ENHANCING THE PARTICIPATION OF STUDENTS AND FACULTY IN DISTANCE LEARNING USING BLENDER LEARNING AND FLIPPED CLASSROOM TECHNOLOGIES IN THE DEVELOPMENT OF PEDAGOGY THROUGH DIGITAL TECHNOLOGY

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ABSTRACT

This article is written in order to theoretically and methodologically substantiate a practice-oriented concept for the formation of independent thinking as a result of the knowledge acquired by professors and students using digital techniques and technologies. The following main tasks are assigned to the study of the suitability of distance learning for students and professors to work and study: the definition of the scientific idea of the concept of "independent and creative thinking using digital techniques in distance learning", identification of conditions for the provision of digital technology for the organization of psychological, pedagogical and distance education for the formation of independent and creative thinking of students as a result of the acquired knowledge; to reveal the role (place) of developing education, distance learning, which is in demand today, the information environment in the formation of independent thinking of students as a result of the acquired knowledge; development of LMS mood, the formation of independent thinking as a result of the knowledge acquired by students through digital technologies; to determine the effectiveness of experimental work on the use of e-learning, online learning, offline learning, blender learning and flipped classroom technology in distance learning for students. Digital technology tools, distance learning and teaching methods, forms and tools are identified, and conclusions are drawn.

Introduction

Without digital technology, our lives would be unimaginable. Modern digital technologies, which are undergoing significant changes in all rapidly developing areas, require the development of computer science, physics and mathematics in the higher education system, as well as in all other disciplines using digital technology. Theoretical knowledge and the use of new digital techniques and blended learning technology and flipped classroom technology in the traditional way of teaching, which we have been using before, have connected our knowledge with technology and high-speed Internet, and requires independent creative individuals who have the knowledge and ability to apply that knowledge in practice. If there is a way of thinking that solves the global problems of our time and the development of high digital technology, the ability of people to make new connections between objects and create new things in the spiritual or material realm, we need a mature cadre that meets modern requirements. we can grow. Such thinking, aimed at creating something new, important for the individual and society, is creative and certainly effective.

A person with developed creative thinking and independent thinking not only takes a worthy place in society, but also contributes to the development of society. In this regard, the requirements of general education and digital technology education are set in terms of shaping the creative activity of students, which requires precision. Creating new methods and types of activities for graduates of educational institutions opens up opportunities for them to open new careers. If necessary, it will be necessary to focus on labor, that is, to carry out the theory in relation to production. This means that teaching will be based not only on the transmission of information, but also on "learning to think independently based on the knowledge they have acquired," which is "the most important period in the learning process - it has mostly conscious skills and mental tools without reflection and, of course, the efficient use of technology."

Analysis of the relevant literature

Problems of development of independent thinking and creativity in specific subjects were studied by the following researchers: M. Nizoyova, Rustamova, interactive and non-traditional Mamatov DN, Bekchanova Sh.B., who teach students to think independently in native language lessons. "On the stage of development of higher education using digital technologies in distance learning" T-2020. Journal "Innovatsii v ekonomike" [1], Bekchanova Shoira Bazarbaevna "Forms of distance learning with the use of digital technologies in the stages of development of the higher education system" Innovation in ekonomike.91 p. SI (2020) DOI http://dx.doi.org/10.26739/2181-9491-2020-SI" [2], Bekchanova Sh. B. "Using the" blendedlearning "technology of higher education distance learning" Wissenschaft ohne grenzen - 2020. 30. März - 7. April 2020. Volume 16. Berlin 2020 y. [3], D.N.Mamatov "The role of electronic versions in the formation of knowledge and skills of students." Issues of teacher training in the field of labor and vocational education. Materials of the Republican scientific and scientific-methodical

conference. Tashkent-2008 [4], D.Mamatov "The features of electronic educational medium in training future teachers of vocational educational "The Advanced science. Open access journal. ISSN 2219-746X, volume 2012, issue 1, Torrance, CA, 90503, USA [5], Aripdjanova A, Mamatov D.N" Methods of designing teaching technology in the electronic information educational environment "Modern Problems of Continuing Education: Innovation and Prospects. International Scientific Conference April 27, 2018, Tashkent. [6] In this literature, etc. It is used to teach skills, not to make full use of the possibilities of digital technology to develop students' independent thinking through the ideas they possess. This is due to the fact that practical lessons are not included in the plan, especially for the formation of students' practical knowledge using digital technologies.

