



 Research Article

## ADVANTAGES AND PROBLEMS OF DISTANCE LEARNING IN MATHEMATICS

Journal Website:  
<http://sciencebring.com/index.php/ijasr>

**Submission Date:** June 10, 2022, **Accepted Date:** June 20, 2022,

**Published Date:** June 30, 2022

**Crossref doi:** <https://doi.org/10.37547/ijasr-02-06-07>

**Copyright:** Original content from this work may be used under the terms of the creative commons attributes 4.0 licence.

**Abdurazaqov Abdujabbor**

Candidate of Physical and Mathematical Sciences, Associate Professor, Department of "Higher Mathematics", Fergana Polytechnic Institute, Fergana, Uzbekistan

### ABSTRACT

It is known that today when science and technology are developing rapidly, the amount of scientific knowledge, understanding and imagination is increasing dramatically. On the one hand, it ensures its differentiation due to the development of new fields and branches of science and technology, while it creates a process of integration between sciences. For this reason, our informatization of the education system is a helpful tool in educating young people in keeping with the times.

### KEYWORDS

Methodological methods, integration between disciplines, distance education, intellectual and spiritual development, critical and creative thinking.

### INTRODUCTION

As stated in the decree of the President of the Republic of Uzbekistan dated October 8, 2019, No. PF5847 "On approval of the concept of

development of the higher education system of the Republic of Uzbekistan until 2030", distance education system in higher education

institutions. To ensure the integration of education with production using the majority of online open courses, training courses that provide the ability to work with advanced modern equipment and technologies of our country in various sectors of the economy. devoted to the study of the issue of application to the educational process [1-4].

In the advanced age of our society, it is desirable to make the educational process more interesting and meaningful for students, without being limited to the previous methodical methods, using the possibilities of scientific and technical innovations, the Internet and high technologies. In the distance education method, even if the teacher and the student are separated by distance, constant communication is maintained. This process is carried out with the help of e-mail and Internet technologies, which will be a special method of monitoring the training. Especially now, in the conditions of the coronavirus pandemic, which threatens the lives of people all over the world, the need for remote education has arisen by itself. Schools, lyceums, colleges, and higher education institutions have all transferred their system to a remote, i.e. online, system. Purpose of work.

## LITERATURE REVIVE

Russian and foreign scientists who conducted research and scientific work on the development of mathematics lessons using distance education technology and tools, in particular, Abdukadirov A, Pardayev A, D. Khodzhayev, A.K. Ahmedov, B.Q.

Xaydarov, D.E. Davletov, J.Y. Sapparboev, Azizkhojayeva N.N., Hayitov A. The works of Boymurodov N.D., M. Sayfurov, M.M. Alimova, Sh.U. Turakhonov and V. Kaziyev were studied [10-17].

## MATERIALS AND METHODS

The distance education system should be considered in the continuous education system along with full-time, part-time, and externship education systems. A person-oriented approach, which reflects the main principles of pedagogy, is recognized by the world's pedagogical communities for all forms of modern education systems. At the centre of teaching is not the teaching process, but the cognitive activity, learning, arising from the personal capabilities and abilities of the student. The activity of the teacher should be directed to the organization of the productive activity of the students. Therefore, the main goal of the educational system is the intellectual and spiritual development of a person, the formation of critical and creative thinking, and teaching how to work with information [18-23].

A personalized approach to distance learning significantly increases the educational level of the educational process, relying on the wonderful opportunities provided by the Internet. The process of distance education should be organized based on such pedagogical technologies that the following opportunities for students are formed:



- To acquire the necessary fundamental knowledge that can be applied to solve specific scientific or practical problems;
- Solving problems with friends in the course of cognitive activity;
- Work with additional sources of information necessary to solve the issues;
- Elimination of all existing problems, practical application of acquired knowledge;
- Conducting independent observations using Internet technologies;
- To be able to evaluate one's knowledge levels and achievements, to be able to correct one's activities.

On the one hand, all the mentioned causes the formation of critical thinking. On the other hand, it is necessary to choose such pedagogical technologies and organizational forms that the application of the above teaching conditions will serve the formation of critical thinking.

Nowadays, distance learning is becoming more and more popular, which increases the urgency of the problem of developing special methods of using technical teaching tools. Day by day, more and more people prefer distance learning, and full-time and part-time education [21-25].

Distance education is a form of education in which the best traditional and innovative educational methods, tools and forms based on computer and telecommunication technologies are used in the educational process, along with full-time and part-time education.

There are other interpretations of the concepts of distance education and education, which reflect different approaches to their understanding.

