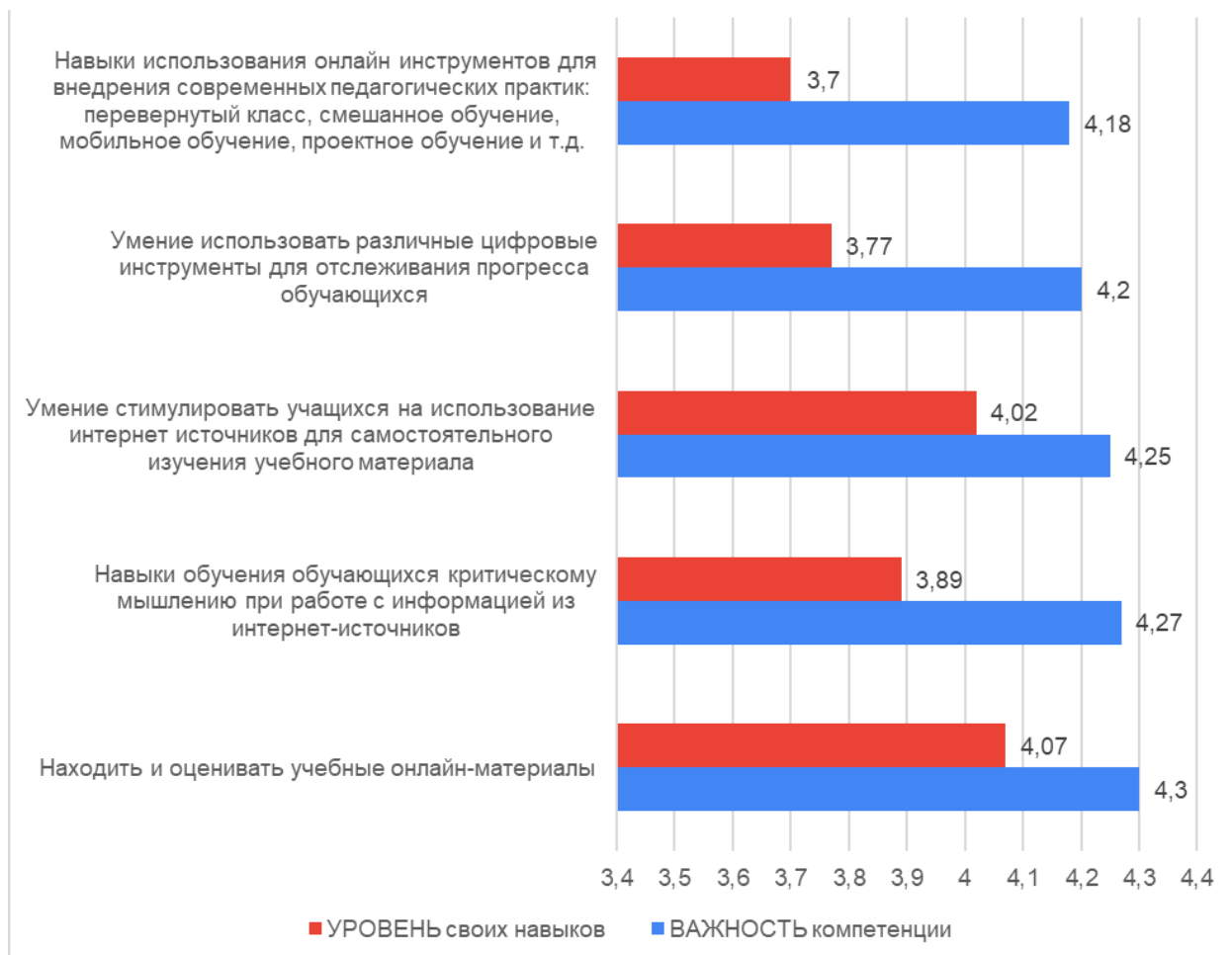
Rice. 2 - Results of the survey on the group of competencies "Communication and cooperation"

The figure shows that teachers consider the skills of self-education and self-development to be the most important competence (4.3 points), and, in their own opinion, they possess them to a fairly high degree (4.1 points). This is the highest average score. The least importance is given to the ability to use the possibilities of social networks for professional development (4.17 points), while, as in the first case, one's own level of possession of this competence is rated the lowest, as well as the skill of using online platforms recommended at the level of the university and the republic (3.96 points).

