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ментом для достижения главной цели Стратегии» Казахстан-2050 «Мәңгілік Ел, программа основана на шести основных направлениях Стратегии» Казахстан-2050.

Предоставление проекта программы, ориентированной на обновление содержания и структуры, совершенствование инновационного потенциала системы образования опорной школы им. М. Ауэзова.

Ключевые слова: *обновленное содержание образования, управление системой образования, учебно-воспитательная работа, инновации, национальные ценности.*

SHOLPANBAYEVA, G.A., SATBAYEVA, A.T.
IN THE CONDITIONS OF THE UPDATED CONTENT OF EDUCATION, THE MANAGEMENT OF THE EDUCATIONAL PROCESS

The need for an educational process management model based on the conditions of the updated content of education. The experimental work entitled "Pedagogical conditions for the management of the innovative educational process" is focused on increasing the innovative potential, updating the content and structure of the educational system of the M. Auezov reference school. The content of experimental work tailored to national priorities and national values, which are the Foundation to achieve the main objectives of the Strategy" Kazakhstan-2050 "Mangilik YEL, the program is based on six main areas of the Strategy" Kazakhstan-2050".

The provision of the draft programme of renewal of the content and structure, improving the innovative capacity of the educational system of the reference school.M. Auezov.

Key words: *updated content of education, management of the education system, educational work, innovations, national values.*

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EDUCATIONAL INFORMATION PORTALS AS AN ADDITIONAL RESOURCE FOR TEACHING COMPUTER SCIENCE IN SECONDARY SCHOOLS

Abstract

This article contains information about the use of educational portals in This article contains information about the use of educational portals in teaching the subject «Computer Science» in a secondary school. The current situation with the pandemic, the rapid transition of educational organizations to distance learning, the lack of full-fledged teacher-student interaction, and at the same time the lack of proper assimilation of information requires school teachers to modernize teaching approaches with an emphasis on the independent work of students. At the moment, Kazakhstan's education is undergoing a number of reforms, in particular digitalization and automation of the educational process, the introduction of e-learning in schools in Kazakhstan. The rapid development of information technologies is replacing traditional static websites used for online education with interactive intellectual portals that provide additional opportunities for learning new, more in-depth knowledge that cannot be achieved using only traditional teaching methods. The article contains a comparative analysis of educational

portals proposed by the Ministry of Education and Science of the Republic of Kazakhstan for additional distance self-education of schoolchildren. The analysis was carried out according to the following criteria: the availability of materials of the school course «Computer Science», the method of submitting new material, compliance with the requirements of the state standard, a way to consolidate new knowledge in the form of tests, simulators, practical tasks, and more. It was found out that not all the proposed portals contain materials on a school subject, many portals require registration and a fee for use, some portals are only in the state language, which limits universal access.

Key words: distance learning, educational portals, blended learning, e-learning, online learning, computer science course in a secondary school, self-study.

1 Introduction

The events of the last two years have become a test for Kazakhstan's education system, in general, as well as for the education systems of other countries. Schools, colleges and universities conducted distance learning or a mixed format. According to the United Nations Educational, Scientific and Cultural Organization (UNESCO), by mid-May 2020, more than 1.2 billion students at all levels of education worldwide had stopped attending school. The primary task for domestic educational organizations was to train both teachers and students in a new format of education, which was mainly held online through information programs ZOOM, SKYPE, WhatsApp and others. Teachers began to use mostly the simplest ways of teaching – explaining new material, fixing it with the help of control works. The individual characteristics of students in the assimilation of information in an online format were not taken into account, parents' readiness to use new teaching methods was not taken into account. Definitely, the interest of students in learning has decreased. In our opinion, in order to improve the cognitive ability of students, the skills of independent information retrieval, individual development of students in the learning process, educational information portals can play a major role.

