DIGITAL TOOLS FOR BUILDING WEB CONTENT IN TEACHERS' TRAINING

Ivelina Velcheva, Kosta Garov

Abstract. The following work is devoted to the appropriate digital tools for building web content that could be used in the pedagogical specialists' training. It is known that in last two years educational systems around the world have switched to online learning. This has led to a need for retraining of pedagogical specialists in the field of preparation of e-learning content. This is the main reason why it is important for teachers to know modern digital tools that provide various services related to cloud storage, video conferencing, creating interactive presentations, building web content, creating mind maps, collecting and providing information, creating digital notebooks, working with a whiteboard, creating tests for control and assessment of knowledge and much more. This work presents a digital tool for building web content and its practical application in teachers' training. The described digital tool is used in the teachers' training in bachelor's and master's programs of FMI at the Paisii Hilendarski University of Plovdiv, as well as in various qualification courses conducted by the Department of Qualification and Professional Development of pedagogical specialists at the same university.

Keywords: web content, web site, digital tools, online training, pedagogical specialists

Introduction

It is known that in the last two years many of the world's education systems have switched to online learning. Development and increasing the digital competencies of the pedagogical specialists becomes an obligatory element of their preparation. There is also a growing need for post-qualification of teachers in the field of e-learning content, which is taught in the classroom. There are a number of digital tools that can be used in technological support of training and learning (for cloud storage, video conferencing, creating presentations, building websites, collecting and providing information, working with a whiteboard, creation of mindmaps, creation of tests for control and assessment of knowledge, etc.). They would make it easier to conduct both online and face-to-face training. For this purpose, it is necessary for the current pedagogical specialists to have the

necessary knowledge and skills in order to be able to successfully use a wide range of digital tools and to introduce them daily in pedagogical practice.

Thanks to the interactiveness that digital tools provide, teachers can more easily provoke students to be the active part in the learning process by setting them different tasks in an innovative way. Many of the tools provide an opportunity for initiative and critical thinking, collaboration and communication, independent research and experimentation, making conclusions and proving hypotheses. The idea of introducing digital tools in the educational process is supported by a number of authors [1-6] and is the subject of their research. According to V. Gyurova, "if the students of the 21st century are accustomed to using modern technical means, if they have been educated and taught that they have the right to choose and make their own decisions, then the school should offer them an educational environment that matches with their habits and satisfy their needs, but also help them discover the educational potential of digital technologies and the joy of learning" [1]. M. Spirova, T. Terzieva and A. Rakhnev support the thesis that "innovative technologies create an interactive educational environment that meets the needs and requirements of modern students and education in general" [2].

In this paper it is described a specific digital tool for creating e-learning content and its practical application in teacher education. The educational content, presented in electronic form, is an important part of the learning process, as it is necessary for the knowledge of the pedagogical specialists on the topic to be periodically enriched. The described tool is used in the training of teachers in the bachelor's and master's programs of FMI, as well as in various qualification courses conducted by the Department of Qualification and Professional Development of Pedagogical Specialists at Paisii Hilendarski University of Ploydiy.

Digital tools for building web content

The use of digital tools for the preparation of e-learning content is an integral part of the learning process. They are extremely suitable for storing teaching materials in a centralized place, presenting additional material related to the various units, completing homework assignments and presenting the results of larger interdisciplinary projects. Building websites is one of the successful ways to illustrate the listed activities, as well as to reach the information to a larger circle of people.

There are various digital tools for creating and publishing websites that provide many and varied functionalities. The tools are online based and can be accessed from a variety of digital devices at any time, thanks to pre-created registration and an Internet connection. The innovative opportunities they provide serve to successfully attract the attention of the audience and their interface is

extremely intuitive. They are a great way to increase learners' engagement in a way that interests them. Even using only the free version provided to them is enough to develop an innovative website in a short time. The main difference with the free version is that it contains less functionality, there are advertising banners in the content and the domain of the website includes the name of the platform. Here is a small part of the digital tools related to the creation of e-learning content and its presentation by building websites: Alle.bg, Google Sites, Wordpress, Weebly, Wix, Zoho Sites. The specific tool that will be discussed in more detail in this paper is the Bulgarian platform for building websites Alle.bg, as the rest are sufficiently recognizable for most of the audience. The idea for the presentation of this particular tool is to promote successful Bulgarian platforms.

Digital tool Alle.bg

Alle.bg (https://alle.bg/) is a platform for creating websites and thanks to its intuitive interface, this can be easily achieved in a short period of time. It is suitable for use by users who do not have knowledge and skills related to programming, because its functionalities are presented through menus and no code appears. This is exactly the reason why the platform is suitable for implementation in the learning process and in general education classes and not only in the specialized ones, which are related to programming. It is extremely suitable for presenting information by teachers and students in an innovative way, thanks to which the attention of the audience can be engaged for a longer period of time.

