

LEVEL OF USE OF EDUCATIONAL MOBILE APPLICATIONS IN UZBEKISTAN

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ABSTRACT

The article discusses the issues of mobile education and the next stage of mobile applications among teachers and students of some universities in the Republic of Uzbekistan. The article is based on a survey of education statistics on mobile application downloads in Uzbekistan and a study of mobile education and mobile application downloads among teachers and students of higher education institutions in Uzbekistan. At the same time, it was stated that the majority of higher education teachers and students have a good understanding of mobile education and are ready to accept it.

KEYWORDS: *Mobile Education, Mobile App, Google Play Market, Apple App Store, Professional Activity, Technology.*

INTRODUCTION

Mobile devices and applications are entering all areas of human activity. Due to the availability of an Internet connection module using personal mobile devices, the speed of data access is significantly increased, and their functionality sometimes exceeds the capabilities of desktop computers due to built-in photo and video cameras, microphones, geolocation devices and more.

The effectiveness of the pedagogical process in higher education is the use of innovative pedagogical technologies in the classroom. These technologies also include mobile devices, which are the most convenient means of accessing information due to their small size and high functionality [1].

It turns out that mobile devices will become a daily part of education in the near future and will facilitate live communication between teachers and students. The use of mobile technologies in education requires educational leaders to make organizational efforts, research and methodological work of scientists and teachers on the introduction of mobile learning strategies, forms and methods in the educational process.

MATERIALS AND METHODS

Currently, the problems of the introduction of mobile devices in educational institutions have become the most active topic of discussion in the scientific literature. The development and use of modern methods of teaching students, and interactive systems for assessing educational achievements are considered to be the main topic of discussion [2]. Teaching using mobile

devices, and expanding the forms of independent work of students is especially relevant at a time when Uzbekistan is rapidly implementing reforms in the field of education.

In this regard, we considered it necessary to conduct a study on the readiness of university teachers in Uzbekistan to use mobile educational technologies in their professional activities and the mobile applications used. The study aimed to analyze the readiness of teachers for mobile learning and the situation with the introduction and use of mobile applications in their professional activities, including mobile learning technologies.

The study was conducted in two phases, the first of which aimed to analyze the statistics of downloads of educational mobile applications to determine the level of use in Uzbekistan. The second stage is based on a survey of teachers and students of some universities in Uzbekistan on mobile education and mobile applications.

Phase 1 To determine the statistics of downloading educational mobile applications in the territory of Uzbekistan <https://gs.statcounter.com>, <https://www.similarweb.com>, <https://siteefy.com>, <http://www.statista.com>, <https://www.slideshare.net>, <http://www.datareportal.com>, The information provided at <https://www.bygd.me> and <https://app.sensortower.com> was used.

Phase 2. The second phase of the study involves a survey of the level of mobile education and use of mobile applications among teachers and students of higher education institutions in Uzbekistan.

RESULTS

There are now more than 70 mobile app markets worldwide, with the Apple App Store and Google Play Market, the most popular app stores, accounting for more than 90 percent of global app revenue¹.

According to statistics, there are more than 2.2 million mobile apps in the Apple App Store and more than 3.4 million in the Google Play² Store.