Internet addresses: https: //lex.uz/docs/4545884 - The concept of development of higher education in the system of uninterrupted education in the Republic of Uzbekistan until 2030. [1], http://st.tdpu.uz/course/index.php?categoryid=28 Electronic platform for distance learning students of Tashkent State Pedagogical University named after Nizami. [2], http://reja.tdpu.uz/shaxsiyreja/preps/main Electronic platform for electronic lessons, scientific and spiritual work, work activities of professors and students of Tashkent State Pedagogical University named after Nizami. Based on [3], blended learning and flipped classroom technology, which were much needed and used today during the corona virus pandemic, are very useful and widely used. This means reading according to laws aimed at increasing the number of people with higher education and reducing the number of poor, as shown in the link to the first site.

Research methodology

Research methodology shows that in the current era of the coronavirus pandemic, it is necessary to open "distance learning" departments

in every university, while continuing to conduct not only computer science, physics and mathematics, but also all subjects online.

As the research topic shows, blended learning technology and flipped classroom technology in distance learning subjects should be mastered by students using not only specific subjects but also human beings using digital technology tools as a direction of continuous distance learning. is to form independent and creative thinking as a result of the knowledge acquired in all disciplines.

The aim of the research is to provide a theoretical and methodological basis for a practice-oriented concept to shape students' independent and creative thinking in the disciplines of blended learning and flipped classroom technology in distance learning subjects.

Research hypothesis. Positive results can be achieved in a variety of learning environments as a result of special systematic lessons that use digital technology tools aimed at shaping students' independent and creative thinking in blended learning technology and flipped classroom technology in distance learning subjects. At the same time, the formation of students 'creative and independent thinking is effective in the following cases: the learning process combines systematic, active, environmental and person-centered approaches to the formation of students' creative and independent thinking; the learning process is organized in such a way that creative and independent thinking depends on its form of learning and is formed in the unity of its verbal, non-verbal and problem components;

The program for the formation of creative thinking is designed taking into account the age characteristics of students, their knowledge base and accumulated experience; the educational environment of the educational institution is saturated with textual, audio, video and presentation information, which means a unit of training in addition to education and digital technology; online and offline ways of shaping

students 'independent thinking as a result of the knowledge they have acquired are ways that encourage them to be creative.

Analysis and results

The most appropriate task for the formation of independent thinking as a result of the acquired knowledge of students are the methods of teaching:

a) heuristic dialogue between faculty and students, leading students to master the system of facts, new concepts and digital technologies;

b) the presence of blender learning technology and feedback, which helps students to work on themselves, develop an interest in independent thinking, the formation of basic skills in creative behavior, the development of elements of a culture of creative thinking. effective use of flipped classroom technology, ie both teachers and students;

c) a collective mental activity that encourages each student to formulate ideas to solve a problem situation, where the use of feedback from flipped classroom technology is also very useful;

d) the method of creative intellect, the development of intellectual abilities associated with the creative process, of course, the intellectual and creative development of each student as a result of the knowledge acquired by professors from effective teaching processes;

e) blender learning technology, which allows students to apply their knowledge to solve practical problems, and flipped classroom technology, where feedback is available, using digital techniques;

f) activation of teaching methods among teachers and students, activation of students' mental activity using the technology of "blender learning" and "flipped classroom" with the presence of feedback, their independence and creativity. increase activity.

The novelty of the study is that it:

- The scientific concept of the content of the concept of "independent and creative thinking" through the online and offline

knowledge of students from the technology of "blender learning" mixed learning methods and the presence of feedback from the existing "flipped classroom" technology is concretized, independent thinking is effective thinking, outside of the existing system of knowledge, the novelty of its product, the specificity of the process, the creation of radically new things, its production verbal (oral, images, videos, presentations, independent thinking aimed at working with audio lessons)), non-verbal (creative thinking aimed at working with graphic images, presentations, audio lessons and videotapes) and problematic (own personal ideas aimed at solving problem situations);

- On the basis of the knowledge of professors and teachers, the psychological and pedagogical conditions for the formation of independent thinking as a result of the knowledge acquired by students through the technology of blender learning and digital technology from the existing flipped classroom technology (The level of knowledge acquired by students and the focus on learning their intellectual abilities is based on knowing the characteristics of mental development, students of different ages (the advantage of distance learning is that age, appearance, disability and health, performance) It doesn't matter if you work or not. A person can study at a distance at home, at work, on the street, anywhere on the globe, get a higher education, become a student and get a higher education. His disability does not play a role here. He is also a disabled person i is a person who can and should have the right to higher education. Distance education is very useful here.) Individualization of practices is accompanied by problem-solving research sessions;

- problem solving is achieved by eliminating inconsistencies between the purpose of the task and the methods of achieving it);

