

## THE ROLE OF MOBILE TECHNOLOGIES IN THE DEVELOPMENT OF INFORMATION COMMUNICATION TECHNOLOGIES IN EDUCATION

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### ABSTRACT

An example of using the Thunkable visual programming platform for the purpose of using mobile technologies as a means of developing information and communication technologies in education.

**Keywords:** Thunkable, thunkable.com, program, project, Log In, Android, gmail, Create New App, iOS, Google Play, App Store

As the President said in his lectures, information technology and digital technologies are one of the most important factors for the fundamental improvement of the economy. Therefore, our future is directly related to ICT and specialists who rely on them. Based on achievements in the field of ICT and in order to meet the needs of qualified IT personnel, in order to improve the education sector, the President of the Republic of Uzbekistan "Further improvement of the education system in the field of information technologies, development of scientific research and their integration with the IT industry" on measures" was adopted. At the same time, foreign higher education institutions are also preparing personnel for the IT sector.

A continuous system of personnel training in the field of information and communication technologies has been established, and through this system, children from school age are being attracted to this field and their interests are being supported.

Currently, the information technologies that are effectively used in the educational system create new educational opportunities. For example, it serves as an important tool for organizing distance education using information technologies in teaching and independent learning. In particular, the software tools that organize and manage virtual educational systems create a number of opportunities for Internet users of any age from the educational system. Concepts such as "digital pedagogy" and "virtual classroom" are introduced in the field of information technologies in modern education. Virtuality refers to a situation that does not actually exist, but can be created with the help of certain tools. The concept of a virtual class means organizing the learning process remotely using information and communication technologies. The concept of mobile education is explained by the introduction of mobile applications in education.

"Mobile learning" is not just a combination of "mobile" and "teaching"; it always stands for "mobile e-learning" and its history and development are partly based on attitudes towards

"traditional" e-learning and its perceived shortcomings and limitations as a continuation of "traditional" e-learning. is passing

In the introduction of mobile technologies to the educational process, the distribution of educational materials in different forms provides an opportunity to present them in a visual way full of multimedia possibilities, such as audio, video, pictures, graphics. Besides:

- there is no need to carry heavy books with you. All necessary textbooks, books and manuals are at hand at any time;
- there are opportunities such as support for independent study of the subject and strengthening of knowledge through mobile textbooks and training manuals.
- mobile books do not get lost, torn or worn out;
- it is convenient for him to use mobile textbooks, that is, when using them, he can set the settings according to himself, that is, see the text in a larger font, enlarge the images, set bookmarks in the necessary places, continue reading from where he left off.

#### **The process of creating mobile applications on the Thunkable visual programming platform.**

Effective educational mobile applications can be developed using programming technologies such as Thunkable. In general, developing effective educational mobile applications using thinkable programming technology requires careful consideration of user experience, interactive learning, personalization, gamification, and effective content management.

Basic steps to create a mobile app on Thunkable visual programming platform:

First, create an account and go to [thinkable.com](https://thinkable.com), the official website of the Thunkable visual programming platform. After that, we need to register in the opened thinkable platform by selecting the Log In horizontal menu.

After that, the following window will open, giving us the opportunity to enrich our existing projects and new projects on the thinkable visual programming platform.

As you can see, when I log into my account, you can see a few of my projects in progress. And we choose "Create New App" to create a new project: after giving the "Create" command, we see the working environment of our new project: We can also choose a new or existing project to work on.

In the Design section, drag and drop user interface (UI) components onto the Screen to create your app's layout. You can customize the components to suit your needs, such as adding images or changing font sizes.

Create your app's logic and functionality using drag-and-drop programming blocks in the Blocks section. You can use variables, conditional statements, loops, and functions to create different behaviors in your program.

We'll test your app using Thunkable's Live Testing feature to check for any errors or bugs and make adjustments as needed.

When you're happy with your app, our thinkable visual programming platform offers paid subscriptions so you can export it as an Android or iOS app, depending on your needs.

Publishing to stores like Google Play or App Store to make your app available for download to the general public is also available on the thinkable platform with its own limited account paid versions.

So we try to give a more beautiful design to the mobile application we are creating. To do this, we issue the "Bottom Tab Navigator" command from the "Add Navigator" point from the commands created by pressing "+" from the "screens" window.

After that, navigation windows "Home", "About", "Contact", "Settings" will be created. And we will continue to design. Let's rename the "Home" window to "Home" and then we will mention the purpose and tasks of the mobile application we are creating in the "Home" window.

On the "Home" page of the mobile application, there is an option to switch to a window that displays the main topics of the mobile application. Before that, we will equip our window with topics.

When we give the command Publish and Download the created mobile application, it asks us for our email. And when we enter our e-mail address, Thunkable visual programming platform sends us a notification with the following content: So it advises us to upgrade our account with one of the paid subscriptions so that we can download our mobile applications in the form of android apk files

Keep in mind that creating a mobile app takes time, effort, and planning. When designing your app, it's important to consider the needs and behaviors of your target audience, as well as any legal and ethical issues. Thunkable provides a variety of tools and resources to help you build a successful app.

In conclusion, I can say that the use of educational resources based on mobile technologies is necessary to organize the educational process more effectively, to use mobile technologies effectively and, most importantly, to increase the student's interest in science, to master science more deeply. , allows self and even parents to control their children by monitoring the level of mastery of science.

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