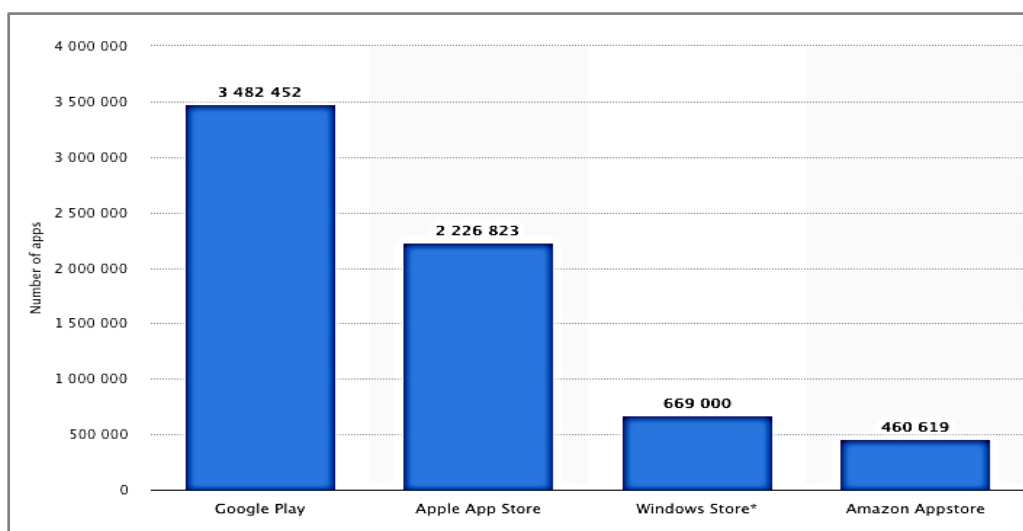
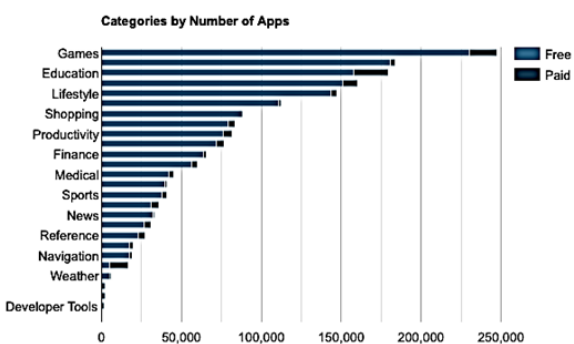
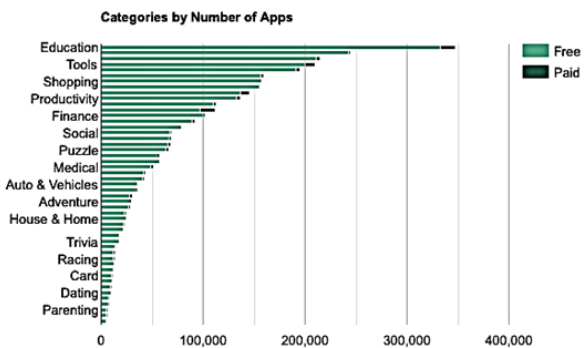


Figure 1 A comparative analysis of the major leaders of the mobile app market.

According to the data, there are 27 categories in the Apple App Store and 49 categories in the Google Play Store. The following is an approximate distribution of the number of apps in the selected categories for both stores.



Apple App Store app store



Google Play Market app store

Figure 2 An approximate distribution of the number of apps in selected categories for the world's two major mobile app stores

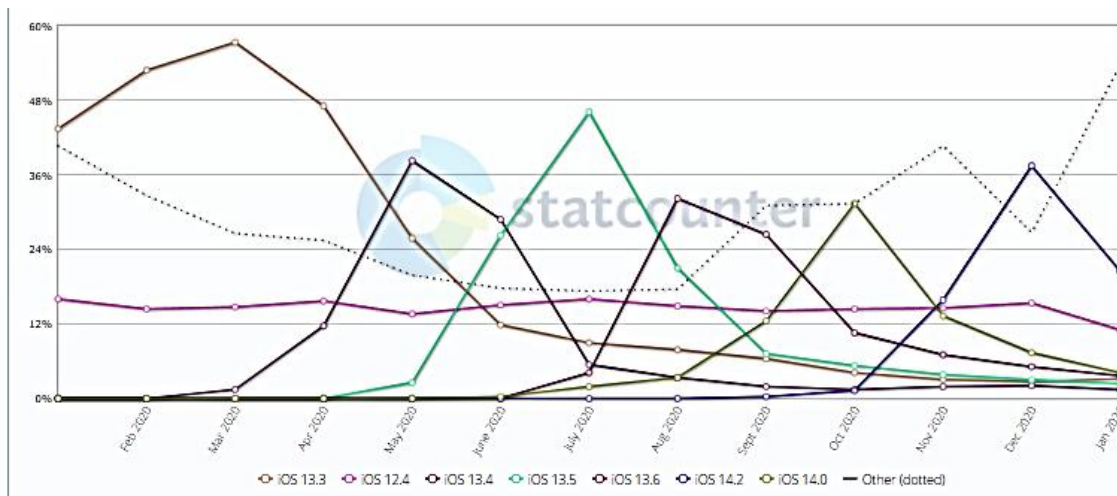


Figure 3 Mobile iOS version Market share in Uzbekistan (as of 01.01.2020 - 01.01.2021)

