Methodology of electronic educational resources creation and use of applications

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Abstract
Annotation: In the article describes the role of electronic learning resources in the modern system of education, the nature and classification of electronic learning resources and the methodology of creating electronic resources in Articulate Storyline.

Keywords: electronic training, resource, education resource, software, HTML5, animations.

Introduction
The widespread and rapid penetration of modern information and communication technologies in all sectors and industries of our national economy creates the basis for the formation of an informed society. Concepts such as "information economy", "e-government", "e-government", "distance learning", "open education", "e-learning" have entered our lives. According to the Resolution of the First President of the Republic of Uzbekistan dated April 16, 2012 No PP-1740 on measures to implement the investment project "Creation of the National System of Electronic Education in the Republic of Uzbekistan" 'i was formed. Also, on the basis of the Resolution of the Cabinet of Ministers of July 25, 2012 No 228 "On the establishment of the Center for the introduction of e-learning in educational institutions under the Ministry of Higher and Secondary Special Education of the Republic of Uzbekistan" Center for the introduction of e-learning in educational institutions "was established.

It is known that e-learning resources play an important role not only in "e-learning", "open learning", "distance learning", but also in the organization of traditional education in accordance with modern requirements.

The term "resource" is widely used today. An "educational resource" is a source of learning materials in a variety of forms and shapes that can be used in the learning process. In other words, an educational resource is a source of information used in the learning process. An e-learning resource is a collection of electronic publications created with the help of software, information, technical and organizational means, which can be read with the help of digital computers or distributed through network technologies.

There are several programs that create e-learning resources, including Articulate Storyline. Articulate Storyline is one of the most popular programs for creating electronic resources, designed to create flexible, easy-to-use, and multi-purpose courses. Articulate Storyline - allows you to create tutorials, presentations, tests and other forms of content in Flash and HTML5 formats that can be viewed on the iPad and integrated into distance learning systems [1,132b].

One of the advantages of Articulate Storyline's other products is that it has a graphical interface that is as user-friendly as possible, and not only the content but also the course developer's interface design. Articulate products are convenient not only for developers, but also for those who study in the courses developed using it.

What sets Articulate Storyline apart from others is its quick study and the bright visual style of the courses being created. The program's interface is similar to the Microsoft PowerPoint interface. For someone familiar with Microsoft PowerPoint, working in the program is easy.
Supports all types of multimedia content: video, flash, audio, web objects. All popular video (flv, avi, wmv, mov, mpeg, dv, 3g) and audio (mp3, wma, wav, m4a, aac, aiff, ogg) formats are imported, as well as the HTML code of the video on the Internet, or you can record video from a webcam and record audio from a microphone.

Creating an electronic resource using Articulate Storyline

Let's look at creating an electronic resource on the topic "Tasks and capabilities of a spreadsheet" using the article Articulate Storyline.

Once the Articulate Storyline program is installed, we will launch it. In the program window that appears on the screen, select the "New Project" section and create a new project (Figure 1).

![Fig 1: Articulate Storyline Create a new project window. Double-click on the "1.1 Untitled Slide" window on the screen and the following window will appear (Figure 2).](image)

Let's start creating an electronic resource by placing information on the topic "Tasks and capabilities of the spreadsheet" on the slides above:

With the help of the Insert menu you can work with slides, characters, pictures, ready-made figures, caption, video, audio, placement of web objects and text entry, editing and creating tables, hyperlinks, as well as interactive objects. To insert text on a slide, use the TextBox object in the Insert section of the program (Figure 3).

![Fig 3: The TextBox object of the Articulate Storyline program.](image)

The Home menu of the program allows you to edit several attributes of the text, such as color, size, font type.

To place an image on a slide, select the Picture object from the Insert menu, click the Open button, indicating the location of the image (Figure 4).

![Fig 4: Image placement window via the Insert menu](image)

To create a new slide, select the desired slide type from the Basic Layouts attribute of the New Slide command on the Home menu (Figure 5).

![Fig 5: Create a new slide window](image)

The program also includes human-shaped objects that can be placed next to information that you need to remember on slides. Such objects are located in the Character section of the Insert menu (Figure 6).

![Fig 6: Character placement window](image)

The program's Insert menu contains the Hyperlink command, which can be used to move an object or text to another slide, exit the program, insert or delete music, and so on. actions are performed. As an example, we can see the process of moving to the selected slide by giving the Hyperlink command to the circle object. To do this, select the circle object and click the Hyperlink command to insert the desired slide through the Action-Jump to slide.
The program also has the ability to create a test. To do this, go to the Slides menu and select the Graded Question command. A window will appear with 11 types of tests. From these we select the type of test we need and enter the questions and answers (Figure 7).

![Fig 7: Test input and edit window](image)

The program's Insert menu contains a Button object, which acts as a button, that is, it performs certain actions when we select it. For example, go to the top of the slide, go to plan 2, exit the program, start the video, pause, pause, and so on. You can also place a video on the slide. To do this, select the "Video" object in the "Insert" section and specify the location of the video (Figure 8).

![Fig 8: Insert a video into the slide.](image)

To publish the finished electronic resource, select Publish from the File menu (Figure 9).

![Fig 9: Publish window](image)

In summary, Articulate Storyline is one of the most widely used programs for creating interactive e-learning courses. The program is designed for users in a way that is convenient and suitable for various issues of creating courses. One of the advantages of Articulate Storyline's other products is that they have developed a graphical interface that is as user-friendly as possible and a wider design of not only the content but also the course developer interface. As for the main features of Articulate Storyline, the Simple interface allows you to create courses from scratch or based on templates without requiring the user to read any more.

**References**