SUPPLEMENTARY EDUCATION PORTAL CREATION FOR STUDENTS

YEREKESHEVA M.M.[1*] iD, ZASLAVSKAYA O.Y.[2] iD, BATURINA A.[3] iD

Yerekesheva Meruert Mynturganovna[1] - Candidate of Physical and Mathematical Sciences, docent, Aktobe Regional University, Aktobe, Kazakhstan
 -mail: myerekesheva@zhubanov.edu.kz, https://orcid.org/0000-0002-4043-5688;
*Zaslavskaya Olga Yuryevna[2] - Doctor of Pedagogical Sciences, professor, Moscow City Pedagogical University, Moscow, Russia
 -mail: zaslavskaya@mgpu.ru, https://orcid.org/0000-0002-6119-8271;
Baturina Aida Muratovna[3] - Master of Pedagogical Sciences, computer science teacher, IT lyceum school MBOU Secondary School No. 72 named after Abisha Kekilbayevich, Aktobe, Kazakhstan
 -mail: aida.baiturina@gmail.com, https://orcid.org/0009-0003-1214-9769;

Abstract. The aim of the research described in this article is to develop and implement an educational portal that enables students to acquire additional knowledge and skills by studying the process of creating electronic resources in the educational field. The portal addresses the current demands of digital learning and provides access to supplementary educational opportunities. The article discusses software development methods, the selection of an optimal environment for application creation, and the key stages of the development process. The focus of the research is on creating a supplementary education portal, emphasizing the use of object-oriented programming (OOP) methods, web technologies, web programming, and electronic educational resource creation techniques.

As a result of the research, technologies such as PHP, MySQL, and JavaScript were chosen, leading to the successful implementation of the application. An analysis of existing educational portals, such as BilimLand and Daryn Online, was conducted. The outcome of the work was the creation of a functional educational portal that allows students to effectively gain additional knowledge, meeting modern requirements. The portal offers interactive tools available to users and adapts to individual educational needs.

Key words: educational portal, supplementary education, Web-programming, programming, server, scripts, programming platform, portal development, testing, compiler.

Introduction

Modern portals are complex and large information systems, the development of which requires a deep and comprehensive conceptual study.

The portal is a single integrated point of effective comprehensive unlimited access to information, applications and people. Thus, portal technology allows you to bring resources as close as possible to users, ensures the integration of the information essence of the organization, embodies relations within working and information groups, creating conditions for a single Information Space [1].

The educational portal is an area of application of information and computer technologies in education.

We note the following requirements for the portal:
- providing services to a large number of users (school students);
- a wide range of information;
- assists basic network formats;
- has a wide range for individualizations;
-implementation of convenient and effective search mechanisms, assessment of the accuracy and completeness of the data obtained;
-ensuring the protection of stored information using software and physical methods of ensuring security;
-subsumption of stored information-rubricating, automated procedures for categorizing search results;
-intelligent analysis applications-knowledge management systems [2].

The main issue of the creation and development of the portal is information and methodological support for the procedure of subjects of the educational process. Although, the educational portal

should be a comprehensive, open tool for accumulating and using allocated educational resources, an effective tool for forming the modus of the education system. The educational portal is a system that fulfills the mission of providing information and methodological materials to teachers and students of various categories, integrating the experience of innovative work in educational institutions [3].

Tasks of the educational portal:

The functioning and development of a unified educational information environment, as well as the development of a system of educational portals, ensure the solution of the following tasks:

• Improving the quality of education (development of the normalizing system in education, the formation of a unified environment for certification and testing, the creation of an educational quality system);

• Creation of conditions for the gradual transition to a new level of Education based on information technologies (development of a system for providing educational information from multimedia to network content delivery systems, development of distance education, creation of an open education system) [4].

Research methodology

The creation of the educational portal was preceded by a theoretical analysis of the work of scientists who conducted research on this issue.