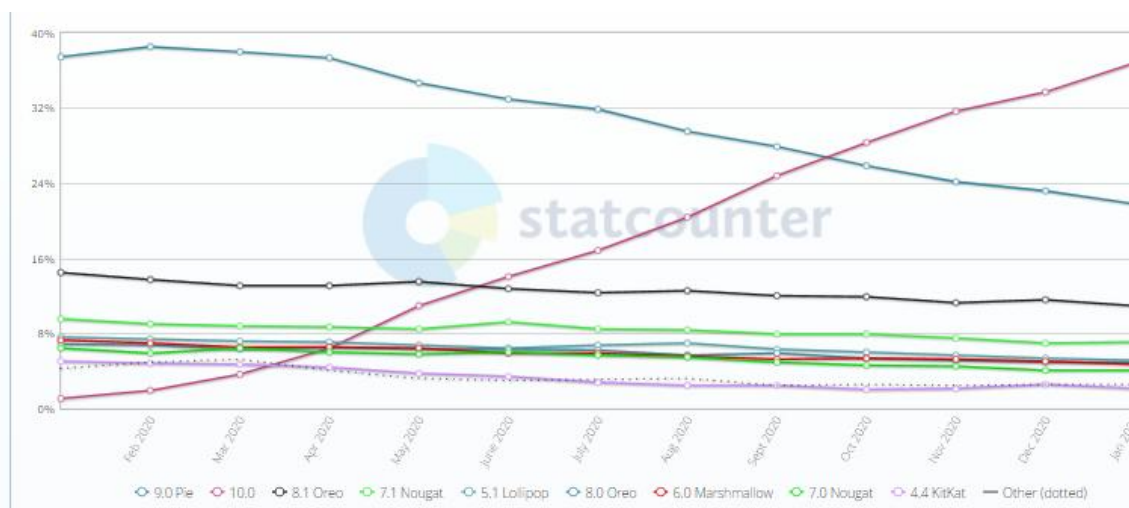


Figure 4 Mobile Android version Market share in Uzbekistan (as of 01.01.2020 - 0.01.2021).

In addition, to obtain values close to the actual indicators of use in educational mobile applications in the context of Uzbekistan, the site <https://app.sensortower.com> was applied and sorted as follows:

Date:	Country:	Category:	In App Purchase:	Cost Range (\$):
Feb 25, 2022	Uzbekistan	Education	<input checked="" type="button" value="All"/> <input type="button" value="IAP"/> <input type="button" value="No IAP"/>	0 to <input type="text"/>

As a result of the selection, some duplicate and almost non-educational mobile applications of 200 educational applications were dropped, and the 150 most downloaded mobile applications in Uzbekistan were on the Android and iOS platforms. The list is formed ([application-1](#)).

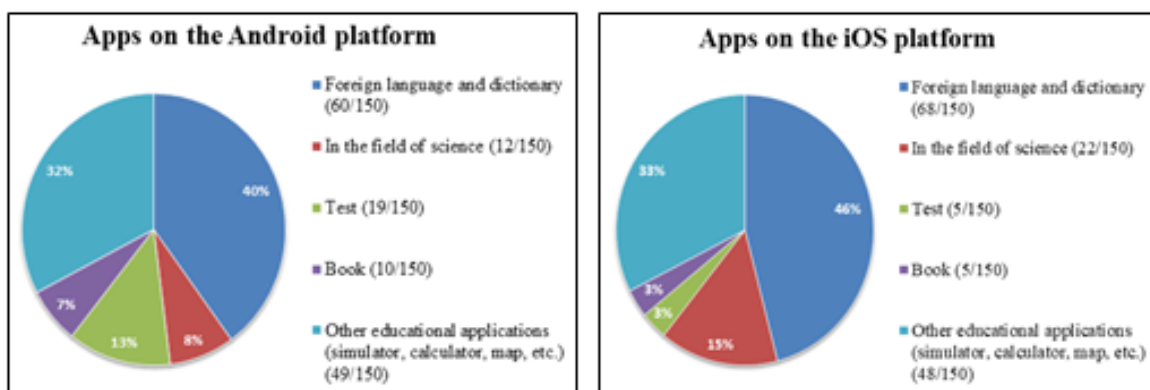


Figure 5. Graphical representation of the distribution of the 150 most downloaded mobile applications in Uzbekistan by type.