The distance learning system has long been in demand abroad, is considered very effective and has good characteristics and ratings. For example, during the mass transition to distance learning in Cyprus, licensed software necessary for distance education was purchased at the state level. Tens of thousands of children and teachers logged in using the codes provided to them. Both public and private «virtual classroom» services have been successfully launched in China and Singapore. [1]

The author of the article «Derzhi distancziyu. Onlajn obrazovanie v Kazakhstane» Aleksej Kuz`min identifies three main advantages of online education: firstly, you can study both at home and anywhere in the world, for example, if a child is ill or studies at home due to disability, then he receives a full-fledged education on a par with his peers without any restrictions. Secondly, the distance learning system offers students and teachers additional opportunities to learn new, more in-depth knowledge that cannot be achieved using only traditional teaching methods. The use of digital technologies allows students to choose the appropriate pace of learning, a comfortable principle of presentation of the material, the duration of the lesson, additional information. And, thirdly, online learning and working with electronic materials contribute to improving the effectiveness of the educational process, improving academic performance and developing skills in a digital environment. [2]

At the moment, Kazakhstan's education is undergoing a number of reforms, in particular digitalization and automation of the educational process, the introduction of e-learning in schools in Kazakhstan. The rapid development of information technology is replacing traditional static websites used for online education with interactive intellectual portals. [2]

In addition, children of different ages in schools began to be tested for knowledge and proficiency in various skills. Previously, it was «reading literacy», «mathematical literacy», but now, starting last year, they began to evaluate «digital literacy». The first results allowed us to say that there are no digital literacy skills or they are very weak. One of the main focuses of education in the

21st century are: algorithmic, information, technical, communication literacy and digital security. In this connection, the subject «Computer Science and communication Technologies» was introduced into the program of the Kazakh primary school, starting from the 3rd grade, in 2022 this subject is already being introduced starting from the 1st grade.

The purpose of this article is to analyze existing educational portals that include materials of the school course «Computer Science» for independent use by students.

2 Materials and methods

The study analyzed the learning portals proposed by the Ministry of Education and Science of the Republic of Kazakhstan, providing the formation of values for self-development and self-education of secondary school students in the subject «Computer science». The didactic features of the implementation of distance learning in the educational process are revealed.

3 Results and discussion

According to the authors of the article «The educational potential of learning portals the case of mathematics online», the main role of educational portals in education is to improve learning by connecting people, information and services. [3] Education today consists of three major areas: promotion, management and evaluation of learning. Again, during the lockdown period in Kazakhstan, parents unexpectedly faced a situation where they have to teach children themselves, since the information is not always clear, combine the role of both teacher and parent. Improving education today requires removing barriers and building connections by providing parents, teachers, and students with access to the people, information, and services they need to fulfill their role in the learning process. Educational portals can improve many aspects of education, including communication and collaboration, document management, access to and exchange of information, and assessment and reporting. They can also be personalized for any user, be it a student, parent, teacher, employee, administrator, or even a government agency. [4]

First of all, working with educational portals is considered as an independent work. Independent learning can be defined as «a process in which people take the initiative, with or without the help of others, in diagnosing their learning needs, formulating goals, identifying human and material resources, choosing and implementing appropriate learning strategies and evaluating results». When studying independently, students should be able to make their own decisions in the field of education. It is obvious that informal education provides much more opportunities for learning. People may feel demotivated to study at school because there are limitations that can affect their motivation, such as the requirements for completing tasks without available resources in the classroom. As stated by Cox (2013) in his review of changes in technological and educational research over the past 40 years, students use technology outside of school even more than in school, which makes informal learning as important as formal learning in human learning and development. [5]

The modern education system, which is being implemented in our country today, implies an increase in the amount of time for independent study. In recent years, portals have appeared that meet the standards of public education of the Republic, in connection with which, we can note the growth of their importance. The idea of portals has changed, because in the beginning they positioned themselves as a simple website that hosts an electronic school textbook in the usual formats of downloading and viewing. Now, modern educational portals are an interactive online learning environment, a teacher's assistant and self-study for a student, including theoretical material in the form of texts, diagrams, illustrations, tables, diagrams and practical fascinating tasks in the form of simulators, test questions, crosswords, as well as multimedia materials – video tutorials, audio materials, flash animations and much more. Some even contain elements of machine learning. [6]

