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THE IMPLEMENTATION OF ICT AS ESSENTIAL EDUCATIONAL RESOURCES IN SYNCHRONOUS AND ASYNCHRONOUS MODES OF DISTANCE LEARNING

ПРИМЕНЕНИЕ ИКТ КАК ОСНОВНЫХ ОБРАЗОВАТЕЛЬНЫХ РЕСУРСОВ В СИНХРОННОМ И АСИНХРОННОМ РЕЖИМАХ ДИСТАНЦИОННОГО ОБУЧЕНИЯ

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Abstract. The article deals with the implementation of ICT as essential educational resources in synchronous and asynchronous modes of learning. The application of ICT tools by the teaching staff as an essential and effective instrument to modernize the educational process is emphasized. Online-learning environments, namely synchronous and asynchronous ones, essential to provide distance education, are mentioned. Various forms of interaction involved in synchronous and asynchronous modes are pointed out. The ICT-based distance educational resources are identified. Basic tips for interacting online by means of various ICT platforms are examined. The importance of distance learning implied to make a safe background for the students to gain necessary knowledge in terms of strict quarantine measures is underlined. Various options of multimedia resources used to organize the study of both theoretical and practical material in terms of strict quarantine measures are presented. The basic problems of contemporary ICT, the difference and peculiarities of the synchronous and asynchronous methods of e-communication are determined. The general tendencies, content, sources, means, forms and methods of ICT implementation in terms of strict quarantine circumstances are highlighted. Certain ICT tools implemented by higher educational establishments to provide distance learning in the educational institutions are defined. The key ways of overcoming the contradictions that arise in the path of self-improvement of a student in the present are mentioned.

Key words: ICT, synchronous mode, asynchronous mode, learning environment, distance educational resources.

Introduction. Educational institutions all over the world have changed their educational activity in the direction of distance learning to make a safe background for their students to gain necessary knowledge. Any university in terms of strict quarantine cannot indicate a lack of lectures and practical activities essential for a complete educational process. The use of ICT instruments is an important and effective tool to modernize the educational process. Learning and free communication via the Internet

is not a new way of interaction. But its irreplaceability has become obvious because its importance has increased especially in terms of quarantine. Such tools did not dominate in the work of higher educational establishments, and long-term quarantine forced educators to gain new experience. Restrictive measures during the period of strict quarantine put the education system in a rapid transition from full-time studying to distance one. Circumstances motivated teachers of educational institutions to move to new activities with the use of ICT, which helped to ensure partnership of all participants of the educational process. For the first time the integration of various forms of education was announced by K.J. Bonk (Curtis J. Bonk) and Ch.R. Graham (Charles R. Graham) in the book “Blended Learning” in 2006. [2] At present the application of different types of distant learning is explored by modern scholars, namely Shahabadi, Hung, Lu, Zare, Fryer and Bovee who investigated the development of the theoretical and practical background of distance learning and classified its modes. [10], [4], [6], [11], [3]

The study is aimed to define the basic peculiarities and characteristics of synchronous and asynchronous E-Learning Modes in order to modernize methods, specify strategies and set objectives of active practice in obtaining knowledge, distinguish the forms of its structuring and introduce the theoretical, experimental and methodological levels of the research.

How to arrange the online environment for distance learning.

The use of ICT instruments is an important and effective tool to modernize the educational process. Learning and free communication via the Internet is not a new way of interaction. But its irreplaceability has become obvious because its importance has increased especially in terms of quarantine. Such tools did not dominate in the work of higher educational establishments, and long-term quarantine forced educators to gain new experience.