Intended to conduct a survey based on the current and future relevance of mobile education and students of higher education institutions in Uzbekistan are asked to apply directly to the questionnaire and answer questions via <https://forms.gle/UUTJg7HardXKdQKx9>.

The questionnaire consists of 9 questions, each of which includes answer options, only one of which requires you to select several of them or write a personal opinion. Survey questions the following 3 aspects to determine focus:

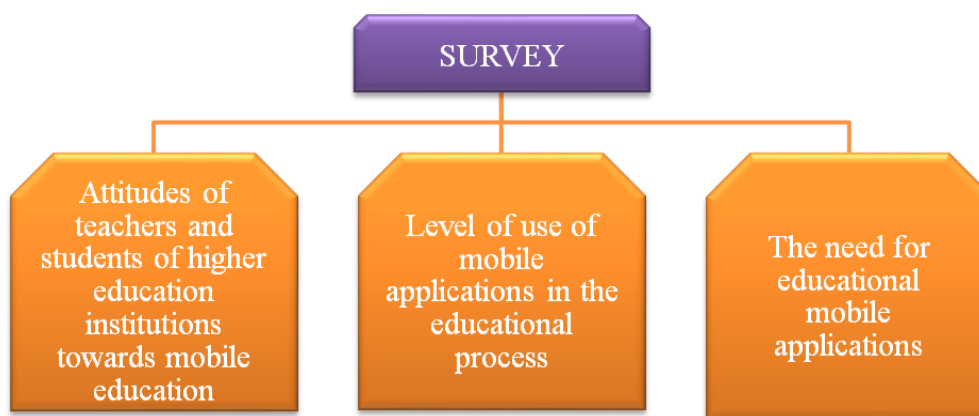


Figure 6. Survey objectives.

To conduct the survey, a survey of 9 different types of questions was developed in the Google Form environment.

Survey questions to study the level of mobile education and use of mobile applications among teachers and students of higher education institutions in Uzbekistan :

Table 1.

<p>1. What do you think is “Mobile Education”?</p> <p>A. learning process organized using mobile technologies in conjunction with information and communication technologies (ICT), regardless of place and time;</p> <p>B. these portable devices are primarily a learning process organized using phones, smartphones, tablets, sometimes laptops, etc., or devices used only in the normal life of the teacher and the student;</p> <p>C. the process of interaction between teacher and students to acquire knowledge and skills in real-time;</p> <p>D. My opinion is different from the other three tariffs.</p>
<p>2. What problems can occur in the organization of mobile education in higher education?</p> <p>A. Mobile apps with educational content are not enough;</p> <p>B. Technical devices and their capabilities are not the same for everyone</p> <p>C. Problems with internet speed or traffic are a hindrance</p>

<i>D. I don't see any problem in organizing mobile learning</i>
<p>3. Does the university where you work have a mobile application?</p> <p>A. Yes</p> <p>B. No</p> <p>C. No, but there is a mobile version of the university site</p>
<p>4. Do you use a mobile device during your university career?</p> <p>A. Yes, I use it often;</p> <p>B. Sometimes I have to use it;</p> <p>C. No. I don't use it at all;</p> <p>D. I have been using it mainly since March 2020.</p>
<p>5. What types of devices do you use most often during your educational activities?</p> <p>A. Personal computer</p> <p>B. Laptop</p> <p>C. Tablet</p> <p>D. Cell phone</p>
<p>6. Do you use mobile technology to plan your daily activities related to education?</p> <p>A. Yes;</p> <p>B. No</p>
<p>7. Should higher education use mobile applications in the classroom and/or beyond?</p> <p>A. Yes, it is necessary to use. Because it provides interactivity and helps improve the quality of education;</p> <p>B. Yes, it should be used. Just outside the classroom;</p> <p>C. No, you don't have to use it. Because they negatively affect the quality of education in return for distraction;</p>
8. What is the most used mobile app (s) related to your educational activities?
<p>9. What mobile application would you like to have at your university?</p> <p>A. Providing information about the university (address, contact numbers, mode of operation)</p> <p>B. Educational mobile applications, especially in specialty sciences</p> <p>C. Mainly providing news related to the activities of the university</p> <p>D. other</p>

