ALGORITHM AND METHOD OF CREATING A MODEL OF A DISTANCE LEARNING PLATFORM IN SPORTS SCHOOLS

Jamshid Jalilovich Atamuradov
Doctoral Student, Department of Informatics and Digital Technologies
Bukhara State University, Uzbekistan
E-mail: j.j.atamuradov@buxdu.uz; atamuradov727@gmail.com
ORCID: 0000-0002-4004-8899
(https://orcid.org/0000-0002-4004-8899)

ABSTRACT
With the development of information technology, distance learning is becoming an increasingly popular method of obtaining knowledge. Distance learning covers a wide range of formats, including massive open online courses (moocs), virtual classrooms and labs, and online classes. This approach provides flexible and accessible opportunities for people seeking to continue their education and improve their knowledge in new areas.

In this article, we will consider the existing problems facing sports schools and discuss the algorithm for introducing distance learning into the educational process of general education sports schools. One of the solutions to these problems can be the integration of distance learning, which will improve the quality of educational services and expand accessibility for students. We will also talk about the mechanisms for building a model of a distance educational platform that could effectively function within a sports school. Particular attention will be paid to the basic technological requirements necessary for the successful implementation of distance learning. This includes both educational technologies and methodological approaches that will help ensure high quality of the educational process and meet the needs of students. Ultimately, effective integration of distance learning into sports schools can not only improve the level of education, but also make it more accessible to a wider audience.

Keywords: Distance learning, distance learning platform, distance learning, technology, education, electronic information, interface, design, project, model, sports schools, educational process, sports schools, science teacher, system administrator, content, educational resources, target audience, roles, stages.

INTRODUCTION

Distance learning at all stages of educational processes contributes to the use of technology, improving the quality of education and further modernizing the educational process. To achieve this goal, the requirements for the platform developed for accumulated work, i.e. business requirements, functional requirements, are determined and the limits and limitations of the project are investigated. In addition to describing functional requirements, design assumptions and dependencies are considered. After the requirements are formulated, the user interface is developed, that is, the target audience of the platform is determined using the symbolic method, user scenarios for each character are defined and a site navigation scheme is developed. The final part of the interface design is to create an interactive prototype of the platform.

PURPOSE OF THE STUDY

Designing and building a model of an online distance learning platform designed to identify problems in the learning process of young athletes in sports boarding schools, increase the effectiveness of the assimilation of secular knowledge in the course of educational activities, increase the level of indicators of assimilation and assimilation of lessons missed for a reason.

Thus, the task of the study is to identify the needs of teachers and determine the content, content, technological and ergonomic features of the distance learning platform for the introduction of distance learning in the teaching of basic and additional disciplines for pupils of sports schools studying in a digital society.

THE MAIN PART

Intensive digitalization, development and active implementation of modern information technologies are significantly changing the living, working and educational conditions of modern people. The changes affect almost all the most important areas of activity of participants in the information society: everyday, cultural, social, labor, political, intellectual. The field of education is no exception, for which the current formation of a new digital era is presented in the context of significant changes in the conditions of education and upbringing of the younger generation, globalization and virtualization of human social ties and citizenship. leadership and, of course, cognitive changes in humanity itself. A person in a digital environment has, on the one hand, a huge amount of diverse information resources due to their virtual visibility and quick access through technical telecommunication channels, and on the other hand, in order to use them effectively, he must understand

modern methods, that is, algorithms for presenting information and processing it. This circumstance actualizes the problem of constant search and updating of methods and tools used for training. This is especially true for the upbringing, training and development of the younger generation in a modern society and an environment saturated with digital technologies, according to some scientists [1, 2, 3]. descendants of the "analog" era.

The analysis of pedagogical practice shows that today the training of pupils in additional disciplines can be carried out through the independent development of educational resources in educational organizations in the form of additional education programs, optional courses in the system of specialized and vocational training and optional courses in secondary schools. For example, in the format of massive open online courses (MOOCs), simulators, workbooks, etc.

METHOD

The information space that unites pupils and provides them with the opportunity for distance learning and checking the level of knowledge is called an educational platform.