If we focus on the studied scientific articles about the educational portal and the theoretical concepts considered in the manuals, we may say about N. B. Parshukova, in the textbook "Designing and developing of an educational portal" she considers all stages of creating a portal. Describes the requirements, from analysis and formulation of the concept to the sale and implementation of finished products. The manual discusses the basic principles and methods of designing educational portals, as well as such important aspects as the choice of a technological platform, the organization of the content structure, the development of functionality and design, security and access control issues, analytics and evaluation of the effectiveness of the portal.

D. V. Luchaninov and N. G. Ignatova consider the issues of the effectiveness of the use of internet technologies, the assessment of results and the organization of interaction between students and teachers [5].

Petru A Mircea, Radu Ion Badea, Anca Dana Buzoianu in their scientific research "Development of an educational portal - innovative tool for support of teaching and learning doctoral studies" present ideas and concepts for the development of an innovative educational portal that provides resources and tools for effective teaching. The scientific work addresses various aspects of portal design and development, including architecture, functionality, user interface, content management, and integration with other systems.

Garkusha N. V., Butorina N. I. pay special attention to the specifics of the content of education and the methods of its presentation on the site. They also consider the possibilities of interactivity, feedback and evaluation on the educational site [6].

In the manual "Web Portal Application development Technologies"Américo Sampaio examines the various technologies and tools used in the creation of web portals. It covers a wide range of topics, including the selection of platforms, programming languages, databases, structures and other components necessary to create a functional and effective web portal.

Currently, available portals are typical information resources, where materials for the work of students at school are simply posted or are aimed at helping the main school curriculum. Resources aimed at additional education of students at school, which would allow them to build individual development patterns with a focus on future professional activities and specific projects, are currently not available, although many attempts are being made to create them.

Let's focus on the largest of the portals of suplemented education for schoolchildren in Kazakhstan.

1. Educational portal "*BilimLand*" (www.bilimland.kz)-a universal, multilingual educational platform based on the advanced achievements of world leaders in e-learning, consisting of an interactive e-course for students, as well as a complex of virtual laboratory work and simulators of the main school. A huge base with educational content with more than 40 thousand materials [7].
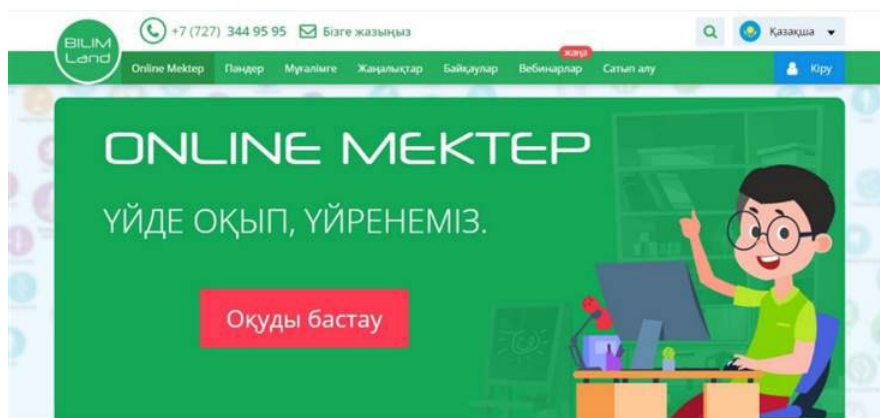
Figure -1. Educational portal "BilimLand"