DISCUSSION

The results of the survey were analyzed and the results of the study were summarized. According to him:

Date: 04.10.2021 to 07.03.2022

Participated: 515 teachers from 45 universities in Uzbekistan and 2694 students. Including:

A total of 3,209 people took part in the survey.

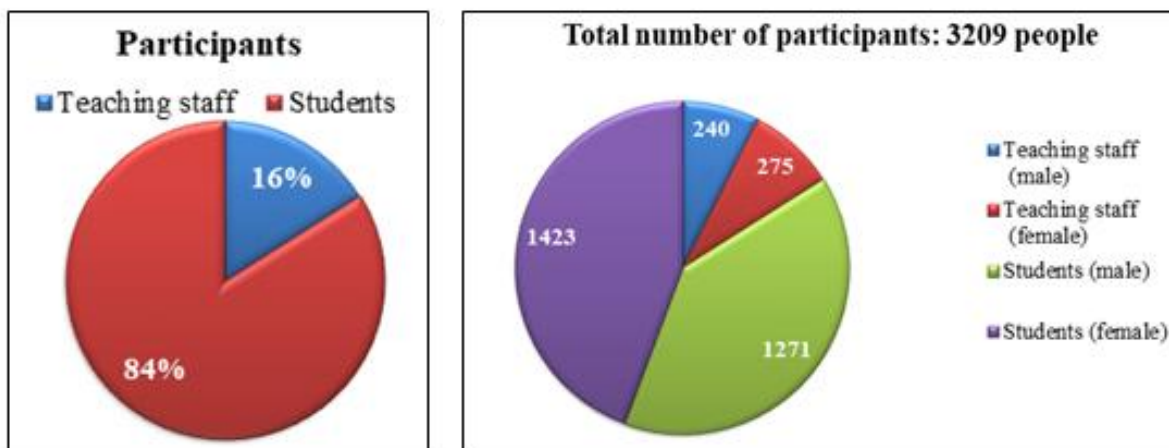


Figure 7. Indicators of teacher-employee, student and their gender in relation to the total number of survey participants

The number of participants by gender and type of activity, its graphical appearance is as follows:

What do you think is “Mobile Education”? If we graphically describe the answers to the question using MS Excel, it will look like this.

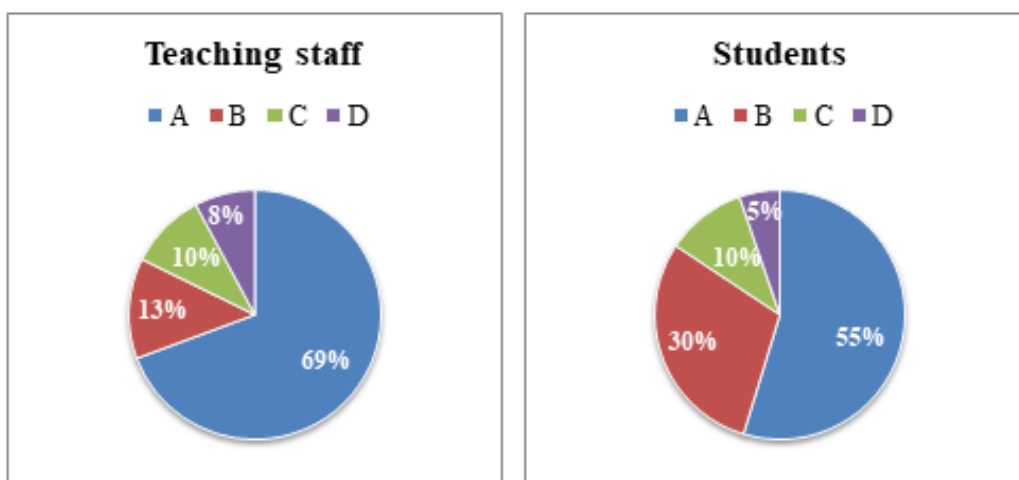


Figure 8. What do you think is “Mobile Education”? A graphical representation of the answers to the question using MS Excel.