There are three main tasks that can be solved with the help of digital online education platforms:

✓ A distance learning, as well as pupil knowledge control;

✓ Automatization of the learning and professional development process for pupils;

✓ Organizing of trainings in various fields of study

The process of creating a distance learning platform for sports schools consists of several stages. We have analyzed these stages as follows:

The stages of creating a distance learning platform:

➤ A analysis and evaluation of the characteristics of the target audience is the determination of which audience the distance learning platform is intended for, that is, for which of the learning stages, and an analysis of its effectiveness at this stage.

➤ And setting goals and objectives should be clearly defined, which problem will be solved by the distance learning platform being created and which tasks will be performed in the learning process.

➤ And the creation of the structure of the distance learning portal – it is necessary to form a project and a model of the distance learning portal being created in order to achieve the intended goals.

➤ And the selection of technologies and services for implementation on the distance learning portal - when the purpose and structure of the site are clear, there are always

several options for technological solutions for the implementation of the learning process and the stages of monitoring the result;

➢ A development of technical specifications - it is necessary to note the goals and objectives, describe all the stages, technologies and services used in the creation process;

➢ A creation of a project model for the documentation of the distance learning portal - that is, designing the structure of the training course and monitoring the level of acquired knowledge;

Data Collection and Analysis

Based on the above-mentioned guidelines, we have identified the following stages at which the task of our research is, namely, when developing a distance learning platform:

1. Stage of analysis and evaluation of the characteristics of the target audience – at this stage, our research is aimed at young pupil-athletes, subject pupils, parents, as well as sports coaches (coaches) who are direct participants in the educational process and the process at a comprehensive sports boarding school.

In the course of our research, an in-depth analysis of the educational process in boarding sports schools, the activities of young athletes in this process, sports activities and achievements of gifted young athletes was carried out, and direct participants in the distance learning process for whom the developed distance learning platform can be implemented in these sports schools were identified. As a result of this analysis, the roles of participants that can be distributed in the distance learning platform being developed were determined as follows:

❖ The teacher's role is a teacher of exact sciences, who is responsible for creating content on the platform, posting resources, tracking the attendance of pupils who miss classes, as well as organizing the verification, evaluation and control of assignments completed by pupils.

❖ The role of a pupil is a pupil of a sports boarding school who can work with content created by teachers, assimilate material on the subject on a specific missed date, complete teacher assignments and, as a result, improve the efficiency of learning missed lessons, as well as assimilate secular knowledge and be ready for promotion.

❖ The role of a parent and a coach – these two roles form an identity for each participant, and they are assigned to each pupil. In this role, the main task of participants in the distance learning process is to monitor the assimilation of missed lessons by the child or pupil assigned to them and, if necessary, to activate the process of assimilation of missed lessons by pupils (conversation, explanation).

❖ **The role of the system administrator** is a person who fully controls the process of distance learning on the distance learning platform. The role of the system administrator in the organization of the distance learning process is considered very important. Because the system administrator performs tasks such as the formation of lists of participants in the distance learning process and the creation of subject blogs, the appointment of teachers for created subjects, monitoring the processes of assimilation by pupils and monitoring the filling of subject content by teachers, monitoring the assessment of assignments sent by pupils, and the formation of general reports, as well as presenting them to the administration of a sports school.

2. Management for setting goals and objectives – to promote the effective organization of the educational process in a comprehensive sports boarding school and the effective organization of the development of distance learning lessons using distance learning components postponed due to the participation in the processes of pre-competitive, competitive and training periods of pupil athletes with young talents studying at these sports schools.

