

METHODOLOGICAL ASPECTS OF THE USE OF COMPUTER TECHNOLOGIES IN TEACHING GEOGRAPHY

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ABSTRACT

This article describes the methodological aspects of the effective use of modern information technology in the teaching of geography. The advantages of using modern interactive technologies, electronic textbooks, multimedia and Internet resources are also highlighted.

Keywords: Information technology, video, interactive technology, computer technology, geography education, training system, computer presentations, electronic textbook.

INTRODUCTION

In the 21st century, education is recognized worldwide as a key factor in ensuring sustainable development. In particular, the Decree of the President of the Republic of Uzbekistan dated 29.04.2019 PF-5712 "On approval of the Concept of development of public education in the Republic of Uzbekistan until 2030" identifies "creating opportunities for quality education throughout life." This will allow teachers of all disciplines in the education system to constantly improve their professional skills and competencies in the quality of teaching and methodological activities through the use of modern educational and innovative technologies, advanced foreign experience, widespread use of information and communication technologies in the educational process. In this regard, the system of retraining and advanced training of public educators is of great importance. Because in the process of professional development of teachers of geography, the content and essence of modern approaches and innovations in geography education are taught and competencies for their application to educational processes are developed. In particular, the skills of using modern information technologies are formed in the process of geography education.

Information technology can be used in the process of teaching geography in the following forms:

- Computer lessons in teaching certain subjects;
- Computer lessons - as a visual material;
- in the organization of group and individual work of students;

Improvements in teaching methods, techniques and audiovisual tools have a huge impact on the quality of teaching and the management of the education system. Observation of technical conditions: the correct selection and placement of video equipment in the classroom, attention to hygienic requirements, taking into account the age characteristics of students in the demonstration of video material in the classroom is of great importance.

With the help of videotape in geography education: travel around the world, video excursions, study of the current state of the environment, integrated lessons, video lectures, drawing up a plan of the basic abstract or writing a statement on the content of the video; visits to exhibitions and museums, film-based presentation of experiments and schemes in laboratories and practical classes; can be used as illustrations or projects.

MATERIALS AND METHODS

The use of new information technologies in the teaching of geography leads to an increase in students' interest in geography, which in turn improves the quality of students' knowledge. Linking the theoretical knowledge provided to students from the electronic teaching materials in the course of the lesson with practice, creating problem situations, solving the problem together with students, develops in them the skills of independent thinking, helps them to understand the essence of the topic. The use of new information technologies in the educational process leads to an increase in the effectiveness of pedagogical methods, changes in the work of teachers, improvement of their working methods, structural changes in pedagogical systems. This puts specific tasks in the organization and management of pedagogical processes [2; 8].

As well as the effective organization of pedagogical processes in the environment of modern information technologies: the division of labor among teachers and the integration of teachers and computer programmers, specialists into the team that creates electronic literature; improving the organization of the pedagogical process and monitoring the effectiveness of teaching activities.

Modern interactive technologies of pedagogical activity:

- Increasing the role of student activities in the learning process, the transfer of the weight of the learning process from teacher to student;
- Ensures that the teacher creates feedback with each student through the use of interactive technologies.

Here are the functions of the computer as a teacher:

- a source of educational information (can completely or partially replace the teacher or textbook);
- Visual textbook (in the form of a new textbook through multimedia and telecommunications);
 - source of personal information;
 - source of training;
 - can serve as an analyst and supervisor.

As a computer work tool: preparation and storage of text; graphic designer, graphic editor; a computer with great capabilities (with the ability to display the results in different views); has features such as a modeling tool.

Computer as an object of study: programming, programming a computer to perform clearly specified actions; software development; performs the functions of studying various information environments. [3; 56].

Today, in order to improve the technical literacy of geography teachers, the following topics are taught: GPS maps of geographical maps, GIS technology, STEAM educational approach to teaching geography, the importance of ISPIG in testology, TISSS, TIMSS, the role of natural sciences (geography), the use of electronic atlases in geography lessons in general secondary schools, electronic textbooks on geography and modern requirements to them, etc. With this information, teachers will be able to organize their lessons in secondary schools on the basis of modern information technology with high quality and efficiency.