What are the problems in the organization of mobile education in higher education? Focusing on the answers to the question, the majority of participants pointed out that the main problem is the lack of mobile applications with educational content.

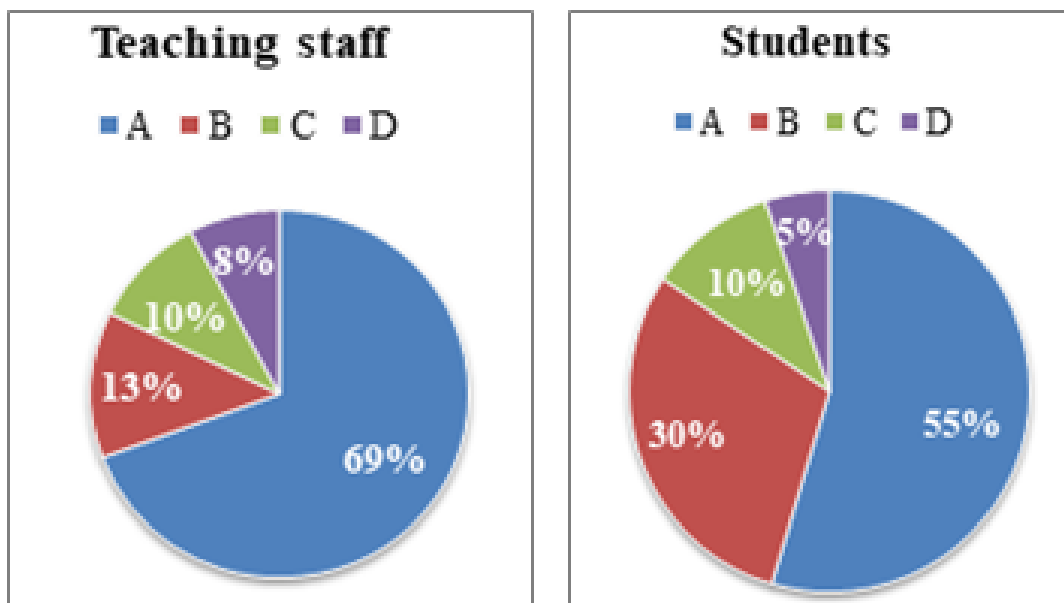


Figure 9. Graphical representation of the answers to the question about the problems of organizing mobile education in higher education institutions.

Does your university have a mobile application? Most of the answers to the question said that they understand the mobile version of the university website.

