Based On Mobile Education In Teaching Astronomy In The Credit - Module System Astrostem.Uz Advantages Of Using A Mobile Application

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ARTICLE INFO	ABSTRACT
	the formation of the distance education system in the world on the basis of new information technology tools, as well as the creation of modern educational information resources and portals, further informatization of education is an urgent issue. In the development of the world of the present day, the use of mobile technologies to solve various pedagogical tasks in the educational process is demonstrating tremendous vital importance. This article will talk about the benefits of mobil ilova and the importance of its use in the educational process. **Keywords:** mobile education, distance education, android, style, Astrostem.uz, technology, development, student, reader, smartphone

Mobile education refers to the planning and implementation of education through mobile devices. Mobile apps have become an integral part of our daily lives. With the rapid development of mobile technology, it has changed the way we work in education through mobile applications, control students and students, communicate, receive knowledge, learn, and work. A variety of mobile applications have been created and are working on the creation of mobile technologies designed to automate various calculations for IOS, Android, MI systems. The Deloitte (Deloitte Touche Tohmatsu) Research Center reports that a smartphone user looks at his phone an average of 50 times during the day. This process can also be observed in our Republic. Because now in all of the population layer: from schoolchildren to adult mobile operators are using smartphones and tablets. Mobile apps provide students with the convenience and flexibility to learn at their own pace at any time, anywhere. Since most students have a smartphone or tablet, they can take study materials with them, which makes learning more accessible and limited to certain tables or places. Among the many technological tools created, mobile applications have proven to be educational modifiers. They emerged as important tools for teachers and students, offering many benefits. The importance of using mobile apps in education is as follows:

1. **Expands the possibility of obtaining knowledge**. Mobile applications in the field of education provide unprecedented access to the wealth of knowledge. They provide readers with resources around the world and open up endless possibilities. For example, educational programs allow students to study various topics, get help from the author of an online essay, Read Current News articles, watch educational videos, and even participate in interactive quizzes and games to strengthen their understanding [1].

2. **Provides flexibility and comfort.** Mobile apps provide students with the convenience and flexibility to learn at their own pace at any time, anywhere. Since most students have a smartphone or tablet, they can take study materials with them. This makes education more accessible and brings positive results [2].

3. **Interactive techniques are used in learning**. Mobile apps have the ability to make learning more interactive and fun. They use various multimedia tools such as graphics, audio and video content, as well as interactive quizzes and games. This versatile approach supports a variety of learning styles and thus helps to better understand and maintain knowledge [3].

4. **Helps teachers.** Mobile applications are useful not only for students, but also for teachers. They can use these tools to better organize lesson plans, monitor student progress, and interact with parents and students. With these benefits, teachers can pay more attention to their basic responsibility for giving knowledge and less attention to administrative tasks [4]. Helps with homework.

5. While mobile apps are usually associated with self-guided education, they are the primary facilitator for personalized academic support. For example, many students can use apps to get help with academic writing. With these tools, students can have professional writing assistance, gain insight into the composition of their essays, and even learn to express their thoughts more consistently. Mobile applications that offer the best mission services are an invaluable resource for students. These applications can help students plan, research, and complete assignments. In addition, they provide important tools for reference management, plagiarism verification and editing services.

6. **Prepares for future modern technologies.** The use of mobile applications in education in the era of digital literacy prepares students for the future. It instills in them the skills necessary to move increasingly in the digital world, solve problems, develop creativity and digital literacy.

7. **Provides ease of learning.** Another important area in which mobile applications have had a significant impact is special education. Traditional educational environments often present many challenges for students with learning disabilities or special needs. However, mobile applications designed for these students provide a personalized learning experience taking into account their unique needs and capabilities. These tools are created with different functions such as text-to-speech, speech-to-text, adjustable font sizes and colors. As a result, students with disabilities not only remain consistent with their peers, but also feel a sense of independence and confidence in their educational ability.

8. **Helps in preparing for exams and preparing tests.** Preparing for standardized tests can be a difficult task for many students. However, many mobile apps have emerged as effective tools to help students prepare for these exams. These applications offer a number of resources: practice tests, flash cards, tutorials and even progress tracking features. This approach makes preparation for tests more structured, manageable and less stressful for students.