During our research at this stage, we identified the direct participants in the distance learning process and defined their tasks depending on their role, and as a result, we saw that it is acceptable to have separate pages for each role. We have also developed a custom model for each user role of the distance learning platform. First of all, the model and tasks of the page of young athletes-readers, which is the main participant of the platform, as well as the work performed, were developed.
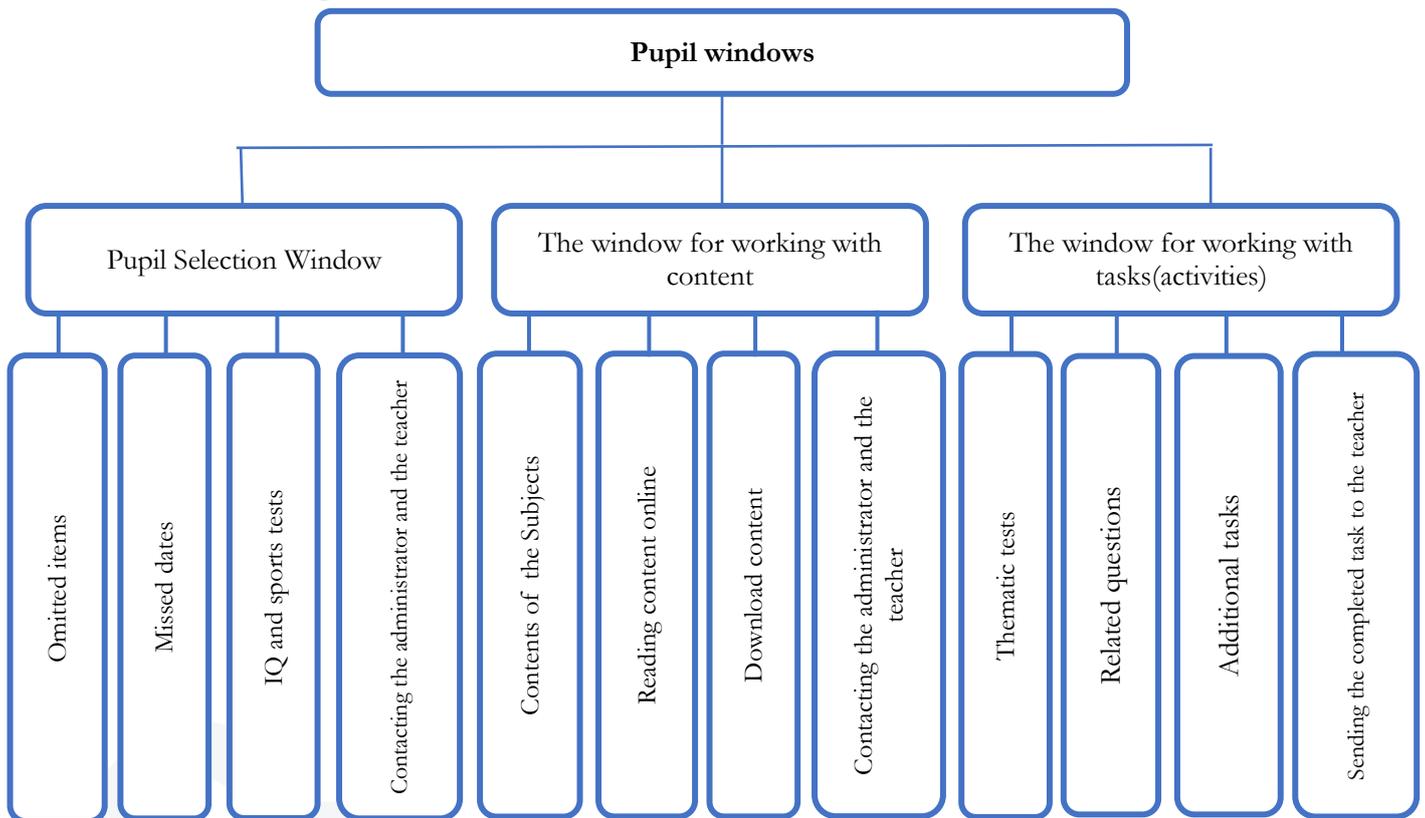
Figure 1. The model of the page of young athletes-readers, which is the main participant of the platform

This part of the projected distance learning platform was divided into three windows (Figure 1).

1) the main window of the pupil's choice – in this window will be placed the date of the lesson, the name of the subject, the knowledge test and the forming IQ of the pupil, as well as additional test questions on sports, which the athlete himself was engaged in, sections of the appeal to the system administrator.

2) The pupil's content window – in which the pupil gets access to resources on an undeveloped topic after completing the work in the selection window. Resources can be in the form of theoretical, presentation videos, practical exercises, as well as assignments on the topic to determine the level of development based on minimum requirements. The reader will be able to read these resources from offline or online browsing or download them to their device.

3) the task window – in this window, our pupil performs the task given by the teacher on the mastered topic and sends it to the subject teacher. The study hour missed after the assessment of the task is considered mastered. The tasks set by the subject teacher and designed to consolidate the acquired knowledge consist of test questions, control questions, as well as tasks aimed at assimilation of information and based on new pedagogical technologies.