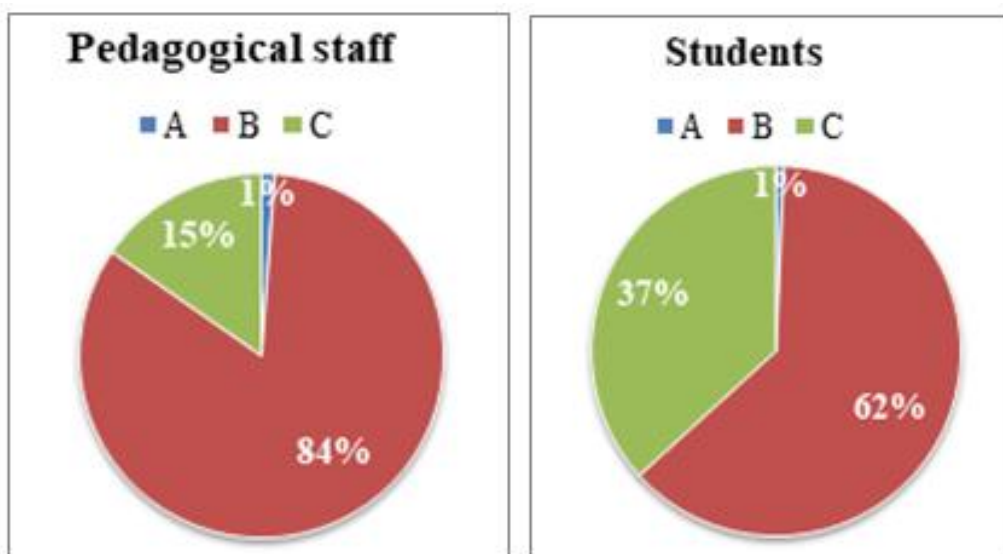


Figure 10. "Does your university have a mobile app?" a graphical representation of the answers to the question.

Do you use a mobile device during your university career? - When analyzing the answers to the question, most of them said that they will use it more often, although from March 2020.

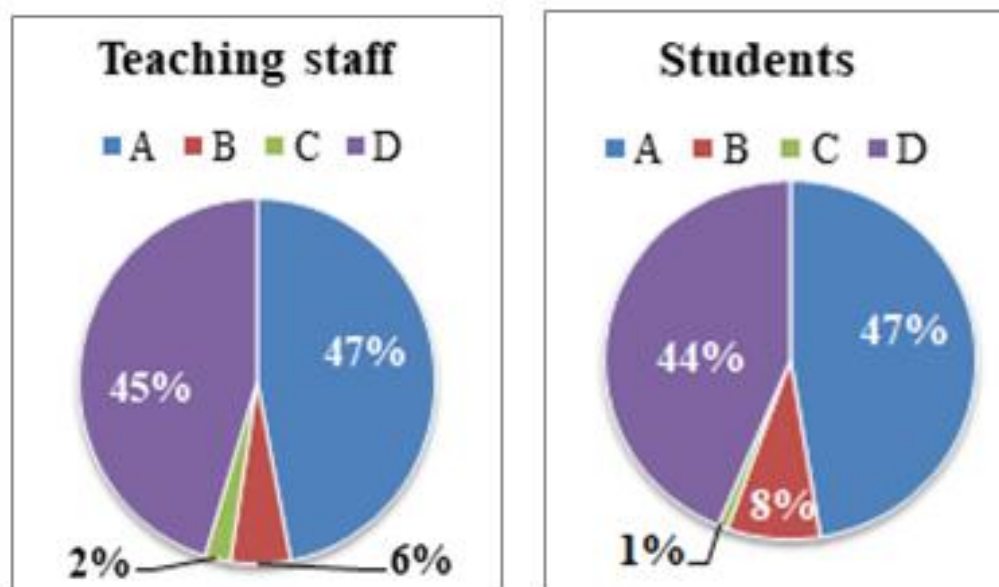


Figure 11. Use of mobile devices by survey participants during their activities.

The next question in the survey was “What types of devices do you use most in your educational activities?” While most users noted the use of laptops and personal smartphones, it can be seen that a small proportion of participants use personal computers and tablets:

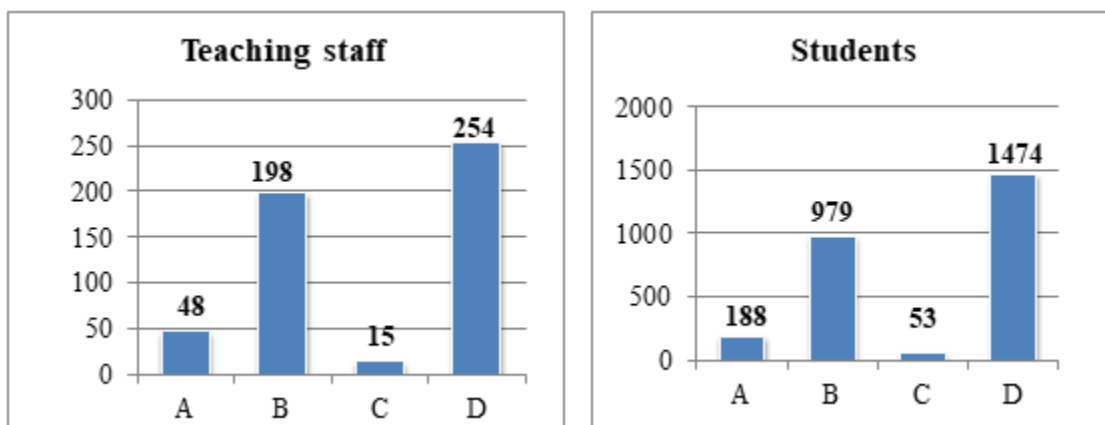


Figure 12. Devices used by survey participants in educational activities.