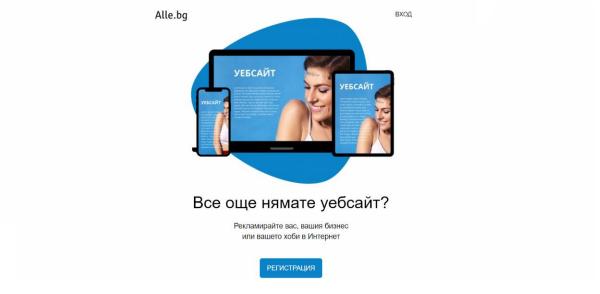


Figure 1. Home page, Alle.bg

The platform includes three services, in addition to the ability to create a free website with an unlimited number of pages, which may contain various elements (text, images, videos, surveys, maps, etc.), it provides free domain and hosting. Each website created in Alle.bg receives its own domain for free, with a

name chosen by the user and type "name_selected_by_user.alle.bg", as well as hosting, without traffic restrictions. The tool offers ready-made templates for websites with different designs and the user can choose a specific design and then he can change. The change may include the smallest details, such as font type and size for different types of titles and subheadings, thickness and color of navigation menu borders, change of background image /background color, etc/. It is suitable for creating both personal websites and websites of organizations, including for schools. E-learning content presented through a website can visualize many and varied information that is positioned in a centralized location. Teachers can publish homework assignments, tasks for interdisciplinary projects and the results achieved later, photos and videos from school events, important news and more. They can also provide additional information on various topics related to the lessons learned, to be intended for the more curious students. Each student can have their own website where they can present themselves and the activities they do at school and in their free time.

After successful registration in Alle.bg, the home page appears and the user can create a new website or access an existing one. Each site can connect to its own domain or add additional services that are paid. At this stage the free functionalities will be mainly presented, because they are sufficient for building e-learning content, both by a teacher and a student. After choosing to create a new website, a dialog box appears and a domain name have to be chosen. It can be changed only when paying for the service for your own domain. Then the user must reflect some of the basic settings of the site (choice of title, short description and navigation menu with pages) and choose a vision from the free templates provided by the platform, which have a different design. The initial vision of the site is ready and from now on the user can access the two menus and customize its appearance by changing even the smallest details.

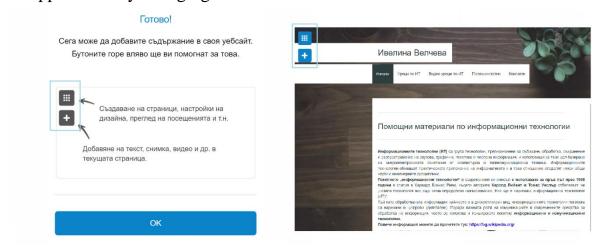


Figure 2. Main menus, Alle.bg

In the upper left part of the site, there are the buttons for the two main menus, including various functionalities. One of the menus is related to the creation and insertion of new items, and the other — to the basic settings of the site. When the plus sign is pressed, a list of items that can be added is displayed. Each item provides settings for editing, changing visual features, copying, changing the location on the page or deleting. A dialog box opens for some of the elements, in which the information necessary for their visualization is filled in. The free version of Alle.bg has a large list of items; the most commonly used are title, text, hyperlink, photo, photo album and video. The structural elements are related to the location of the content itself — number of columns, possibility for floating content, container and separator (horizontal line). There is also the possibility to include HTML code, additional navigation, contact form, location map, survey, comments, share button, Google Translate and blog articles.

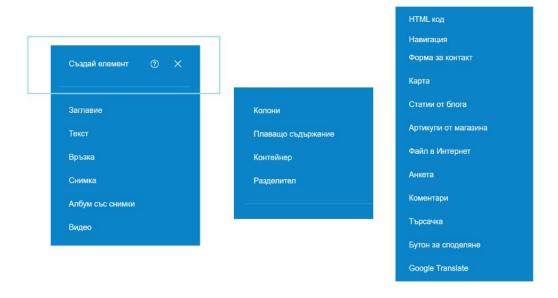


Figure 3. Add elements, Alle.bg

When selecting the alternative menu by pressing the button with the dots, the settings used to manage the site are opened. It contains the domain name of the site and an option to select a link to your own domain, as well as an option to stop editing the current page of the site (it can be made inactive). When you stop, the button for adding a new item disappears and when you switch to already created items, the options for editing, deleting, etc. are not displayed. Then there are the settings for the pages, where a screen for creating, moving and deleting pages on the site opens. From the design settings a completely new design can be selected or adjusted the currently selected one, as the content does not change, but changes its appearance. In blog settings, articles and categories can be created, which are displayed in places where the "Blog Articles" item has been added. When accessing the settings for comments, the comments posted by visitors to the site can be managed (to be approved, deleted, etc.). The settings option accesses the general settings of the site, which includes title, description, icons, language, access to the site (may be temporarily suspended) and more. The settings for visitors and audit follow, as here you can see information about the last visits to the site, and from the "Audit" tool you can analyze the content of the site and find problems with it (broken links, short titles, etc.).