On March 17, 2020, the Ministry of Education and Science of the Republic of Kazakhstan in its telegram channel published a list of educational resources for self-use by students during the pandemic (https://www.inform.kz/ru/rekomendacii-mon-rk-obrazovatel-nye-resursy-dlya-shkolni kov-i-studentov_a3626029) where you entered: electronic diary kundelik.kz, bilimland.kz, da-ryn.online, Khan academy, 100 points, imektep.kz , coursera.org , itest.kz , stem-academia.com. [7]

We have analyzed the proposed portals on the availability of materials of the school course «Computer science», on the way to submit new material, on compliance with the requirements of the state standard, a way to consolidate new knowledge in the form of tests, simulators, practical tasks and more.

The functionality, terms of use, availability of materials for the school course «Computer science» of the proposed educational portals are shown in Table 1.

Table 1. A brief description of educational portals proposed by the Ministry of Education and Science of the Republic of Kazakhstan for the independent development of students during the distance learning format.

Portals	Short description	Learning materials on the subject of «Computer Science»	How to start using it?	Cost of the solution	What is missing to fully ensure the distance learning process?
KUNDELIK. KZ https://portal. kundelik.kz/r u/video-lessons	Electronic document flow between teachers, students and parents. On the portal you can also find out the latest news of the education system, watch educational videos. There are instructtions, recommendations, methodological manuals and manuals for teachers.	Grades 5-11	Access to video tutorials is open to all visitors of the site, there is no need to register.	free of charge	There are no interactive tasks for video tutorials, tasks for practical work and consolidation of acquired knowledge. The mobile version of Light contains a limited level of access to the portal's capabilities. For wider access, you need to purchase the Pro version on a paid basis.
BILIMLAN D.KZ https://biliml and.kz/	Online platform for distance learning, more than 24 thousand lessons in accordance with the standards of the Ministry of Education and Science of the Republic of Kazakhstan in three languages (Russian, Kazakh and English). Each lesson consists of a theoretical part, a video clip and tasks.	no	The student must register on the platform and pay for the selected online courses. The service is available in a web version, no additional software installation is required for the PC. A personal computer and Internet access are required for training.	paid	There is not enough open information about the capabilities of the service with illustrative examples of how the service works. It is impossible to find information about the functionality of the platform, the capabilities of the teacher and student on the site. The platform is on a paid basis, which limits universal access.
DARYN.ON LINE https://daryn. online	The portal offers to optimize the study of school subjects in a short time.	Grades 1-11	The student must register on the platform and pay for the se-	paid	The course on the subject of computer science is designed in the state langua-

	Short video tutorials are completed with tests. Correct answers bring points, which can then be exchanged for new courses.		lected online courses. There is also the possibility of using a mobile application in the App Store or Play Store. The course consists of video lectures, tests, tasks and feedback, where the student can leave comments on the course.		ge, which restricts the access of Russian-speaking students. The courses are divided by subject, but the course content does not include all the topics of the annual curriculum of the subject. The portal is more positioned as an educational assistant for the successful completion of the UNT, admission to international schools and Nazarbayev intellectual schools.
100 POINTS https://ru.khanacademy.org	Initially, this large educational portal contained material only in English, but gradually the developers expanded the material for Russian-speaking users. The training material is presented in the form of videos (lectures) and flash materials, lasting up to 15 minutes (for better perception of lessons). The goal of the educational portal is to provide free world-class education for everyone anywhere in the world.	no	The student needs to register. The course contains video tutorials, practical tasks in the form of testing, and there is also unit testing after passing several topics.	free of charge	There is a course on cryptography. A small list of training courses has been identified in the directions. Since the product is not domestic, the training courses do not correspond to the curriculum.
100 POINTS https://100ballov.kz/	The portal is intended more as an additional resource for preparing for the Unified National Testing. In the free version, small notes with examples of problem solving or questions to the topic covered are available.	no	To access the use of the content of the portal 100ballov.kz registration required. Access to the main content after payment is made.	paid	The portal acts as an online assistant for preparing high school students for the Unified National Testing.