2. Educational portal "Daryn Online" (https://daryn.online)- allows many teachers to study online from anywhere at any time. You can study on this educational platform by subscription, which costs two thousand tenge [8].
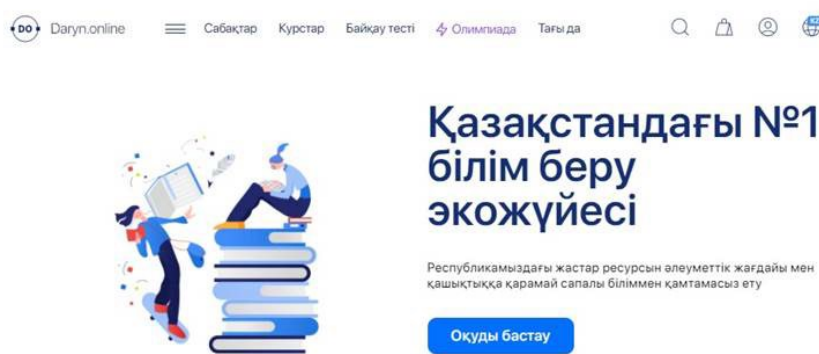

Figure-2. Educational portal "Daryn Online"

3. The electronic textbooks "Opiq" (www.opiq.kz) - are real multimedia e-books. They are available, so you can log in into the site and work on any gadget.

The interactive resource contains school textbooks. Most of the textbooks are collected in the publishing house Almaty "Kitap" publishing house.

The content of the textbook fully corresponds to the program, only significantly expanded, as there are some videos and interactive tasks. Students like it very much. For example, you can watch an excerpt from a historical film during the lesson of a History of Kazakhstan, or listen to an excerpt from an opera at the music lesson.
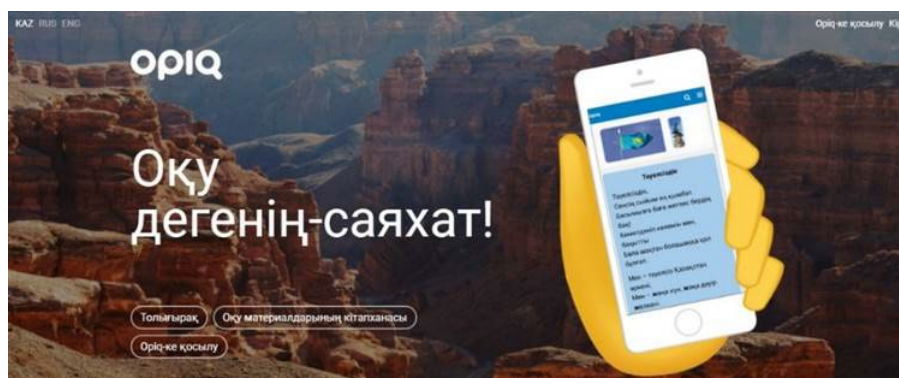

Figure -3. Electronic portal "Opiq"

Currently, people think that, educational portals offer too much help to students at school, so

they adhere to the idea that they do nothing and do not receive knowledge. However, providing all the necessary material, allows students to learn without spearing time in search. This facility is being implemented by the educational portals.

Results of the study and discussion

Having studied the features and functions of existing educational portals, as a result, we have elaborated our own portal for supplementary education. The structure of the software equipment can be seen in the functional diagram below (Figure 4).
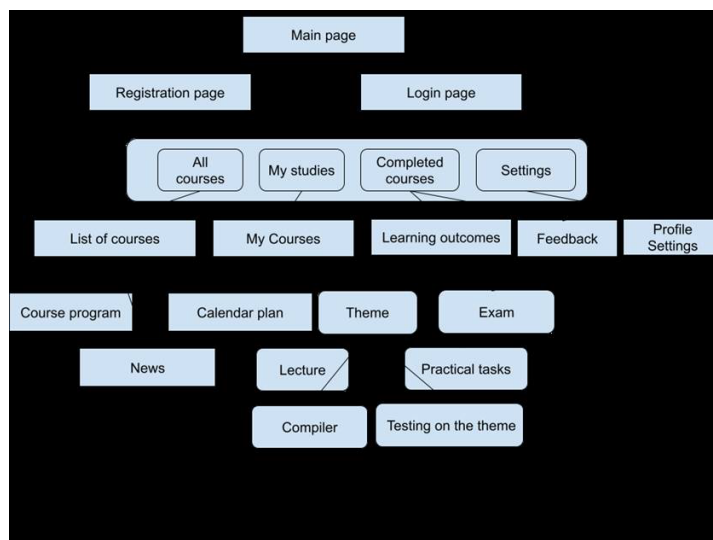
Figure-4. Functional scheme of the educational portal