The rest of the competencies are rated quite high and approximately at the same level from 4.23 to 4.26 points. However, the possession of these competencies, according to teachers, is significantly lower than their value of 3.96 - 4.04. The exception is the knowledge and use of network ethics - 4.17. This is the highest level of their skills. As in the previous case, the technical and organizational competencies of teachers are less developed than the rest.

Organization of learning in the digital environment

The results of the survey for this group of competencies are shown in Figure 3.



Rice. 3 - Results of the survey on the group of competencies "Organization of training in the digital environment"

The importance of all the competencies of this group given in the survey is estimated quite highly. Points in descending order: 4.3 - find online learning materials (confirms the above assumption about the low assessment of the ability to develop digital resources), 4.27 - Skills for teaching students critical thinking when working with information from Internet sources, 4.25 - Skill encourage students to use Internet sources for self-study of educational material, 4.2 - Ability to use various digital tools to track student progress, 4.18 - Skills to use online tools to implement modern pedagogical practices. As expected based on the above results, the least assessed was their ability to use digital tools and innovative methodologies. 3,

Security and responsible use of the online environment

The survey results are shown in Figure 4.

This group of competencies includes: the ability to create a secure login and password; skills of responsible behavior on the Internet and teaching this to students; ability to work with digital tools for saving, deleting data, maintaining the confidentiality of information; the ability to recognize actions and information that have fraudulent intent.