Another key participant in the distance learning platform is a science teacher. In the course of our research, the tasks of the subject teacher were studied in detail, and based on these tasks, a model of the teacher's window was designed ((Figure 2).
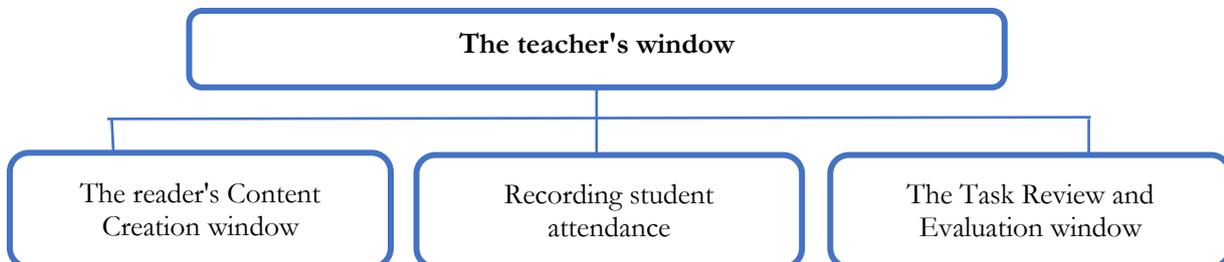

Figure 2. Distance learning platform mirror model of a science teacher

A sports school is being designed for young athletes. The next section in the distance learning platform being developed is the system administrator window. The system administrator is not only the main participant in the organization of the distance learning platform and the distance learning process, but also the person with the greatest responsibility and the greatest responsibility for managing the system. Because it is the role of the system administrator that is responsible for the smooth operation of the entire system, the security of the system and its personnel, as well as other types of information. Even in the distance learning platform we are developing, the role of the system administrator has been fully analyzed and goals and objectives have been defined, and the windows and tasks of the administrator have been described based on the results of the analysis as follows (**Figure**.3)
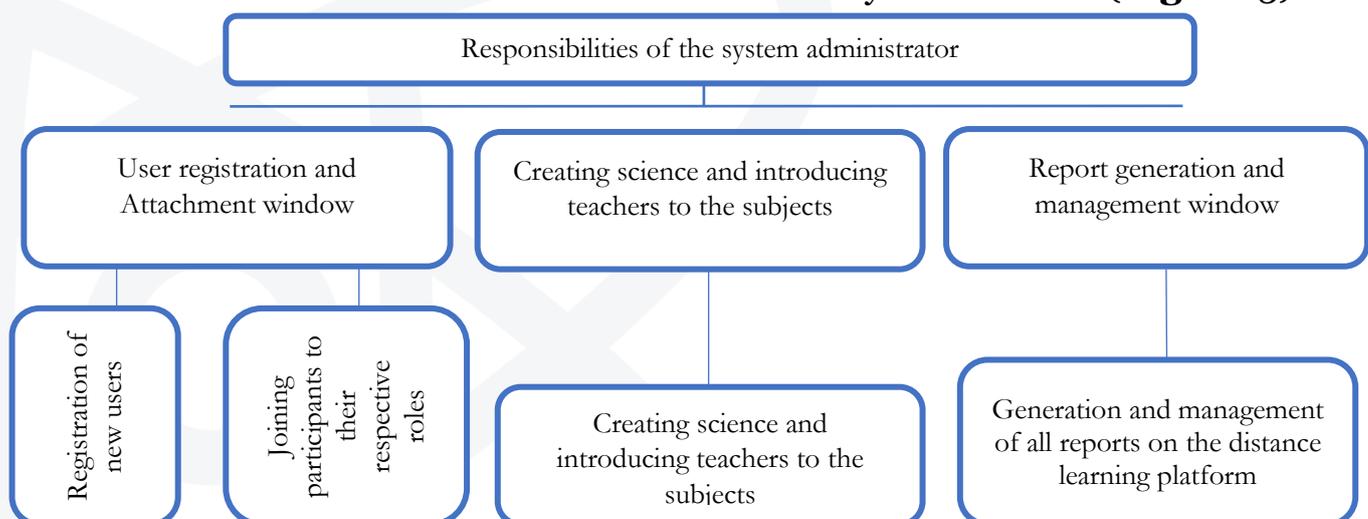

Figure 3. The window model of the system administrator of the distance learning platform

1) **The user registration and attachment window** - this window is the first window of the system administrator, which will consist of two parts, depending on the tasks of the system administrator.