Participants reported that many use mobile technology in planning their day-to-day activities related to education.

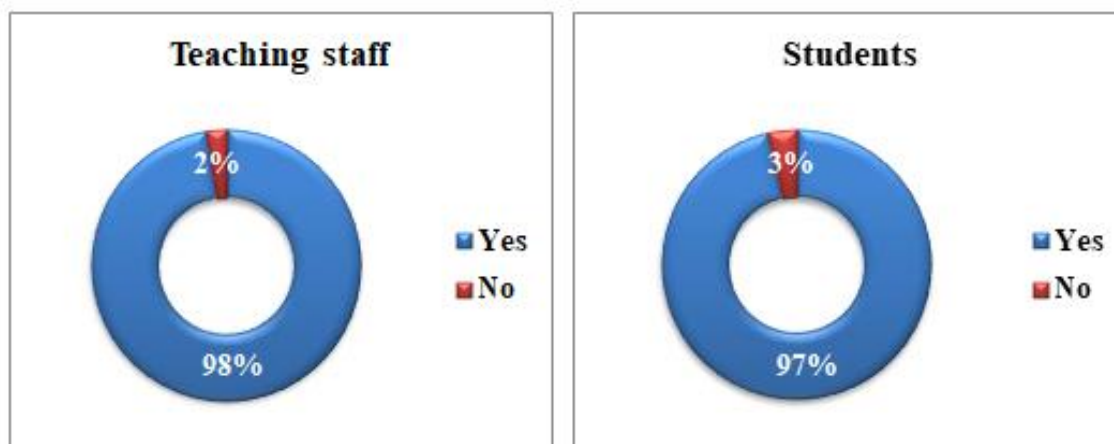


Figure 13. Use of mobile technologies by participants in planning their daily activities related to education.

By conducting a comparative analysis of the results of the survey in tabular form (table), we can see that at the end of the processing of answers, teachers and students are increasingly using mobile learning technologies in their educational activities.

CONCLUSION

Based on the results of the survey, it can be said that the majority of higher education teachers and students have a good understanding of mobile education and are ready to accept it. Although the introduction of mobile technologies in the educational process is underway, the main reason for the lack of high performance in this area is the lack of development of mobile applications with educational content, which means that there is a need for research in this area. . In addition, most of the existing educational mobile applications are designed to organize foreign language learning and testing. The mobile applications of Uzbek universities are almost non-existent, although reputable foreign universities pay close attention to them. Nevertheless, teachers and students of higher education use mobile devices during the activities often they use. Although the laptop is also a widely used device, mobile devices predominate when it comes to numbers and internet access and access to educational resources. Mobile technology plays an important role in planning day-to-day activities related to education.

Based on the above, to have a positive impact on the quality and effectiveness of education in higher education and to improve the situation with the use of mobile technologies in education, we propose the following:

Increasing the number of scientific studies on the use of mobile technologies in education;

Teachers and students of higher education institutions on the organization and effective use of mobile education;

Develop educational mobile applications and focus on the pedagogical, didactic and psychological aspects of the application in the process;

Ensuring that every university has a mobile application;

Development of guidelines for the use of mobile educational applications to increase the effectiveness of classrooms and extracurricular activities in universities;

Develop educational mobile applications in line with regulatory documents to reduce the gap between traditional education and mobile learning;

Announcing competitions, and grants for the creation of educational mobile applications;

Sciences associated with creating mobile apps and increasing the hours allotted to them.

Their knowledge and skills in developing interactive learning resources for use in educational activities.

As mobile technology continues to grow, policymakers will need to reconsider ICT opportunities for education. These suggestions are designed to facilitate the process of implementing the most preferred education policy by detailing some of the unique benefits of mobile education and providing advice.

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