9. **Leads to stability and economic efficiency.** From an economic and environmental point of view, the use of mobile applications in education is much more sustainable and cost-effective than traditional educational resources. Electronic materials take the place of paper and contribute to the protection of the environment. In addition, most educational applications are free or their cost is much lower than physical textbooks and additional resources. Such frugality ensures that quality education is open to a wider audience regardless of socioeconomic background. Learning in pursuit of knowledge should not be limited only to formal educational conditions. Mobile apps do this by promoting lifelong learning. They provide access to a variety of learning platforms, podcasts, webinars, and online courses covering a wide range of topics. As a result, people can pursue their own interests, learn new skills, or study specific subjects.

Currently, there are many types of educational mobile applications that vary depending on their use and the function they perform. In jdavla 1 below we can see the list of mobile applications related to education:

Table 1. Educational mobile apps

№	The function that mobile applications perform	The function that mobile applications perform
1	LearnWorlds Mobile Builder	With LW Mobile Builder, students can engage and study course content, watch instructional videos, and take knowledge tests.
2	Udemy	Udemy, a popular online course marketplace, comes with an app that allows students to browse and learn online courses on a variety of topics using their smartphones.
3	Khan Academy	Khan Academy is a non-profit educational organization that provides free online education for anyone, anywhere in mathematics, art, computer programming, economics, physics, chemistry, biology, medicine, finance, history and more. famous for giving.
4	TED-ed	The TED-ed platform offers the ability to take any TED talk, TED lesson or educational video and create a lesson plan with customized questions and discussions. The TED app lets you access your favorite talks in over 100 languages and save them for offline viewing.
5	SoloLearn	This app is useful for those who want to learn programming. The app offers free online courses in every programming language, and users can test their skills through a series of interactive lessons that make for an engaging learning experience.
6	Duolingo	Duolingo offers a great way to learn a new language. What makes it unique is that it makes learning fun through game-like exercises and bite-sized lessons that are addictive and easy to follow.
7	Quizlet	Quizlet is a way to help students develop their knowledge in arts and humanities, languages, math, science, social studies, and sports, among other

		categories, as well as hobbies, including cooking, trivia, travel, and video games. is another great app that provides.

Teachers can also use mobile applications to assign tasks. When developing tasks based on mobile applications, it is necessary to understand that the specified educational goals can be achieved only by taking into account the principles of the private method:

properselection and organization of materials; focus on the audience of students;
selection of educational methods and forms that correspond to educational goals. In addition, a teacher who develops an assignment on a mobile platform must develop an exercise that cannot be done without the use of mobile technologies. Only in this case, the integration of digital technologies into the educational process can be considered as an appropriate, successful and effective improvement. In addition, when designing work based on mobile applications, it is necessary to take into account that the output creates a completely new work format in contrast to traditional tasks, therefore, special attention should be paid to the readiness of both teachers and students to implement these improvements of the educational process must

The use of mobile applications in the teaching of subjects opens wide opportunities for teachers and students. Organizing the educational process in educational institutions on the basis of mobile applications creates a number of innovations related to the rapid updating of educational materials based on the latest advances in science. Teaching education on the basis of mobile applications leads to greater individualization of education. As a result of this, as a result of the student's independent search for himself, the ability to work independently develops, and mastery indicators develop. Control works included in mobile applications are of practical importance as they monitor the student's learning process. The use of mobile applications in education is characterized by a special location, an additional opportunity, and not choosing a location.

Mobile application is a component installed on a mobile device (telephone, communicator, smartphone, etc.) mobile platform (Android, iOS, BlackBerry, HP webOS, Symbian OS and Windows Mobile), mobile server and control user interface for connection and is a business logic device.

The mobile application prepared by us was introduced in our country due to the 2020 coronavirus pandemic and was created during the quarantine. The "AstroStem.uz mobile application program" is designed for independent study of science. With the help of this mobile application, students have the opportunity to independently familiarize themselves with the science program, study theoretical material, complete practical tasks, choose an independent work topic, pass the test control. Also, this mobile application is designed for students to study outside the classroom, it is designed for completing homework assignments, independent work activities, and control assignments. The student downloads the AstroStem.uz application to his computer, phone and tablet using the button to install the mobile application from Google Play. The main page of the mobile application has the following tabs; information about the authors, the science program in the documents folder, the text of the lectures in the lecture folder, practical exercises, laboratory work, independent work topics, and a list of literature. Each tab is designed to work offline, starting with a working curriculum of a subject and a list of required literature on that subject. The working program contains the purpose and tasks of the science, as well as information communication and pedagogical technologies used in the teaching of Astronomy, lectures, practical exercises and independent work topics, laboratory work and evaluation criteria, and other information.


In the "Practical exercises" window of the mobile application, practical tasks related to science are also given, in which students will have the opportunity to complete practical tasks in science.