✦ Registration of new users – in the first part of the window, the system administrator registers all the roles involved in the distance learning process in accordance with the system requirements, and these participants are provided with personal login passwords.

✦ Linking participants to their respective roles – it is part of linking participants to roles previously registered by the system administrator. At the same time, the system administrator attaches the roles of teacher, pupil, parent and mentor to the participants, and as a result, each participant performs actions only in the windows related to his role.

2) **The window for creating discipline and attaching teachers to subjects** – this window is the second window of the system administrator, in which the system administrator creates a catalog of subjects that are taught at a sports school and attaches teachers to each subject. After completing these steps, the science teacher will be able to place resources on topics by going to the "working with content" section of the subject attached to it.

3) **Report generation and management window** - – this window is the third window of the system administrator, in which the system administrator can generate reports on current processes on the distance learning platform, statistical data on participants, data on the learning process on the platform, resources and other statistical data.

Another important factor in the learning process on the distance learning platform is the role of parents and mentors (trainers). These participants directly monitor the academic performance of young junior athletes in the learning process and, if necessary, direct young junior athletes. Each participant in these roles has the opportunity to constantly monitor the effectiveness of educational activities of such streams as teachers and system administrators using the results matrix.

3. Creating the structure of the distance learning portal - when creating a distance learning platform, defined as a research product, first of all, we analyze what goal we are pursuing, what problem we need to solve, what result we will get as a result of the research.

They are distributed by participants and roles in the distance learning process, and tasks are defined in accordance with the purpose of these roles, as well as window projects based on the tasks set, a draft platform model was created by combining windows. The created project of the distance learning portal model included, first of all, participants in the distance learning process, separate windows were created for each role on the platform, depending on the responsibilities or responsibilities and capabilities assigned to them, as well as the responsibilities of these participants in the windows, as well as control and management of the results of the capabilities assigned to the system administrator.

Based on the above data, the draft model of the distance learning platform will look like this (Table. 4):
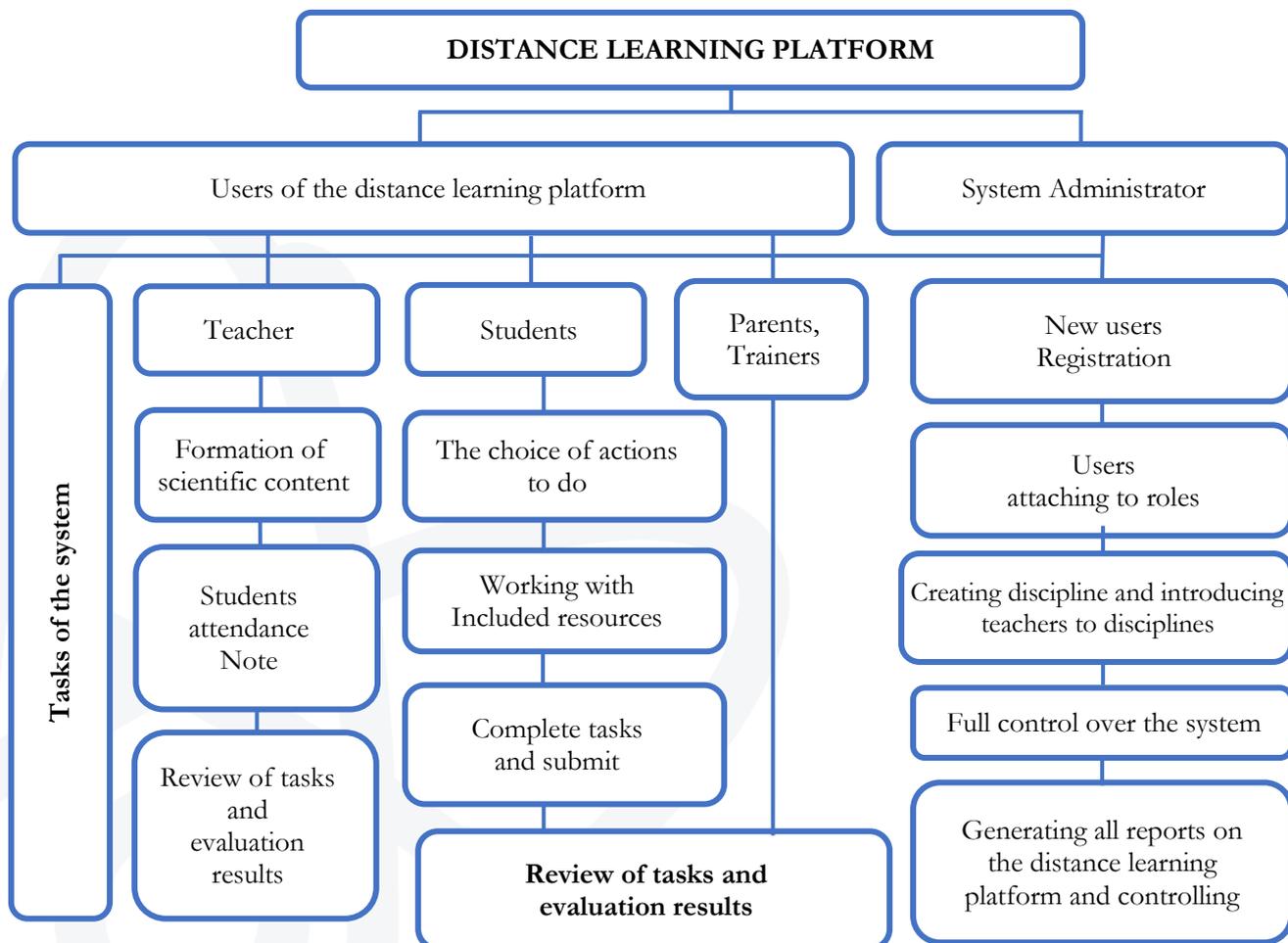