According to the current Regulation of the Ministry of Education and Science of Ukraine "On Distance Education" dated October 16 2020, the organization of distance learning can be implemented by providing education with distance learning as a

separate form of education, using various forms of distance learning technologies (full-time, correspondence, network, external, family (home), pedagogical patronage) in terms of strict quarantine and other emergency circumstances). [8] In terms of strict quarantine, the methodological board of each educational institution must decide on the use of certain ICT tools for distance learning in accordance with the Regulations on distance learning. [9]

Basic characteristics of synchronous and asynchronous modes of distance learning

We should take into consideration that basic modes for distance learning can be represented by its synchronous and asynchronous types. The synchronous type is characterized by the following aspects, such as: 1) this is a "live broadcast", a student communicates directly with the teacher by means of media, for instance, video, audio, chat; 2) it allows the teacher to support students. Even when the teacher sends a smiley face, kind words, it is a manifestation of humanity for students. This causes the child to understand that he is involved in the joint process. [5]

The mode of "Asynchronous distance learning" appeared in education much earlier than the synchronous one due to the lack of ICT development at that moment. It can be characterized as a teaching method which involves contact between the trainer and the student with a time delay. Online resources used to support asynchronous learning include email, electronic mailing lists, e-courses (e.g. Intuit, Cisco Networking Academy), CD-ROMs, conferencing systems, e-tests, virtual training systems, online forums, wikis, blogs (Habrahabr), podcasts (PodFM), screencasts (Skillopedia). [7] One of the models of asynchronous learning is the so-called. peer-to-peer learning (other names: horizontal learning, peer learning, P2P learning). This approach combines self-learning with asynchronous communication between students and teachers. The group of individuals involved in asynchronous learning via the Internet is called the Asynchronous Learning Network.

When describing the asynchronous type of distance learning, it is important to take into account that: 1) it requires independent planning or planning with the help of a teacher

while setting the deadlines and aims; 2) now we should deal with rigid and flexible deadlines. Flexible deadlines are more preferable: when you don't have time, time for completion is added; 3) you can communicate by means of e-mail, TV lessons, blogs, websites, etc. Asynchronous distance learning is just as necessary as synchronous, because there is always some amount of students who need more time to study. There are also students with different educational needs, so this provides differentiation. The advantage of asynchronous distance learning is that it can be planned basing on existing conditions. The best result is blended learning - when we meet children in synchrony (for example in a video conference) and at the same time use asynchronous learning. [1]

Conclusion. When implementing distance learning, we should take into account various circumstances and situations. First of all, it is essential to mention different conditions of distance learning. There are different social opportunities of students, namely: there are students who live in difficult life circumstances. If they have any connection with the school and the teacher, it is very positive; there are different technological aspects, which are also related to the conditions of students – many of them even do not have the Internet; there are various didactic circumstances - we have to be accustomed to a situation where didactics and methods should react including some methodical cases of conducting video lessons and video conferences.

The teacher must optimize their own living space and differentiate working hours. Adherence to the schedule will allow you to focus on work and perform them more efficiently. Observance of asynchronous communication returns control over working hours. Planning work in advance is not the only point to consider about in valuing the time of others, but also creating a situation of confidence and success.

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Аннотация. В статье рассматривается реализация ИКТ как важнейшего образовательного ресурса в синхронном и асинхронном режимах обучения. Подчеркивается применение педагогическим коллективом инструментов ИКТ как важного и эффективного инструмента модернизации образовательного процесса. Упомянется среда онлайн-обучения, а именно синхронная и асинхронная, которые важны для обеспечения дистанционного обучения. Выделены различные формы взаимодействия в синхронном и асинхронном режимах. Определены дистанционные образовательные ресурсы на основе ИКТ. Рассмотрены основные советы по взаимодействию в сети с помощью различных платформ ИКТ. Подчеркивается важность дистанционного обучения, предполагающего создание безопасных условий для получения студентами необходимых знаний с точки зрения строгих карантинных мер. Представлены различные варианты мультимедийных ресурсов, используемых для организации изучения теоретического и практического материала в условиях строгого карантина. Рассмотрены основные проблемы современных ИКТ, различия и особенности синхронного и асинхронного методов электронного общения. Выделены общие тенденции, содержание, источники, средства, формы и методы внедрения ИКТ в условиях строгого карантина. Определены инструменты создания ИКТ, внедряемые высшими учебными заведениями для дистанционного обучения в учебных заведениях. Указаны ключевые пути преодоления противоречий, возникающих на пути самосовершенствования студента в настоящее время.

Ключевые слова: ИКТ, синхронный режим, асинхронный режим, среда обучения, дистанционные образовательные ресурсы.

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