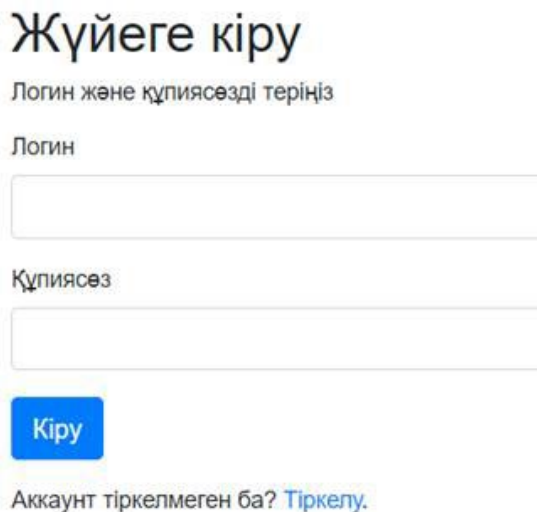Below is the structure of the portal:

- Home page. This page contains a brief description of courses and materials, links to resources and tools for working with courses, registration and access to your personal account.

- List of courses. This section provides a brief description of each one, as well as information about the teaching staff and the duration of the course.

- Personal account. In this section, the user can control their profile, notification settings and access to courses. Also here can be a list of courses and progress in each of them.

- Forum. In this section, users can communicate among themselves, discuss course materials and ask questions to teachers.

"About us". This section provides information about the project team, its history and mission.

- Feedback. Here users can contact for any questions [9].

The software was written in PHP, and the capabilities of the HTML hypertext language, CSS style, and graphic editors were also used. Figure 5 below shows the home page of the web portal.

Figure-5. Home page

On the educational portal, you can log in by pre-registering in the system, by login and password.