Thus, distance education means the delivery of the main part of the studied material to the students, which ensures the interactive interaction of teachers and students during the educational process, and assimilation of the studied material to the students. a set of technologies that provide an opportunity to work independently, as well as in the educational process, is understood.

Distance education is a type of education based on mutual learning between teachers and students who are far from each other, carried out using telecommunication technologies and Internet resources. Distance education is a distance interaction between the teacher and students, which includes all the components of the educational process (goals, content, methods, organizational forms, teaching aids ) reflects.

The emergence of distance education has created a need for the development and implementation of distance learning technologies. Distance learning technologies are educational technologies that are mainly implemented using information and telecommunication technologies.

Distance learning has the following advantages:

- Flexibility - students usually do not attend regular classes in the form of lectures, or seminars. Anyone can learn the course, the





discipline and the necessary knowledge for the chosen speciality to the extent necessary for him;

- Modularity - the basis of distance learning programs is the module principle. Each individual discipline or set of subjects that a student learns creates a holistic view of a particular field of study. It allows the student to build a curriculum from a set of independent study courses that meet individual or group needs;
- Training can be carried out by combining the main professional activity with study, i.e. Through "learning at work";
- Long-term actions - the distance from the location of the student to the educational institution (with quality communication) does not hinder the effective educational process;
- Asynchrony - in the educational process, the teacher and the student can independently implement teaching and learning technology in their own time, that is, based on a schedule convenient for everyone and at a convenient place;
- Coverage - "mass character" - the number of students is not a very important parameter.
- They have access to many information sources (electronic libraries, databases), and can communicate with each other and with the teacher through communication networks or using other information technologies;
- Profitability - economic efficiency of distance education;
- The new role of the teacher (in the distance education system - a tutor), coordinating the learning process, adjusting the taught course,

advising, leading, etc. Interactions with students are mostly done asynchronously using mail or communication systems. Face-to-face contact is also allowed and encouraged;

- For distance learning, the student must be self-organized, diligent and have a certain initial level;
- New information technologies - modern distance education mainly uses computers, audio-video equipment, telecommunication systems and tools.

In distance education, interactive interaction is widely used, which includes the mutual dialogue of any subjects using the tools and methods available to them.

At the same time, both parties actively participate in the dialogue - exchanging questions and answers, managing the communication process, monitoring the implementation of decisions, etc. A telecommunications environment designed for millions of people to communicate with each other is primarily an interactive environment. In distance education, teachers and students are the subjects of interaction, and such means of interaction are e-mail, teleconferences, real-time dialogues, etc.

Disadvantages of distance learning include:

- Lack of direct, face-to-face communication between students and teachers. If there is no person nearby to emotionally colour the knowledge, this is a very important disadvantage for the learning process. It is

- difficult to create a creative atmosphere in a student group;
- The need for a personal computer and access to the Internet; the need for constant access to information sources. Good technical equipment is needed, but not everyone who wants to study has a computer and the Internet;
  - Technical readiness to use distance learning tools is necessary;
  - High requirements for teaching, the task of managing the process, the complexity of student motivation;
  - User authentication problem in knowledge testing. It is impossible to tell who is on the other end of the line;
  - The need for a whole set of individual psychological conditions;
  - High costs of building a distance learning system at the initial stage of system creation, high costs for creating a distance learning system, purchasing distance learning courses and technical tools;
  - The high labour intensity of distance learning course development - more than 1000 hours of specialist labour is required to create 1 hour of interactive multimedia interaction.

Distance learning today is experiencing temporary challenges, such as:

1. Inadequate computer literacy of teachers and students, lack of remote teaching experience; many teachers and students prefer classical education and are not yet ready for this teaching method;
2. Inadequate development of information and communication infrastructures in our country;
3. Because the curricula and courses are not well designed, there are very few qualified professionals capable of creating such textbooks;
4. Poor use of standards in distance learning;
5. The problem of finding experts. High qualification of developers is required; creating high-quality multimedia courses requires a team of subject matter experts, artists, programmers, etc.;
6. Sufficient interactivity of modern distance learning courses;
7. Low completion rates due to lack of experience using distance learning systems and difficulty in motivating students.

## CONCLUSION

Distance education is an educational complex based on the means of exchanging educational information at a distance, where the teacher provides educational services to all levels of the population and foreign students with the help of a special information environment. Implementation of the distance education system in higher educational institutions is considered to be a convenient system from all sides. It is not an exaggeration to say that distance education is the education of the time when modern techniques and technologies, the information system, are developing.