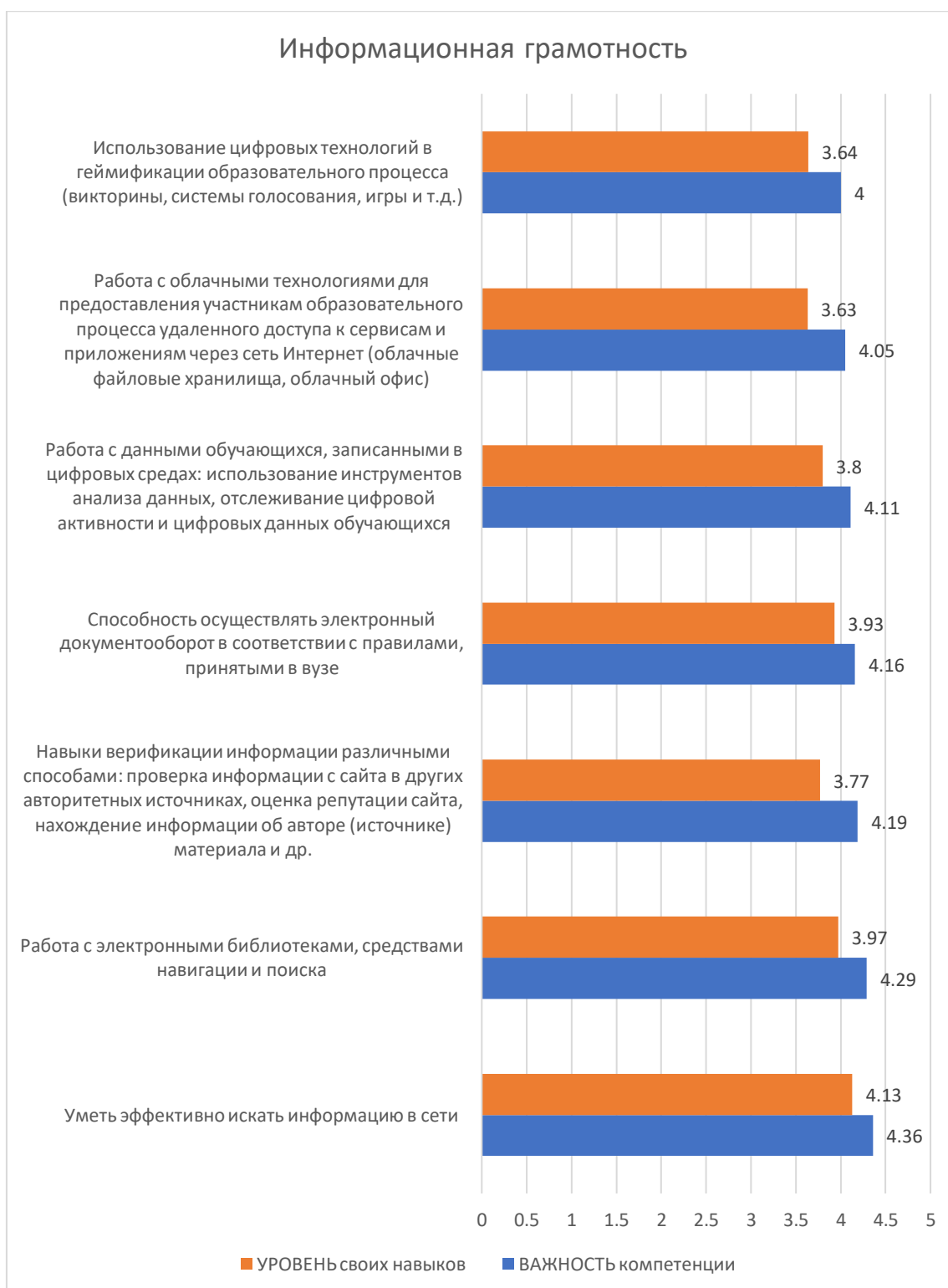


Rice. 4 - Results of the survey on the group of competencies "Safety and responsible use of the online environment"

As follows from the figure, the teachers highly rated the competence of this group, the average score is 4.2 - 4.25, with the greatest importance given to the ability to create a secure login and password, which the respondents are most able to (4.04). Respondents are least able to recognize actions and information that have fraudulent intent (3,5).

information literacy

The competence, which consists in the ability to effectively search for information networks (Figure 5), is rated the highest, 4.36.



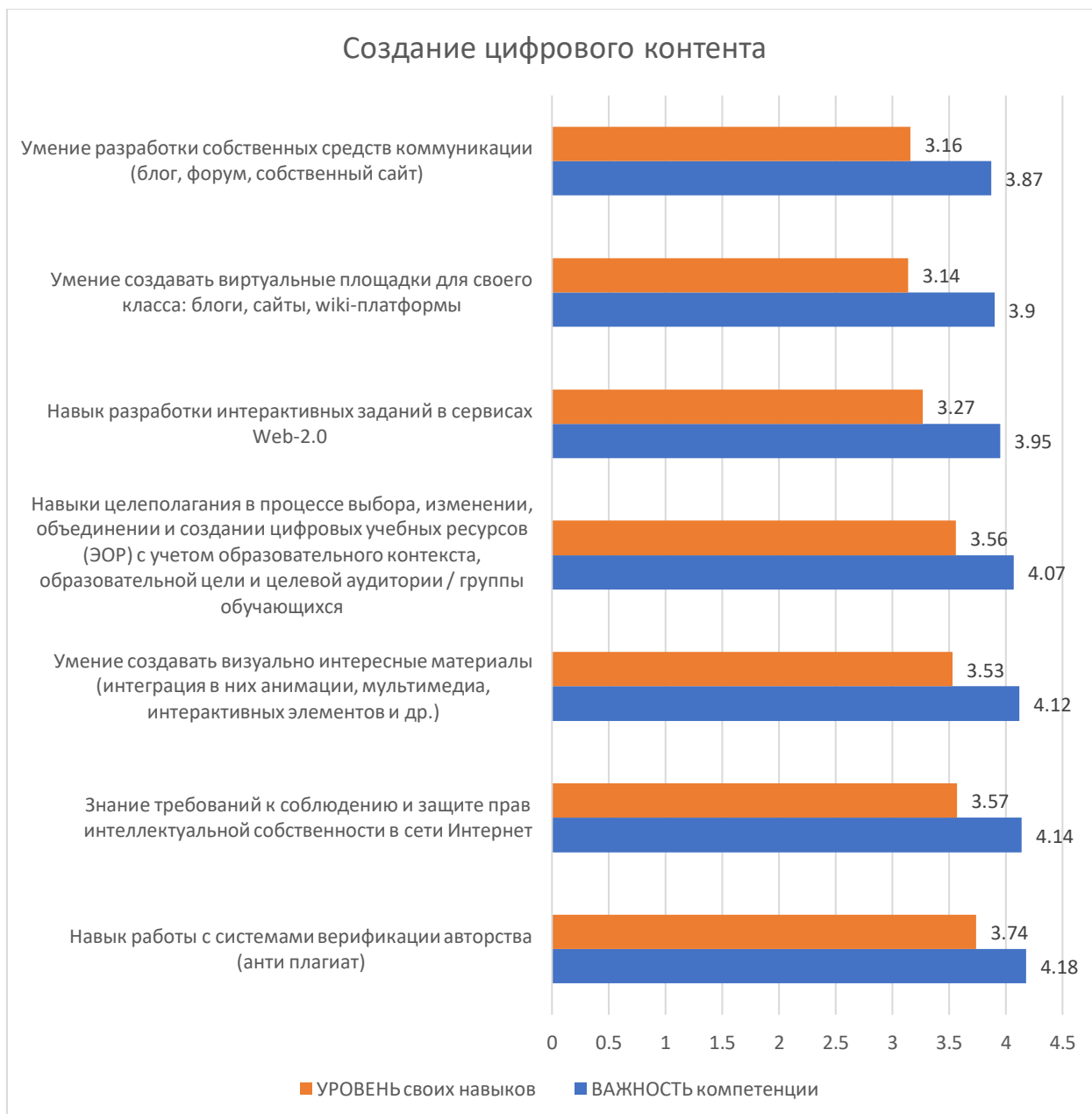
Rice. 5 - Results of the survey on the group of competencies "Information literacy"