Figure-6. Login page

After entering the educational portal, the user goes to the section below, depending on the chosen course. In the left part, you can get acquainted with the content of the course. Step by step master the course materials on the topic. The course performs video lectures, theoretical information, tasks for creating software code, test materials for learning a programming language.
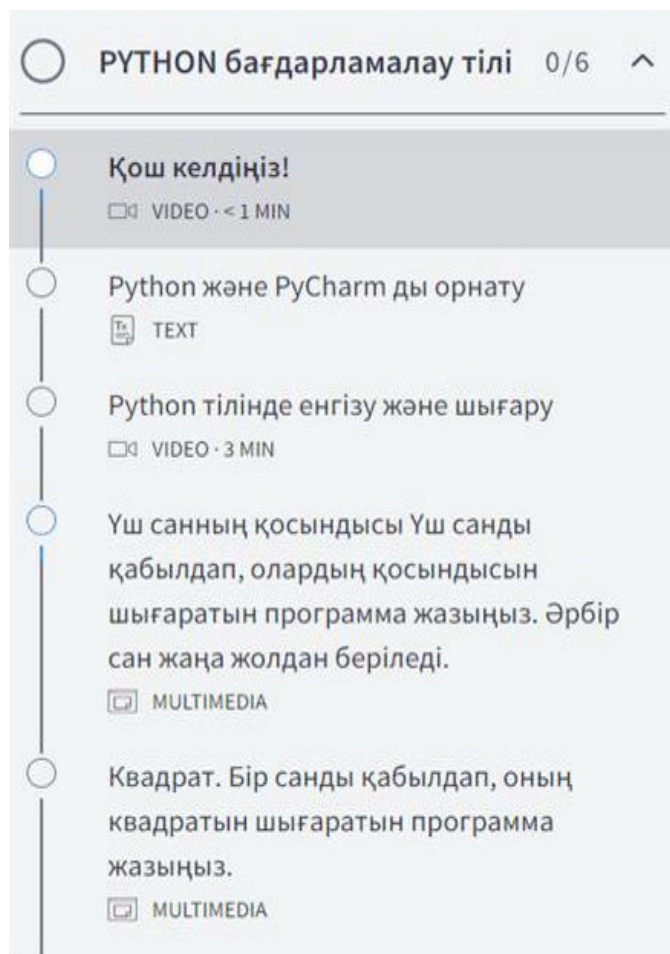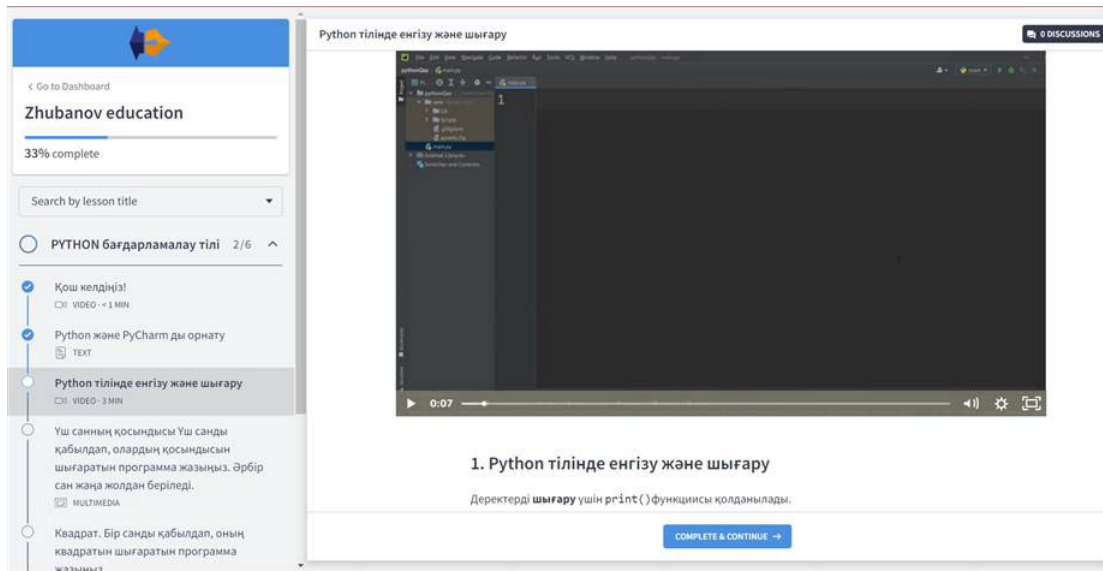

Figure-7. Course content

Figure-8. Video lecture Department

After each topic, by clicking on the "Continue" button, the result of training will be displayed in percentage terms.
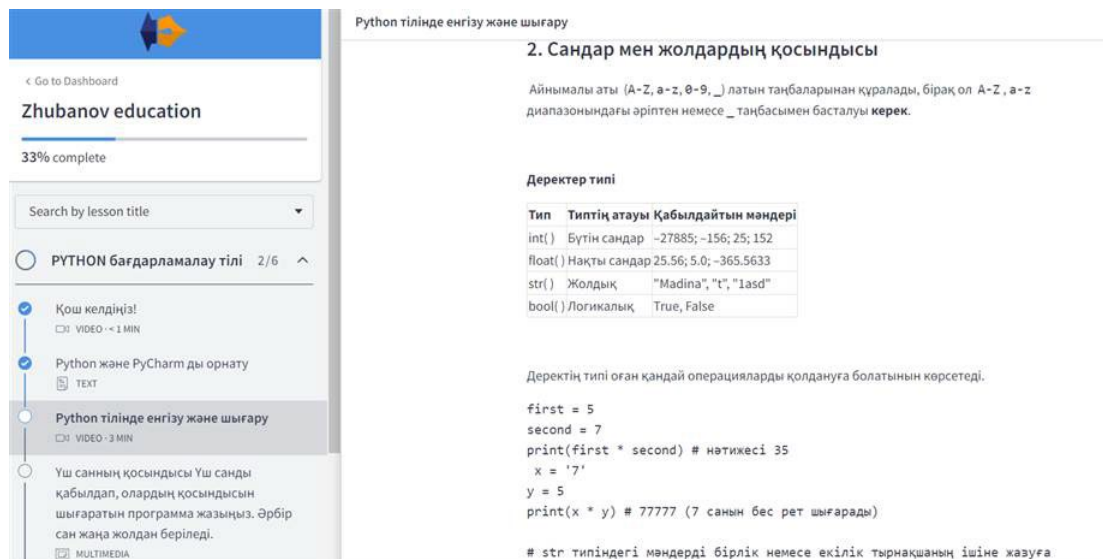