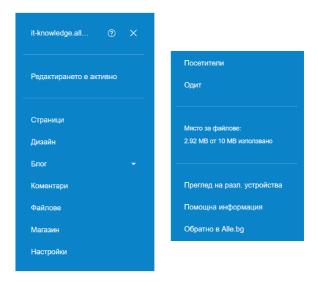


Figure 4. Main settings, Alle.bg

The digital tool Alle.bg provides the opportunity to create an unlimited number of websites, all of them are free, but there are restrictions on the name, available functionality and file space that can be used. In a paid version additional services are provided for a website selected by the user, and some of them are: possibility for additional space (increases the available space for files), removal of the advertising area, removal of the link to Alle.bg at the bottom of the website, using your own domain instead of the free one of the type website.alle.bg, adding a search engine, adding a store with the possibility to add items that can be ordered by visitors and others.



Figure 5. Free vs Paid version, Alle.bg

Here are two sample websites made by one of the authors of this paper (Ivelina Velcheva) and created thanks to the digital tool Alle.bg:

- link to access a website built with the free version provided by Alle.bg https://it-knowledge.alle.bg/;
- link to access a website using paid services provided by Alle.bg https://domoupravitelkite.com/.

During the implementation of teacher training, we have used the basic methodological principles as:

- accessibility;
- from "simple to complex";
- clarity;
- activity.

We used the following methods – face-to-face learning, explanation, observation and exercises that help various learning tasks to be solved. We believe that these methodological principles and methods support the usefulness of the described digital technology.

Conclusion

According to V. Gyurova, "a good teacher today needs modern methodological competence, which requires knowledge and skills for the use of interactive methods and technologies – both based on modern technical means and on interpersonal relationships" [7]. We support the opinion of the author and we want to add that it is extremely important for pedagogical specialists to know modern digital tools and to implement them more often in the learning process. The 21st century is synonymous with the word "digitalization" and teachers need to adapt to students' needs by giving them access to their mobile devices or computers, but as an innovative learning task set and presented using a specific digital tool.

Acknowledgments

The authors are grateful to the project FP21-FMI-002 of the Scientific Fund of the Paisii Hilendarski University of Plovdiv, Bulgaria, for the partial funding of this work.

References

[1] V. Gyurova, The Digital Challenge to Education, *E-Pedagogical Forum*, No. 4, 2020, 12–31, ISSN: 1314-7986.

- [2] M. Spirova, T. Terzieva, A. Rakhnev, Digital environments in education. *Proceedings of the conference "Synergetics and reflection in mathematics education"*, 2020, 349–355, ISBN: 978-619-202-595-3.
- [3] M. Gaidarova, T. Terzieva, A. Rakhnev, Teaching during distance learning shared experience by Bulgarian teachers, *Education and Technology*, 2020, Vol. 11, 7–14, ISSN: 1314-1791.
- [4] L. Slavova, K. Garov, Implementation of cloud technologies in secondary education, *Mathematics and Informatics*, 2019, Vol. 62, No. 5, 500–508, ISSN: 1310-2230.
- [5] V. Shopova, I. Dimitrov, K. Garov, Opportunities for e-learning, *Proceedings of the conference "Synergetics and reflection in mathematics education"*, 2020, 293–300, ISBN: 978-619-202-595-3.
- [6] T. Buhcheva, Digital Technologies and the Education of Digital Youth, *Pedagogical News*, 2016, Vol. 1, 102–105, ISSN: 1314-7714.
- [7] V. Gyurova, Why only pedagogical competence is not enough for the 21st century teacher?, *Pedagogical Forum*, 2018, No. 3, 3–19, ISSN: 1314-7986.

Ivelina Velcheva^{1,*}, Kosta Garov²

^{1,2} Paisii Hilendarski University of Plovdiv,

Faculty of Mathematics and Informatics,

236 Bulgaria Blvd., 4003 Plovdiv, Bulgaria

^{*} Corresponding author: ivelinavelcheva@uni-plovdiv.bg