## REFERENCES

1. O'zbekiston Respublikasi Prezidentining 2019-yil 8-oktyabrda "O'zbekiston Respublikasi Oliy ta'lim sistemasini 2030-yilgacha rivojlantirish konsepsiyasini tasdiqlash haqida"gi PF5847-sonli farmoni.
2. Abduqodirov A, Pardayev A. (2009). Masofali o'qitish nazariyasi va amaliyoti. Toshkent. Fan.
3. Abduqodirov A. (2006). Axborot texnologiyalari va masofadan o'qitish. Toshkent. Iste'dod.
4. D. Xodjayev, A.K.Ahmedov. (2020). Masofaviy ta'lim platformasida o'quv resurslarini yaratish va undan foydalanish. Toshkent.
5. B.Q.Xaydarov, D.E.Davletov, J.Y.Saparboyev. (2018). Matematika fanini o'qitishda zamonaviy yondoshuvlar va innovatsiyalar. Toshkent.
6. Azizxo'jayeva N.N. (2003). Pedagogik texnologiya va pedagogik mahorat. Toshkent.
7. Hayitov A. Boymurodov N. (2006). Ta'limdagi noan'anaviy darslar va interfaol usullardan foydalanish. Toshkent. Yangi asr avlodi.
8. D.M Sayfurov, M.M. Alimova, Sh.U.Turaxonov. (2019). Ta'lim jarayonida videodarslar. Toshkent.
9. Казиев, В. М. (2008). Введение в практическое тестирование. М.: Интуит. ру, Бином. Лаборатория Знаний.
10. Abdujabbor, A., Nasiba, M., & Nilufar, M. (2022). The Numerical Solution of Gas Filtration in Hydrodynamic Interconnected Two-Layer Reservoirs. Eurasian Journal of Physics, Chemistry and Mathematics, 6, 18-21.
11. Абдуразаков, А., Махмудова, Н. А., & Мирзамахмудова, Н. Т. (2022). Об одном численном решении краевых задач для вырождающихся параболических уравнений имеющие приложения в теории фильтрации. Universum: технические науки, (5-1 (98)), 41-45.
12. Leontyeva, I. A. (2018). Modern distance learning technologies in higher education: Introduction problems. Eurasia journal of mathematics, science and technology education, 14(10), em1578.
13. Dildora, K., Nilufar, B., Yulduz, Y., Nargiza, T., & Sevara, B. (2020). The use of acmeological insights in the history of national education in the development of creative thinking by students. Journal of Critical Reviews, 7(9), 221-225.
14. Кенжаева, Д. Т. (2007). Олий педагогик таълим жараёнида баркамол шахсни шакллантиришнинг назарий-амалий асослари: Пед. фанл. номз.... дис.
15. Dildora, K., & Malikaxon, S. (2022, May). Developing communication skills in the process of training future teachers. In International Conference on Problems of Improving Education and Science (Vol. 1, No. 02).
16. Dildora, K., & Nafosat, F. (2022, May). Pedagogical basis of teaching children to

- rules. In International Conference on Problems of Improving Education and Science (Vol. 1, No. 02).
17. Terkashevna, K. D. (2022, March). Development of communication abilities in the process of preparation of future teachers. In Archive of Conferences (pp. 15-18).
  18. Кенжаева, Д. Т., & Чориева, М. Б. (2018). Национально-духовные особенности воспитания детей дошкольного возраста в качестве акмеличностей. Бюллетень науки и практики, 4(3), 333-336.
  19. Кенжаева, Д. Т., & Ашурова, С. (2015). Пути подготовки воспитателей к инновационной деятельности. Журнал научных публикаций аспирантов и докторантов, (12), 95-97.
  20. Кодиров, З. З., Ирискулов, Ф. С., Пулатов, А., & Убайдуллаев, М. (2018). Electronic libraries as a fact of contemporary information landscape. Экономика и социум, (3), 629-633.
  21. Абдуллаев, Г. Б., Кулиев, А. З., Малевский, Ю. Н., & Файзиев, П. Р. (1967). Полупроводниковый термоэлектрический трансформатор тепловой энергии. Гелиотехника, (6), 3-8.
  22. Mamatovich, Z. R., & Ergashevna, T. A. (2019). Blended learning in higher education using LMS Moodle. Образовательный процесс, (5 (16)), 5-9.
  23. Tashlanova, N. (2021). The essence of collaborative approach in learning a language. Scientific progress, 2(8), 281-286.
  24. Ташланова, Н. Д. (2019). Использование опорной технологии в обучении русского языка. Экономика и социум, (9), 289-292.
  25. Koutsoupidou, T. (2014). Online distance learning and music training: benefits, drawbacks and challenges. Open Learning: The Journal of Open, Distance and e-Learning, 29(3), 243-255.