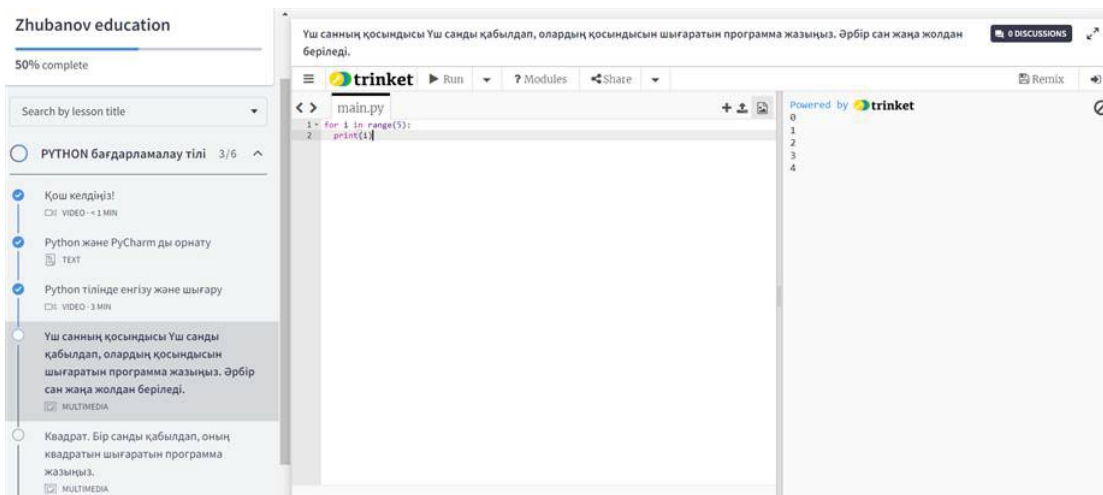Figure-9. Department of theoretical materials
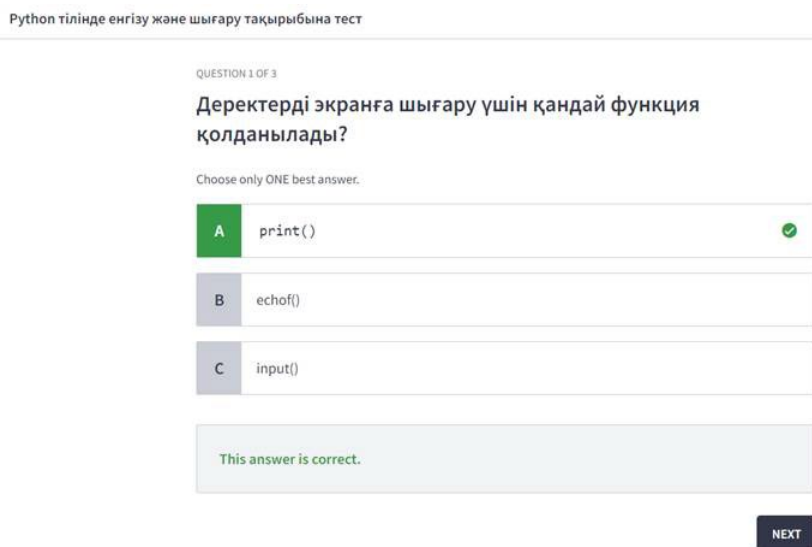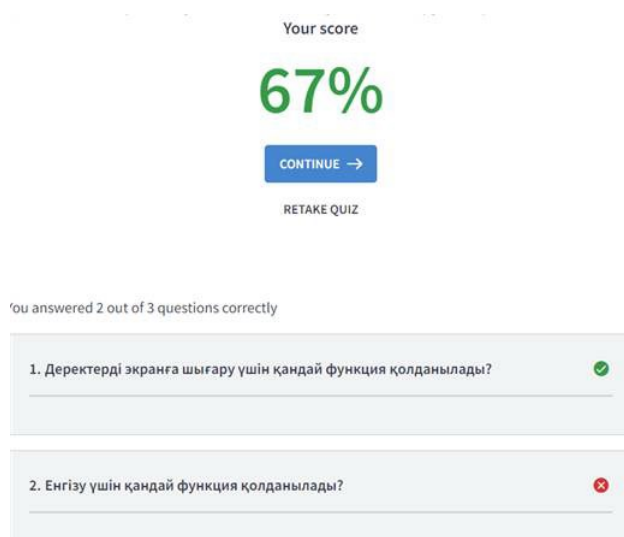