IMEKTEP https://biliml and.kz/	The full course of the primary school program. The portal contains learning materials in the Kazakh language. The portal contains video lessons.	no	Registration and payment are required to access the learning material.	paid	There are no materials on computer science in elementary grades. The lessons are presented in the state language. To access the materials, you must pay for a subscription.
COURSERA https://www. coursera.org/	An educational platform that co-operates with leading universities and organizations around the world, and offers online courses for everyone on a free basis. The duration of the courses is approximately six to ten weeks, with 1-2 hours of video lectures per week, the courses contain assignments, weekly exercises and sometimes a final project or exam.	The portal contains courses in two areas: computer science and information technology.	Registration is required to access the learning material.	free of charge	The content of educational materials on the discipline «Computer Science»: includes materials on information programs, without taking into account the level of proficiency, the age of the student and the school curriculum.
okoo.kz https://okoo. kz/	The portal contains video tutorials, interactive tasks and programming tasks with instant feedback using an automatic evaluation system. The materials are available in Kazakh and Russian.	Grades 5-11	Registration and payment are required. The portal contains interactive lessons, exercises for fixing. Both the web version and the mobile version are available, training courses in three languages, online feedback.	paid	A concise website with registration and search instructions. Availability of material both on the school subject of Computer Science and additional courses in programming and design.
ITEST.KZ https://itest. kz/	The portal is intended more as an additional resource for preparing for the Unified National Testing with the possibility of passing a trial test.	The portal contains a small material on the subject of «Computer Science», in particular on the following topics: information and information pro-	Registration and payment are required.	paid	Limited access to the portal. The content of the course on the subject of «Computer Science» is not presented in full.

		cesses, compu-ter as a means of information processing, algorithmizati on and pro-gramming, in-formation mo-deling.			

Having studied the Kazakh educational portals, we came to the conclusion that there is a shortage of domestic educational resources in general, including in the discipline «Computer scien-ce», which could provide an opportunity both for use in the activities of schools and for the orga-nization of an individual educational process within the framework of home or additional training.

It is worth noting that the existing tasks used in portals are most often the usual tests with a choice of one or more answers, which does not cause students to be interested, fascinating in com-pleting tasks. In addition, the existing educational portals are aimed at helping students in the main school curriculum, the availability of resources capable of developing and building individual development trajectories is not yet in sufficient quantity.

4 Conclusions

It is necessary to accelerate the development of new public educational portals, including practical tasks in the form of simulators and tasks for independent work with feedback. Another problem with the use of educational portals in the educational process is that most of these resour-ces are paid, which limits universal access for students. Therefore, we believe that it is necessary at the state level to resolve the issue of allocating additional funds for the development of information systems of education, taking into account state standards of education or financing schools for the purchase of digital educational resources.

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КАРЫМСАКОВА, А.Е., КАСЫМОВА, А.М.
«ЖАЛПЫ БІЛІМ БЕРЕТІН МЕКТЕПТЕ ИНФОРМАТИКАНЫ ОҚЫТУДЫҢ ҚОСЫМША РЕСУРСЫ РЕТІНДЕ БІЛІМ БЕРУ ПОРТАЛЫ»

