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Characteristics of the application of digital technologies in the development of linguistic and cultural competences

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Abstract: This article examines the effective application of digital technologies in the advancement of linguistic and cultural competence within Uzbek language education and their progression. Information is presented on the effective methodologies for utilizing digital technologies in the enhancement of contemporary language education.

Keywords: Digital technology, language, education, electronic software, electronic exercises, pedagogy, multimedia, software, linguistic and cultural competence, information technology, interactive.

Introduction: The advancement of modern technologies is primarily focused on enhancing the intellectual potential of society, with education being considered a priority area. In both developed and developing nations worldwide, considerable emphasis is placed on the informatization of education. Efforts are underway to advance education, improve its effectiveness, and the incorporation of new information technologies within education remains a central focus of educational reforms.

Distance learning is gaining significant popularity globally as a crucial component of the open education system.

Currently, the most prevalent topic is the creation of educational resources and multimedia lessons. In this domain, individuals can demonstrate their full creative originality, intellect, knowledge, and refined taste. Unfortunately, it is not feasible to prepare a multimedia project without possessing the requisite skills in presentation preparation and database creation; however, there are specialized software tools, and by mastering their operational technologies, one can obtain multifunctional working instruments.

METHODS

Information and communication technologies occupy a significant role in the evolving system of continuous education within our republic. Examining and analyzing the existing experience in the implementation of educational resources in the education system of Uzbekistan enables an evaluation of the effectiveness of the educational system and its subsequent improvement. To achieve this, the study of works by both foreign and Uzbek scholars who have explored the theoretical and practical issues of education provides clarification on numerous matters. Notably, the experience of foreign scholars in this field, particularly A.D. Garsov, G.I. Bogin, I.I. Khaleeva, N.D. Galskova, T.M. Balikhina, A.A. Bodalev, G.A. Bordovsky, V.N. Wagner, L.A. Verbiskaya, N.I. Gez, V.V. Davidova, I.A. Zimnaya, and D.I. Izarepkov, underscores the importance and necessity of linguodidactics in education. The studies of specialists such as V.G. Kostomarov, L.V. Moskovkin, O.D. Mitrofanova, M.V. Lyakhovisky, E.I. Passov, Y.E. Prokhorov, R. Oxford, and D. Higgins emphasize this necessity. The issues surrounding electronic linguodidactics in language education and various aspects of the application of information technologies have been analyzed by N.M. Shansky, A.M. Noukova, I.L. Bim, and A.D. Garsov. Didactic and methodological concerns regarding the use of information technologies in the educational system of Uzbekistan are addressed in the research conducted by A. Abduqodirov, A.Kh. Abdullaev, M.

Aripov, U.S.H. Begimkulov, Sh.S. Ahrarov, B. Begalov, F. Zakirova, N.A. Muslimov, M. Lutfullaev, S. Rahmonkulova, N.I. Taylakov, S.S. G'ulomov, R.H. Khamdamov, U. Yuldashev, U.A. Mirzalimov, and J.Saifiev.

As evident from the aforementioned areas of both foreign and domestic research, significant results and accomplishments have been made in the development of the creation and implementation of educational resources related to linguistic didactics. It is particularly important to note that our country has the opportunity to accumulate global experience, develop the field without replicating past mistakes, and elevate it to a higher level.

DISCUSSION

To engage in a discussion on the essence of the general principles of the theory of educational technology, it is essential to comprehend the fundamental meaning of the term "educational technology." The term "technology" originates from Greek, derived from the combination of the words "techne" – skill, art, and "logos" – concept, doctrine. In lexical terms, the concept of "educational technology" (in English "an educational technology") refers to a science (or doctrine) that provides guidance on organizing the educational (teaching) process at a high level of skill and art.

The use of computer technologies in teaching, based on specific studies, results in the acquisition of 25% of the information through auditory means, 33% through visual means, 50% through a combination of seeing and hearing, and 75% through active engagement. For educational purposes, a multimedia product can be developed using Microsoft Office programs, while additional software such as PhotoShop (for image processing), Adobe Premiere or Vstudio2 (for video processing), Stoik Software (for image processing and morphing), and Phonograph Windows 95 (for recording and processing sound) are employed to prepare the material.

In the theory of teaching, new pedagogical and information technologies cannot be viewed separately, as the widespread implementation of new pedagogical technologies transforms the educational paradigm, and only modern information technologies ensure the effective utilization of the capabilities of these new pedagogical methods. Traditional approaches to developing students' linguistic and cultural competencies have inherent limitations. By utilizing digital resources, it is possible to enhance the methodology to overcome these constraints.