- The role of the developing information-educational environment in the formation of students' independent thinking as a result of the knowledge acquired by students using the technology of "blender learning" mixed learning methods and feedback using the existing "flipped classroom" technology (blender learning through digital techniques) information-learning environment from flipped classroom technology with the presence of mixed learning methods and feedback, which is the interaction of interconnected information and learning a set of pedagogical conditions that contribute to the emergence and development of processes. Students and teachers, digital technology tools allow you to individualize the learning process, it saves a lot of time in the creative work of students, the process of vision, learning ensures the richness of information of the process, the independence of students, which stimulates the creative activity of students helps;

- Approaches and principles of using flipped classroom technology and flipped classroom technology, the combination of which defines the basis of a practice-oriented concept for the formation of independent thinking as a result of the acquired knowledge of students (systematic approach) provides the formation of independent thinking in the unity of its components, blender learning allows you to create independent learning based on the technology of mixed learning methods and the presence of feedback, the existing "flipped classroom" technology. blender learning "includes specific steps through the analytical and constructive processes of" flipped classroom "technology, in which the technology of mixed learning methods and the presence of feedback are available;

- The activity approach in the technology of blended learning and flipped classroom technology, which has the presence of feedback, allows teachers and students to work together as a means of developing creative student thinking;

-environment as a space for the formation and development of individuality of students - is filled in the technology of "flipped classroom", where there is feedback;

- a person-centered approach, the teacher's choice of forms and methods of forming

students' creative thinking, helps to create conditions for the development of creative personality thinking).

Theoretically, the problem of developing practice is a concept aimed at shaping the creative thinking of students in higher education systems; in practice, the problem of developing a program for the formation of independent and creative thinking of students using the technology of blended learning in digital technology and the technology of flipped classroom, where there is feedback.

Object of study - the process of teaching students in higher education. The research topic is the formation of students' independent thinking and creative thinking using digital technology tools in the flipped classroom technology, where the blender learning technology and feedback are available as the direction of the learning process.

The aim of the research is to theoretically and methodologically substantiate the practice-oriented concept of "flipped classroom" technology, in which blender learning technology and feedback are available, to shape students 'independent thinking and creative thinking.

Research hypothesis. Special systematic lessons using digital technology tools aimed at shaping students' independent thinking and creative thinking Achieve positive results in different learning environments as a result of blender learning technology and flipped classroom technology with feedback possible. At the same time, the formation of students' independent thinking and creative thinking is effective in the following cases:

- The educational process combines systematic, active, environmental and personality-oriented approaches to the formation of independent thinking and creative thinking of students;

- The learning process is organized in such a way that independent thinking and creative thinking are formed in the unity of its verbal, non-verbal and problematic components;

- The program of formation of flipped classroom technology with the use of blender learning technology and feedback is designed taking into account the age characteristics of students, their knowledge base and experience;

- The educational environment of the educational institution is saturated with information (textual, graphic, presentation, audio, video lessons), which means a unit of extracurricular activities;

- Blender learning and flipped classroom-feedback methods of blending learning and flipped classroom feedback are ways to encourage them to be creative.

The purpose of the study:

1. Define the scientific idea of the content of the concept of "independent thinking and creative thinking" on the basis of "flipped classroom" technology, in which there is a blender learning technology and feedback.

2. Identify the psychological and pedagogical conditions for the formation of independent thinking and creative thinking of students on the basis of the technology of blended learning and flipped classroom technology with the presence of feedback.

3. Identify the role of the evolving learning information environment in shaping students' independent thinking and creative thinking in blender learning technology and flipped classroom technology where feedback is available.

4. Development of a program for the formation of independent thinking and creative thinking of students through the use of information and communication technologies.

5. To determine the effectiveness of experimental work on the formation of independent thinking and creative thinking of students on the basis of knowledge gained from the technology of blended learning and flipped classroom technology with the presence of feedback.

Digital technologies.
Protection rules:

1. The high dynamics of the processes taking place in the modern information society requires independent thinking and creative activity of students of educational institutions, which gives them the ability to effectively participate in professional activities and adapt quickly to changes in society. Lack of information and uncertainty of information is that the Internet is an open encyclopedia in which anyone can easily place any kind of unconfirmed knowledge (lessons in the form of video, audio, text, graphics and presentations) when their knowledge, life experiences, based on their pedagogical skills, the teacher prepares for the lesson based on their knowledge and experience, and skillfully communicates it to the students using blender learning technology and flipped classroom technology, which has feedback. only then will students have clear knowledge. However, in the modern education system, a long time is focused on the transfer of knowledge, that is, a lot of time spent by students on current, intermediate and final tasks, but the methods of teaching such a person are not yet sufficiently developed. One of the possible ways to solve the problem of cultivating a creative active person in the information society is the purposeful formation of students' creative thinking using the means of digital technologies. Independent thinking and creative thinking Verbal (creative thinking focused on working with visual images), non-verbal (independent thinking and creative thinking focused on working with graphic images and videotapes, audio lessons, presentations) and problematic (solving problem situations) focused independent thinking and creative thinking). The type of learning environment influences the formation of students' creative thinking.