The application also has an independent work topics window, which provides independent work topics for students. Students can prepare abstracts on these topics and send them to the science teacher.

In the "Lab Work" window of the mobile application, science-related laboratory tasks are also provided, in which students will have the opportunity to complete science-related laboratory tasks.
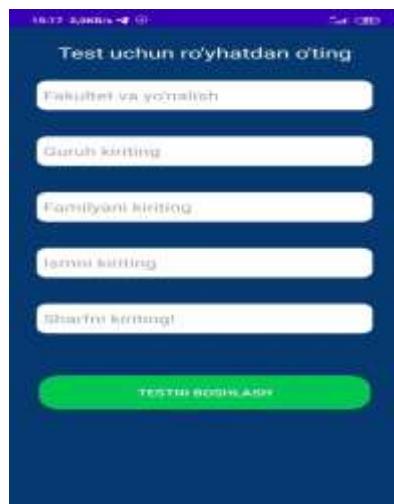
There are a lot of mobile apps today for different purposes. The mobile application developed by us differs from other applications in the following aspects:
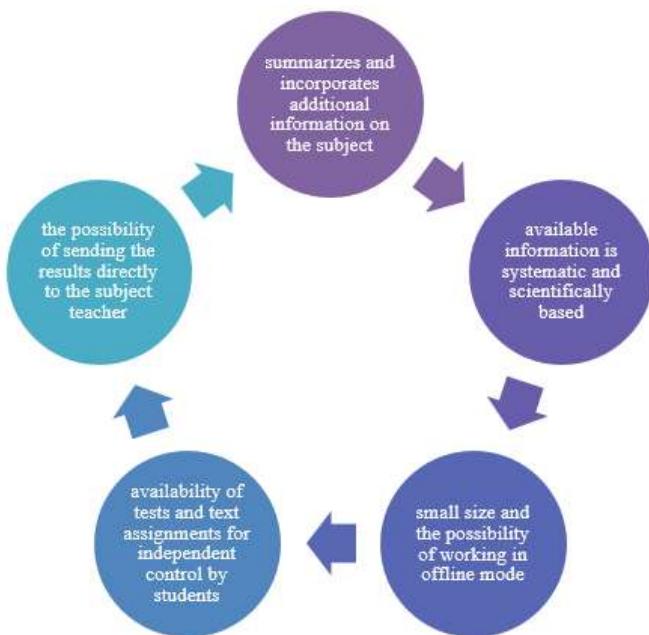
It is in these aspects that this mobile application differs from other applications. Currently, the formation of the distance education system based on new information technology tools, the creation of modern educational information resources and portals, and further informatization of education is an urgent issue.

In conclusion, the emergence of mobile applications in education is undoubtedly one of the most transformative developments in education. These tools have redefined how students learn and how teachers teach. This makes learning more flexible, engaging, personalized and accessible. As we enter the digital age, the role of mobile applications in education becomes even more important. Therefore, the use of these tools is no longer optional, but necessary for teachers and students. In this technology-driven world, incorporating mobile apps into education is an effective way to prepare students for the future and instill a lifelong passion for learning.

Referances

1. Malikova Muhabbat, Sayfullaeva G. I Modern forms of organization of independent work of students as a pedagogical problem// science and innovation international scientific journal volume 3 issue 1 january 2024 uif-2022: 8.2| issn: 2181-3337| scientists
2. Rashidova Nilufar, Sayfullayeva G. I Achieving Transparency in Education// Open Herald: Periodical of Methodical Research Volume 1, Issue 7, November, 2023 ISSN (E): 2810-6385 Website: https://academiaone.org/index.php/6
3. Malikova Muhabbat, Bozorova Aziza, Sayfullayeva G. I. Relevance of Independent Educational Activities of Students in the Credit–Modular Education System// *Open Academia: Journal of Scholarly Research*, *1*(8),

40–42. Retrieved from https://academiaone.org/index.php/4/article/view/297

4. G.I.Sayfullayeva, H.R.Shodiyev Kredit- modul modul tizimida fanlarni integratsion yondashuv asosida o'qitishning afzalliklari// Academic Research in Educational Sciences Multidisciplinary Scientific Journal September, Volume 3 | Issue 9 | 2022

5. Shodiyev Hamza Rozikulovich, Sayfullayeva Gulhayo Masofaviy ta'limda yer mavzusini integratsion yondashuv asosida topish metodikasi//Journal of Academic Research and Trends in Educational Sciences (JARTES) VOLUME 1, ISSUE 10 / ISSN 2181-2675