Figure 4. The model of the distance learning platform

4. The choice of technologies and services to be implemented on the distance learning portal – when completing this stage, first of all, we study the problem at a sports boarding school and look for solutions to this problem. Then, when solving this problem, the technological components of distance learning are selected and the types of services on the platform are formed.

The study examined the actions of young athletes throughout their educational and sports activities in clarifying the existing problem in sports boarding schools. During the study, the activities of pupils of sports boarding schools in the educational process and the effectiveness of their joint sports activities were analyzed and divided into stages. (Table 5).

✓ And the main actions of the pupil in the learning process are participation in classes, participation in periodic controls, performing additional lessons or PT tasks for better assimilation of the subject.

✓ Sport the sports activity of a boarding school pupil is sports activity, participation in sports events, participation in training camps and directly during the competition period.
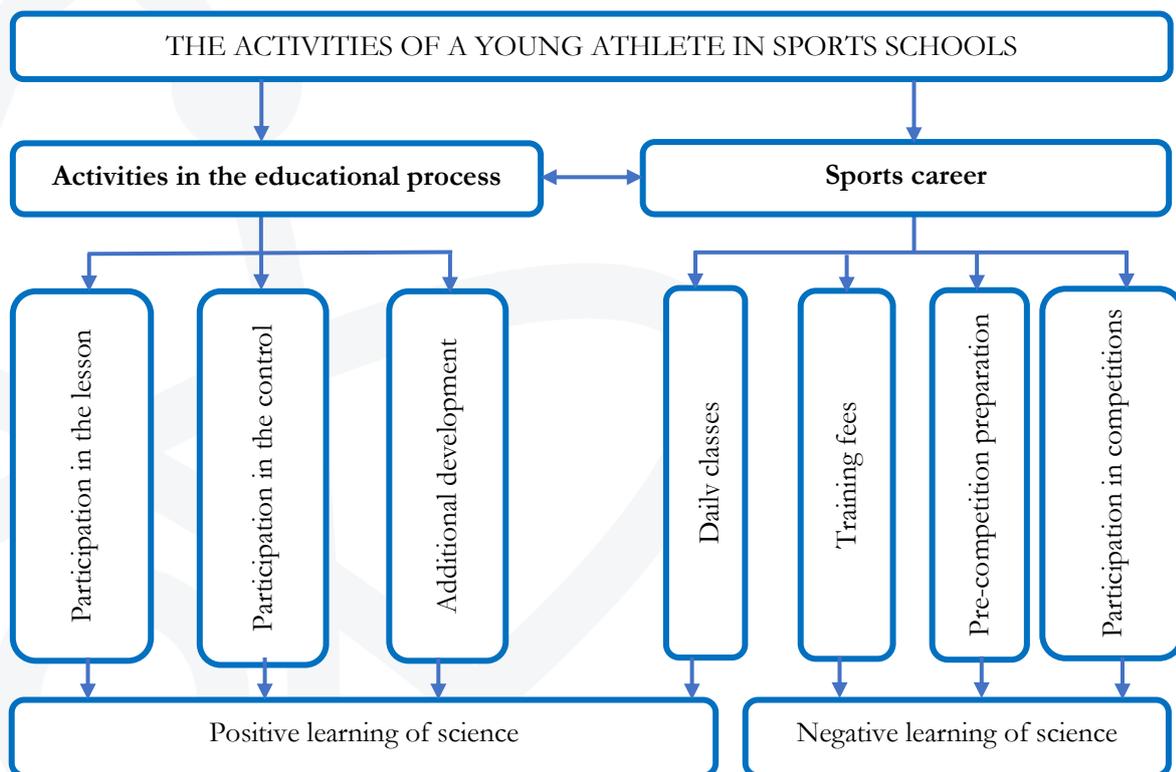