Figure-10. Built-in Compiler

Figure-11. Test tasks

Figure-12. Scores from the test task

As a result of completing the tasks, an accommodative and functional portal was created, that allows students to access various courses and programs of supplementary education, communicate with teachers and other students, share their experience and knowledge.

Conclusion

The main goal of creating the portal was to ensure that students have access to high-grade supplementary education in various fields of knowledge and areas of interest. To achieve this goal, the following tasks were set: conducting an analysis of existing supplementary education portals and platforms, identifying the exigencies and interests of students, developing the structure and design of the portal, creating content for different age groups and interests, testing and improving the Portal [10].

For the design and creation of software equipment, the following procedure was carried out:

- the following technologies were selected to implement the application: PHP, MySql, JavaScript, ampps server;

- The technology of developing an educational portal has been studied.

- The mechanism of using the educational portal in learning institutions of the country and its equipment, technologies were studied;

- analysis and concept of near and far abroad research;

- an educational portal has been created that allows students to receive additional education and meets modern requirements.

The created supplementary education portal has a convenient and comprehensible interface and bears a wide range of educational materials that allow you to adapt the educational material to the individual needs of students, as well as interactive tools, which serve as one of the main the advantages for the independent learning and interaction with teachers.

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. .¹* iD , . .² iD , .³ iD

* ¹ - физика-математика ғылымдарының кандидаты, доцент, Қ.Жұбанов атындағы Ақтөбе өңірлік университеті, Ақтөбе қ., Қазақстан
-mail: myerekesheva@zhubanov.edu.kz, https://orcid.org/0000-0002-4043-5688;
О ² - педагогика ғылымдарының докторы, профессор, Мәскеу қалалық педагогикалық университеті, Мәскеу қ., Ресей
-mail: zaslavskaya@mgpu.ru, https://orcid.org/0000-0002-6119-8271;
³ - Педагогика ғылымдарының магистрі, информатика пән мұғалімі, Әбіш Кекілбайұлы атындағы №72 ЖББО IT мектеп-лицейі, Ақтөбе қ., Қазақстан
-mail: aida.baiturina@gmail.com, https://orcid.org/0009-0003-1214-9769;