And again, less importance is given to competencies related to the ability to use tools: gamification and cloud technologies (4.0 and 4.05, respectively).

According to the respondents, these same competencies are inherent in them to a lesser extent (3.64 and 3.63, respectively). Some difficulty is caused by the competence "Verification skills in various ways" - 3.77 points. Respondents, in their opinion, are best able to effectively search for information on the net (4.13). The remaining competencies are rated below 4.0 points. From 3.8 to 3.97.

Creation of digital content

As the survey shows (Figure 6), the importance of all competencies in this group is estimated from 3.87 to 4.18 points. Moreover, the skill of working with authorship verification systems is most highly rated, the least of all is the ability to develop one's own means of communication.



Rice. 6 - Results of the survey on the group of competencies "Digital Content Creation"

The respondents rated the level of their skills almost similarly and generally less highly than the previous groups of competencies. To the least extent, they have the ability to create virtual platforms for their class (3.14) and develop their own means of communication (3.16): blogs, websites, forums, etc., and to the greatest extent, as noted above, the skill of working with authorship verification systems (3,74). The remaining competencies are rated in the range of 3.27 - 3.57, which is undoubtedly quite low.

In conclusion, I would like to note that the scores describing the importance of competencies are always higher than the scores given for the ability to use them, sometimes significantly.

Summing up the results of the analysis, we can conclude that when drawing up training courses, more time should be devoted to the disclosure and assimilation of the following competencies, which are less inherent in university teachers at the present stage (less than 4.0 points):

- the skill of practical use in professional activities of online platforms and resources recommended for use at the level of a university or a republic;
- ability to use the opportunities of social networks for professional development;
- work with electronic libraries, navigation and search tools;
- skills of verifying information in various ways: checking information from the site in other authoritative sources, assessing the reputation of the site, finding information about the author (source) of the material, etc.;
- the ability to carry out electronic document management in accordance with the rules adopted at the university;
- working with student data recorded in digital environments: using data analysis tools, tracking digital activity and digital data of students;
- work with cloud technologies to provide participants in the educational process with remote access to services and applications via the Internet (cloud file storage, cloud office);
- the use of digital technologies in the gamification of the educational process (quizzes, voting systems, games, etc.);
- all competencies in the creation of digital content;
- skills of responsible behavior on the Internet and teaching this to students;
- ability to work with digital tools for saving, deleting data, maintaining the confidentiality of information;
- the ability to recognize actions and information that have fraudulent intent;
- the ability to use various digital tools to track the progress of students;
- skills to use online tools to introduce modern pedagogical practices: flipped classroom, blended learning, mobile learning, project-based learning, etc.

This study can be useful for use both in JSC "Almaty Technological University" and other universities and educational organizations in Kazakhstan and abroad.