Figure 5. The activity model of young athletes in sports schools

Of course, these periods of activity will not remain without influence on each other, and our young athlete-reader will certainly have problems in one of these two periods. During the analysis, it was noticed that problems mainly arise in educational activities, and when correcting these problems, time takes the first place of the pupil's factor. For this reason, the best solution is based on distance learning technologies, it is advisable to additionally provide distance learning services from the administration of the sports school.

In addition, the activities of pupils of sports schools in the educational process were studied and their joint activities in education and sports were analyzed.

FINDINGS

Development of the specification for the introduction of a distance learning platform designed for distance learning in sports schools, we have determined what we will use this system for and highlighted:

• to place the content necessary for the implementation of the educational process;

• for the placement of educational materials;

• to provide pupils with information about the learning process, the results of intermediate and final control;

• creating conditions for pupils to gain knowledge provided by the educational program and complete tasks by the teacher, to receive advice from the teacher;

Based on the above, we have developed the necessary requirements for the introduction of distance learning in a sports school:

❖ A Availability of a distance learning system;

❖ Equipping natural science teachers with multimedia and interactive learning tools for recording lectures and video tutorials;

❖ Availability of a high-speed computer network providing access to an electronic information and educational environment;

❖ Availability of server equipment for the functioning of the electronic information and educational environment;

❖ And have software tools available to teaching staff to create, store, deliver and use e-learning resources;

❖ The procedure for accessing information resources must be developed and approved;

❖ And the level of training of teachers to work with additional software tools should be provided in accordance with the technologies used;

To organize the distance learning process for users of the distance learning platform, the minimum requirement for participation in the learning process is the presence of a computer or mobile device connected to the Internet. Users can use both a laptop or desktop computer, as well as a tablet or smartphone. It is very important to choose a device that is compatible with the online learning platform that the user uses. Since most online learning platforms are browser-based, for this reason it is important that the device used has a modern web browser such as Google Chrome or Firefox.

3. **Creation of a project documentation model for the distance learning portal** - the documentation model in the process of distance learning is no different from the documentation of the educational process in the sports school to which it is applied. In addition to these documents, they are provided by the school administration and science teachers in the form of reports by the system administrator. In addition, science teachers will also be able to download documents directly from the distance learning platform.

DISCUSSIONS

An analysis of the literature devoted to solving the research task and the data obtained during a survey of subject teachers at a sports school confirm the relevance of developing an online educational platform for teaching sports school pupils.

From the point of view of teachers, such a platform should have design functions that allow the teacher to create a lesson from an existing educational subject, ordered by didactic tasks, with the possibility of supplementing the material with their own developments. It is important to present educational information in short blocks using various visual and interactive methods, while the material can be adapted to the needs and requests of each pupil. The experience of conducting distance learning among teachers at a sports school indicates the need to personalize the content of training according to training levels, didactic tasks, as well as the individual needs of pupils. The advantage of blended learning as the most effective is the ability to integrate individual elements/blocks of educational material from an online platform into the learning process at any stage.

The active participation of pupils in distance learning as a means of activating and stimulating independent work aimed at effective assimilation of knowledge, teachers occupy a special place. There is a constant need for high-quality complex and interactive tasks, laboratory developments, simulators and much more. Each stage of learning should be provided with resources for control, self-control of the acquired knowledge, as well as elements of emotional reflection, and the learning results

themselves are also presented in a visual and understandable form for the subject teacher.