. Бұл мақалада сипатталған зерттеудің мақсаты – білім саласындағы электронды ресурстарды, білім беру порталдарын құру технологияларын зерттей отырып оқушыларға қосымша білім алуға мүмкіндік беретін және заманауи талаптарды қанағаттандыратын білім беру порталын құру және қолданысқа енгізу. Мақалада программалық жабдықты құруда қолданылатын әдістер, қолданылатын ортаны таңдау принципі және құру сатылары қарастырылған. Зерттеу объектісі - қосымша білім беру порталын құру үдерісі. Зерттеудің негізгі әдістері - ОБП әдістері, web-қосымшаларды жобалау мен құру технологиялары, web-программалау әдістері, электронды ресурстарды құру әдістері. Портал цифрлық оқытудың өзекті талаптарын қанағаттандыруға бағытталған және қосымша білім беру мүмкіндіктеріне қол жеткізуге мүмкіндік береді.

Зерттеу нәтижесінде қосымшаны жүзеге асыру үшін келесі технологиялар таңдалды: WEB-технологиялар, ОБП технологиялары; PHP, MySQL, JavaScript, олар қосымшаның сәтті іске асырылуын қамтамасыз етті. Білім беру порталын дайындау технологиясы зерттелді, жақын және алыс шетел зерттеулеріне талдау және тұжырымдама жасалды, оқушыларға қосымша білім алуға мүмкіндік беретін және заманауи талаптарды қанағаттандыратын білім беру порталы құрылды. Портал пайдаланушыларға қол жетімді интерактивті құралдарды ұсынады және жеке білім беру қажеттіліктеріне бейімделеді.

: білім беру порталы, қосымша білім беру, Web - программалау, программалау, сервер, скрипттер, программалау платформасы, порталды дайындау,тестілеу, компилятор.

. .¹* iD , . .² iD , .³ iD

* ¹ - кандидат физико-математических наук, доцент, Актюбинский региональный университет им. К. Жубанова, г.Актобе, Казахстан
-mail: myerekesheva@zhubanov.edu.kz, https://orcid.org/0000-0002-4043-5688;
² - доктор педагогических наук, профессор, Московский городской педагогический университет, г. Москва, Россия
-mail: zaslavskaya@mgpu.ru, https://orcid.org/0000-0002-6119-8271;
³ - Магистр педагогических наук, учитель информатики, IT школа-лицей МБОУ СОШ № 72 им. Абиша Кекильбаевича, г.Актобе, Казахстан
-mail: aida.baiturina@gmail.com, https://orcid.org/0009-0003-1214-9769;

. Целью исследования, описанного в данной статье, является создание и внедрение образовательного портала, позволяющего учащимся получать дополнительные знания, изучая процесс создания электронных ресурсов в сфере образования и удовлетворяя современным требованиям. В статье рассматриваются методы, используемые при создании программного оборудования, принцип выбора используемой среды и этапы создания. Объект исследования-создание портала дополнительного образования. Основными методами исследования являются методы ОБП, технологии проектирования и создания web-приложений, методы web-программирования, методы создания электронных ресурсов. Портал направлен на удовлетворение актуальных требований цифрового обучения и предоставляет доступ к дополнительным образовательным возможностям. В статье рассматриваются методы разработки программного обеспечения, выбор оптимальной среды для создания приложения и ключевые этапы процесса разработки. Объектом исследования является создание портала дополнительного образования, с акцентом на использование методов объектно-ориентированного программирования (ООП), web-технологий, web-программирования и методов создания электронных образовательных ресурсов.

В результате исследования для реализации приложения были выбраны следующие технологии: Web-

технологии, технологии ОБП; PHP, MySQL, JavaScript, которые обеспечили успешную реализацию приложения, исследована технология разработки образовательного портала, проведен анализ и концепция исследований ближнего и дальнего зарубежья, создан образовательный портал, позволяющий учащимся получить дополнительное образование и удовлетворяющий современным требованиям. Портал предоставляет интерактивные инструменты, доступные для пользователей, и адаптируется под индивидуальные образовательные потребности.

: образовательный портал, дополнительное образование, Web-программирование, программирование, сервер, скрипты, платформа программирования, разработка портала, тестирование, компилятор.