The teacher's activity in computer technology is as follows:

1. Preparation for the lesson (preparation of the schedule of the educational process, external analysis, final control.
2. Preparing the audience for the lesson. Monitor group and student activity throughout the lesson.

3. With the help of a computer, the teacher interacts with each student individually, organizes teaching with the help of a computer, taking into account its specific characteristics.

4. Selection and preparation of information environment according to the content of the taught science.

Students and teachers are required to have a high level of computer and technical literacy in performing the above functions. The use of computer technology uses pedagogical programs written in computer memory and derived from telecommunication resources.

The peculiarity of the use of computer technology is that the amount of auxiliary information in them is several times larger than in other sources, it includes a computerized data environment, such as hypertext, multimedia, microworlds, simulation education, electronic communication.

Teaching as a new information technology is approached taking into account the following aspects, if: when this technology meets the basic principles of pedagogy (pre-planning, processing, goal-orientation, integrity); he is able to solve previously unresolved didactic, theoretical or practical issues; if the means of preparation of the information and its delivery to the reader is the computer.

The use of ICT in the teaching of geography is expected to achieve the following goals:

- Develop and support students' ability to think systematically;
- to encourage and apply all educational activities, to further expand and strengthen the knowledge and skills acquired;
- Implementation and development of the principle of individualization, ensuring the integrity of the educational process;
- formation of geographical knowledge, skills and abilities of students.

The use of YaAT (new information technologies) in the teaching of geography also provides solutions to a number of didactic problems that are completely new:

- quality management of geographical education;
- study of complex technical, geographical phenomena in the micro and macro world by means of modeling;
- to bring at a convenient time and scale to study the processes that occur in different geographical systems, very fast or very slow.

RESULT AND DISCUSSION

The use of computers in the study of geography in pedagogical science and practice, both in the classroom and in extracurricular activities, has been proven to significantly increase the level of implementation of an individual approach to the lesson. The use of computers in the classroom increases the level of interaction with geography and other specific disciplines, in particular, computer science, mathematics, etc., as well as the degree of integration of geography with history, economics, foreign languages and other social sciences.

It should be noted that in geography lessons, the computer can not replace natural means, in particular, the study of natural events and phenomena, natural processes in the natural environment is of particular importance. But with the help of a computer it is possible to model many complex geographical processes and laws, help students to control their knowledge, organize independent work, explain and reinforce new materials.

Teachers who use computers in geography classes are able to organize the learning process more effectively through the computer, monitor the learning process of each student, quickly determine the quality and effectiveness of education, use time efficiently, increase students' attention and interest in geography.

The effectiveness of the use of multimedia electronic textbooks in the process of teaching geography has been confirmed in pedagogical practice. In the process of teaching geography, the use of electronic multimedia resources "Geography", electronic textbooks on science, etc., serves to increase the effectiveness of the organized lesson. An e-textbook is created by a creative team of programmers, designers, methodologists and textbook authors based on the current SST, curriculum and programs, as well as the approved textbook. [4;]

The use of the POWER POINT program in the preparation of presentations on the topic of geography, through which the program can be delivered to students through the presentation of diagrams, schemes, pictures, text, video and audio materials. This means that information technology significantly increases the level of visual presentation of educational materials.

Particular attention should be paid to demonstrating students' abilities when creating computer presentations. Therefore, it is important to enrich this process with design elements. In such situations, students try to find material on the topic from a variety of sources. It is well known that the broad source of information from these sources is the Internet. Internet resources play an important role in gathering additional information on topics covered by students, gaining more detailed information about geographical events, conducting geographical practical exercises, using electronic maps, electronic atlases.

CONCLUSION

In conclusion, the introduction of modern information technology in the educational process:

- to acquire new knowledge for students;
- to master the field of science by modeling the studied geographical phenomena and processes;
- expansion of the field of independent activity of students due to the diversity of educational activities;
- individualization and stratification of the learning process based on the introduction of interactive communication capabilities;
- to master the strategy of mastering educational materials by students using the capabilities of artificial intelligence systems;
- formation of information culture in it as a member of the information society;
- the presentation of the studied geographical processes and events through computer technology is important because it increases the interest and activity of students in the science of geography.

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