2. The provision on the need to form students' independent thinking and creative thinking cannot be supplemented simply by a thesis or article about the importance of mastering the problems they face or constructive ways of solving creative problems. Blender learning using digital technology tools and flipped classroom technology, where feedback is available, is an appropriate approach that sets the direction for the development and testing of students' independent thinking programs. provided by the implementation of the principles.

These approaches include:

- Systematic approaches, activity-oriented, environment-oriented and person-centered. The most optimal principles for implementing a systematic approach are systemic and scientific principles;

-activity-consciousness, principles of activity, the connection of theory with practice;

- ecological approach - the principles of directing the learning environment to the individual form of education and stimulating the creative expression of the student;

- Person-centered approach - is the principle of self-expression, individuality, taking into account age-related characteristics, creativity and success, confidence and support.

3. The formation of students' independent thinking and creative thinking through the use of digital technology tools based on the development of verbal, non-verbal and problem-based components of such thinking can be achieved through such a curriculum, the implementation of which allows students to form ideas will give.

-creativity, its place in man and society;

- to acquaint them with the peculiarities of creative thinking and ways to overcome psychological inertia, the basic methods of imagination;

-Distance learning process based on blended learning and flipped classroom technology, taking into account the age characteristics of students, their knowledge base and accumulated experience, including the formation of independent thinking and creative thinking of students. will be effective;

- the educational environment of the educational institution is rich in information (video lessons, audio lessons, graphic lessons, lessons in the form of texts, lessons in the form of

presentations) and means unity outside the higher education institution;

- when mixed methods of shaping students' independent thinking and creative thinking are blender learning technology and flipped classroom technology-feedback methods that encourage them to be independent.

Conclusions and suggestions

In conclusion, during the corona virus pandemic, professors and students remained committed to their profession, using digital technology and blending learning to help students stay active in the face of any depression. "Continue their work using technology. Blender learning and flipped classroom technology are the most appropriate forms of education today, given the slow pace of the Internet, and are a great way for all students to re-learn. 'lib has been used.

An example is the approach of a teacher who performs better than other educators to his or her own work experience, to an approach to research and experimentation that results in good results, and to an approach to creative educators who seek new, unique knowledge. The search for, study, generalization, implementation, and dissemination of best practices are all key stages in a teacher's work process. These steps are:

- At this stage, the pedagogical process is observed. During the observation period, the best practices of teachers and the good work of individual educators will be identified.

- It is necessary to summarize the experience gained at this stage. Helps the teacher analyze the evidence and choose the most important of the secondary ones. In this case, the theoretical basis of the experiment is of great importance. Proper use of logical methods will help you to get the right results.

- At this stage, it is the implementation and dissemination of best practices. A single educational institution can seek, find, study, generalize and disseminate the best practices of its teachers, or apply the best practices of other teachers to the life of that institution.

The following criteria should be considered when selecting best practices for practical use.

its relevance;

programmability;

the conditions for its use have been created;

the experience leads to a good result;

the effectiveness of the result obtained.

Learning best practices, the LMS moodle program was installed and launched at the Higher Education Institution, tested, and well received by students. The blended learning and flipped classroom technologies of distance learning taught through the LMS moodle program were used effectively and were very popular not only among our students but also among our professors and teachers.

It is necessary to monitor the process of implementation of this best practice in the life of the institution, to comment on the search for the most appropriate ways and means, taking into account the conditions for achieving the goal. The methods used, the methods should be repeated many times, the results should be taken into account, they should be constantly analyzed. Based on the results obtained, the necessary conclusions are drawn in order to form the next lesson.

New pedagogical experiences are formed through the application of best practices developed by others. I think it is appropriate to emphasize this in my proposals. If we take a step towards overcoming poverty in our country by increasing the speed of the Internet, we will be able to continue the distance learning in higher education with the help of blended learning and flipped classroom technology. In this distance learning system, which is a type of study in which our students study inseparably from their workplaces, if quality distance learning is provided, they will receive a salary, which will benefit both the family and the company. We need to create opportunities for students who want to enter the Higher Education System and strive to

improve their future by deciding to study regardless of the importance of age for their future. Does this mean that more and more people around the world will be able to overcome poverty and benefit and thrive on their own families, jobs, the future of their children and their own future? According to our great scholars, the emergence of a single higher education in the family means that in the future of this dynasty and their children, the number of higher education will increase and poverty will decrease.

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