Digital resources play a pivotal role in expanding students' understanding of different languages and cultures, offering them diverse learning opportunities. Through the use of digital tools, students can enhance their language skills, cultural awareness, and intercultural communication abilities. The incorporation of digital resources in teaching significantly improves students' linguistic and cultural competencies. Digital resources provide several advantages in developing students' language and cultural proficiency. By leveraging digital tools, students can effectively refine their language and cultural skills. Integrating game-based methods into language and cultural education allows students to advance both their linguistic abilities and cultural comprehension. The use of digital resources and various applications in language and culture education can make the learning process more engaging and effective for students. Examples of such applications include "Quizizz," "Learningapps," and "Worksheet."

An analysis of computer-based teaching programs in developed foreign countries and leading educational institutions within our republic reveals that these programs represent qualitatively new instructional tools, which are fundamentally distinct from traditional teaching methods. One of the primary tools of this approach is the theory of computer modeling. In the process of instruction utilizing multimedia tools, students are afforded the opportunity to fully engage with specific subjects on a computer, edit lecture materials, and observe, hear, and reflect upon the animated components of information technologies integrated into multimedia tools during the lesson. The rapid integration of information technologies into the education system broadens the scope of application for modern technologies. Simultaneously, it is possible to identify the evolving directions of contemporary information technologies within education. These include:

1. The introduction of the capabilities of software tools for educational purposes, serving as both instructional tools, objects of study, and means of information processing.

Integration of the capabilities of educational and demonstration devices with computer tools in the creation of educational and methodological complexes. The utilization of such complexes assists the student in accumulating and storing information about the processes being studied, while also elucidating the underlying principles of these processes. The application of educational and demonstration complexes based on modern technologies establishes the foundation for organizing both individual and collective experimental activities. This provides the student with the opportunity to develop their intellectual and creative potential and acquire

independent knowledge.

3. Integration of the capabilities of computers and audio-visual information transmission devices in the development of multimedia systems. These systems, comprising a combination of software and hardware tools and devices, merge various forms of information (text, graphics, sound, image) and facilitate interactive communication with the user. The application of multimedia systems promotes the adoption of active teaching methods and forms, thereby enhancing the level of information comprehension.

4. Utilization of artificial intelligence systems to develop intelligent learning systems. Such systems form the foundation for organizing the process of independent learning, self-directed knowledge acquisition, and the intellectualization of educational activities. These factors collectively accelerate the development of the student's personality.

5. Use of telecommunications tools that enable information exchange through global and local computer networks.

6. A novel technology for information exchange is the stereoscopic visualization system in real-time, commonly known as "Virtual Reality."

The analysis of the integration of modern information technologies into the education system demonstrated that they:

• assist the student in acquiring practical knowledge;

• enable the student to gain a profound understanding of the field of science through the modeling of the phenomena and processes under study;

• broaden the scope of the student's independent activity by diversifying the organization of educational activities;

• individualize and differentiate the learning process through the incorporation of interactive communication capabilities;

• assist the student in mastering the strategy for acquiring educational materials through the use of artificial intelligence systems;

• contribute to the development of an information culture in each member of society;

• present the phenomena and processes being studied using computer technologies, thereby enhancing student interest and engagement.

It is impossible to separate new pedagogical and information technologies, as the widespread implementation of new pedagogical technologies alters the educational paradigm, and only modern information technologies can ensure the effective utilization of the capabilities inherent in these new pedagogical methods.

A comparison of the principal indicators of pedagogical education within the contexts of traditional and modern information technologies clearly illustrates the promising nature of information-based pedagogical education. This can be substantiated by the following points. Traditional didactics aims to establish a theory of instruction focused on accelerating the intellectual development of the student, optimizing the skills and abilities required for educational activities, and creating methodological approaches that facilitate the process of knowledge acquisition. Modern information technologies assist in addressing new didactic challenges, such as teaching the phenomena and processes of the micro and macro worlds, complex devices, and biological systems through computer graphics and modeling, as well as presenting physical, chemical, and biological processes occurring at extremely high or low speeds within a manageable time scale.

Formation of a modern information technology environment in education:

1.Implementation of the capabilities of software tools for educational purposes as an instructional tool, an object of study, and a means of information processing.

2. Integration of the capabilities of educational and demonstration tools with computer tools in the creation of educational and methodological complexes. The utilization of such complexes assists the student in accumulating and storing information about the process being studied, and in revealing the underlying principles of these processes. The use of educational and demonstration complexes based on modern technologies establishes the foundation for organizing both individual and collective experimental activities. This enables the student to develop their intellectual and creative potential and acquire independent knowledge.