Бұл мақалада жалпы білім беретін мектепте «Информатика» пәнін оқытуда білім беру порталдарын пайдалану туралы ақпарат берілген. Пандемияға байланысты қалыптасқан жағдай, білім беру ұйымдарының қашықтықтан оқытуға жылдам көшуі, мұғалім-оқушы арасындағы толыққанды өзара іс-қимылдың болмауы, сонымен бірге ақпаратты дұрыс меңгерудің болмауы мектеп мұғалімдерінен білім алушылардың өзіндік жұмысына баса назар аудара отырып, оқыту тәсілдерін жаңғыртуды талап етеді. Қазіргі уақытта қазақстандық білім беру бірқатар реформаларды бастан кешуде, атап айтқанда, оқу процесін цифрландыру және автоматтандыру, Қазақстан мектептерінде электрондық оқытуды енгізу. Ақпараттық технологиялардың қарқынды дамуы интернеттегі білім беру үшін қолданылатын дәстүрлі статикалық веб-сайттарды интерактивті интеллектуалды порталдарға ауыстырады, бұл тек дәстүрлі оқыту әдістерін қолдана отырып, қол жеткізуге болмайтын жаңа, терең білім алуға қосымша мүмкіндіктер береді. Мақалада оқушылардың қосымша қашықтықтан өздігінен білім алуы үшін Қазақстан Республикасы Білім және ғылым министрлігі ұсынған білім беру порталдарына салыстырмалы талдау жасалған. Талдау келесі критерийлер бойынша жүргізілді: «Информатика» мектеп курсының материалдарының болуы, жаңа материалды ұсыну тәсілі, мемлекеттік стандарт талаптарына сәйкестігі, тест, тренажерлар, практикалық тапсырмалар түрінде жаңа білімді бекіту тәсілі және т.б. Ұсынылған порталдардың барлығында мектеп пәні бойынша материалдар жоқ екендігі анықталды, көптеген порталдар тіркеуді және пайдалану ақысын талап етеді, кейбір порталдар тек мемлекеттік тілде, бұл жалпыға қол жетімділікті шектейді.

Кілт сөздер: *қашықтықтан оқыту, білім беру порталдары, аралас оқыту, электронды оқыту, онлайн оқыту, жалпы білім беретін мектептегі информатика курсы, өз бетінше оқу.*

КАРЫМСАКОВА, А.Е., КАСЫМОВА, А.М.
«ИНФОРМАЦИОННО-ОБРАЗОВАТЕЛЬНЫЕ ПОРТАЛЫ КАК ДОПОЛНИТЕЛЬНЫЙ РЕСУРС ОБУЧЕНИЯ ИНФОРМАТИКЕ В ОБЩЕОБРАЗОВАТЕЛЬНОЙ ШКОЛЕ»

В данной статье содержится информация об использовании образовательных порталов в преподавании предмета «Информатика» в общеобразовательной школе. Сложившаяся ситуация с пандемией, быстрый переход организаций образования на дистанционное обучение, отсутствие полноценного взаимодействия учителя-ученика, а вместе с этим отсутствие правильного усвоения информации требует от учителей школ модернизации подходов в обучении с акцентом на самостоятельную работу обучающихся. В данный момент казахстанское образование переживает ряд реформ, в частности цифровизация и автоматизация учебного процесса, внедрение в школах Казахстана электронного обучения. Быстрое развитие информационных технологий вытесняет традиционные статические веб-сайты, используемые для онлайн-образования, на интерактивные интеллектуальные порталы, которые дают дополнительные возможности познания новых, более углубленных знаний, которых нельзя достичь, используя лишь традиционные методы обучения. Статья содержит сравнительный анализ образовательных порталов, предложенных Министерством образования и науки Республики Казахстан для дополнительного дистанционного самообразования школьников. Анализ проводился по следующим критериям: наличие материалов школьного курса «Информатика», способ подачи нового материала, соответствие требованиям государственного стандарта, способ закрепления новых знаний в виде тестов, тренажеров, практических заданий и другое. В ходе анализа выявлено, что не все предложенные порталы содержат материалы по школьному предмету «Информатика», многие порталы требуют регистрации и плату за использование, другие порталы только на государственном языке, что ограничивает всеобщий доступ.

Ключевые слова: *дистанционное обучение, образовательные порталы, смешанное обучение, электронное обучение, онлайн-обучение, курс информатики в общеобразовательной школе, самостоятельное обучение.*