CONCLUSION

The distance learning system provides flexible and very convenient opportunities for users who want to expand their knowledge or continue their studies. However, in order to get the most out of online learning and effective results, it is also necessary to meet certain technical and technological requirements. Examples include a reliable Internet connection, a computer or mobile device connected to the network (smartphone, tablet, etc.), additional multimedia, online storage of resources and backups, software and additional applications, highly qualified experienced teachers and access to modern technologies. An equally important aspect is the software and additional applications that will help improve the educational process. This may include training programs, tests and interactive tasks that make classes more engaging and effective. Ultimately, the presence of all these technical and technological requirements is the key to successful online learning. It is thanks to them that users can achieve their educational goals, develop their skills and expand their horizons of knowledge in the chosen field. Thus, distance learning becomes not only convenient, but also effective, providing everyone with a unique opportunity for personal and professional growth, as well as achieving their intended goal.

REFERENCES
Articles
1. Miroshkina M.R. Interpretations of the theory of generations in the context of Russian education // Yaroslavl Pedagogical Bulletin. 2017. No. 6. Pp. 30–35.
2. Mironova O.A. Problems and tasks of digital education in Russia in the context of the theory of generations // Bulletin of the Rostov State University of Economics (RINH). 2019. No. 1. Pp. 51–63.
3. Atamuradov Zhamshid Zhalilovich The role of the teacher in designing the stages of building distance learning. Journal "ACADEMY" No. 10 (61) 2020 [Electronic resource]: URL: http://academicjournal.ru/home/arkhiv-zhurnala-academy.html
4. Lomasko P.S., Simonova A.L., Barkhatova D.A., Khegay L.B. Designing a platform for additional subject training of schoolchildren based on the professional requests of teachers // Open education. 2021. No. 5. URL: https://cyberleninka.ru/article/n/proektirovanie-platformy-dopolnitelnoy-

predmetnoy-podgotovki-shkolnikov-na-osnove-professionalnyh-zaprosov-pedagogov (date of access: 05.12.2023).

5. Atamuradov Jamshid Jalilovich Analysis of the problem of organizing and managing distance education in general educational institutions // Universum: technical sciences. 2021. No. 4-1 (85). URL: https://cyberleninka.ru/article/n/analiz-problemy-organizatsii-i-upravleniya-distantsionnogo-obrazovaniya-v-obscheobrazovatelnyh-uchrezhdeniyah (date of access: 05/22/2021).

6. Teplyakova A.P., Oshurek E.A. Designing an educational platform in the context of distance learning. – 2023. URL: https://elib.bsu.by/bitstream/123456789/295720/1/797-800.pdf

7. Atamuradov Jamshid Jalilovich. Designing stages of construction and planning of distance learning course // Electronic journal of actual problems of modern science, education and training. april, 2021-vii. issn 2181-9750. URL:http://khorezmscience.uz/web/archive/1621255365.pdf

Books

1. Sapa A.V. Generation Z – the generation of the Federal State Educational Standard era // Pedagogical workshop. Everything for the teacher! 2015. No. 8(56). Pp. 1-9.

2. Korneev A.N., Tolokonnikova E.V. K 672 Distance learning: the future of education development. Study guide - M .: Mir nauki, 2019. - Access mode: http://izdmn.com/PDF/13MNNPU19.pdf

Conference Papers

1. J.J. Atamuradov. Principles of construction of effective information systems. «Science and practice: a new level of integration in the modern world» Conference proceedings 11th International Conference. September, 10 - November, 30, 2020.UK, S Yorkshire, Sheffield DOI: http://doi.org/10.15350/UK_6/11.39 http://scope-science.com/assets/research-article_uk_6_11_39.pdf

2. Atamuradov Jamshid Jalilovich The role of the teacher in designing the stages of building distance learning // Academy. 2020. No. 10 (61). URL: https://cyberleninka.ru/article/n/rol-prepodavatelya-v-proektirovanii-etapov-postroeniya-distantsionnogo-obucheniya (date of access: 05/22/2021).All submitted manuscripts must use the 6th edition of the Publication Manual of the American Psychological Association (APA) for both in-text and end-of-text references (See http://www.apastyle.org/ or https://owl.english.purdue.edu/owl/resource/560/01/)