3. Integration of the capabilities of computers and audio-visual information transmission tools in the creation of multimedia systems. These systems, incorporating a combination of software and hardware tools and devices, merge various forms of information (text, graphics, sound, image) and facilitate interactive communication with the user. The application of multimedia systems ensures the adoption of active learning methods and forms, thereby enhancing the level of information absorption.

1. Utilizing the capabilities of artificial intelligence systems to develop intelligent learning systems. Such learning systems establish the foundation for organizing the process of independent learning,

autonomous assimilation of knowledge, and the advancement of the intellectualization of educational activities. All of this accelerates the development of the student's personality.

2. Employing telecommunications tools that facilitate information exchange through global and local computer networks.

3. A novel technology for information exchange is a real-time stereoscopic vision system, commonly referred to as "Virtual Reality."

The analysis of the integration of modern information technologies into the educational system is based on their:

• enabling the student to acquire practical knowledge;

• facilitating in-depth mastery of the field of science through the modeling of the phenomena and processes under study;

• expanding the scope of the student's independent activity through the diversification of educational activity organization;

• individualizing and differentiating the learning process through the implementation of interactive communication capabilities;

• leveraging the capabilities of the artificial intelligence system to assist students in mastering the strategy of learning materials;

• fostering an information culture within every member of society;

• emphasizing the significance of presenting the phenomena and processes being studied through computer technology as a means of enhancing student interest and engagement.

The process of informatization in education and the utilization of modern information technologies results not only in a transformation of organizational forms and methods of teaching, but also in the development of new approaches within it. The informatization of scientific fields, the enhancement of educational activities, the integration of the knowledge process based on modern information technologies, and the expansion and deepening of scientific disciplines and their integration are central components. This, in turn, necessitates alterations in the criteria for selecting the content of educational materials. Therefore, the advancement of the informatization process in education brings about changes in the content and scope of educational materials, the redevelopment of curricula for educational subjects (courses), and the integration of individual topics or subjects. This subsequently leads to changes in the content and structure of academic subjects, and, as a result, to changes in the content and structure of education itself.

At present, educational institutions are being equipped with modern computer and telecommunication technologies. This, in turn, requires educators to adopt new approaches to their work. The introduction of new technologies into the educational process does not result in the replacement of the teacher by technical means, but rather in a transformation of their tasks and role, as well as in the increased complexity of teaching activities.

The second direction of computer-based education is the utilization of computers as objects of learning. The employment of computers as a teaching tool in the educational process necessitates a reassessment of many theoretical foundations of didactics and pedagogical psychology. Specifically, expert systems have the potential to guide the student toward the correct solution to a problem of any complexity, while hypertext teaching systems enable the student to determine the sequence for mastering educational materials.

It is important to note that computer-assisted teaching does not result in a spontaneous resolution of all issues within the teaching process. A computer cannot replace the teacher in the educational process; in other words, new information technologies cannot fully replace traditional methods. Didactic materials created in a text editor expand the possibilities of the educational process, thereby making it more effective and diverse, and enhancing student engagement in learning. Through the use of modern computer technologies, it is possible to create didactic materials tailored to the level of the student audience's preparation. For high-achieving students, opportunities are provided to design more complex tasks or administer challenging tests. When preparing didactic materials, a teacher must remember that these materials are intended to fulfill their professional responsibilities.

The teacher initially instructs students on how to complete spreadsheet templates, allowing them to input the results of laboratory work into tables and process this data. In essence, through these seemingly simple calculations, students acquire the ability to utilize computer technology as an efficient tool. Furthermore, a notable advantage of spreadsheets is the ability to ensure that formulas perform calculations accurately as indicators change. This functionality enables the modeling of relatively simple physical processes. The use of electronic presentations as demonstration material in lessons greatly assists the teacher. Presenting educational content in the form of

animations within an electronic presentation aids in the comprehension of the topic being discussed and enhances its visual appeal. Demonstration slides can also be distributed to students as handouts.

CONCLUSION

From the reviewed literature, it became evident that interactive resources are informational elements that enable the user to engage in a mode of interaction and communication. Interactive electronic educational resources encompass interactive electronic educational resources, as "interactivity" is an essential didactic characteristic of electronic educational resources. Interactive electronic information educational resources do not constitute a new, distinct category of educational resources, but rather serve as a tool that reflects the particular characteristics of educational resources. When teaching the Uzbek language as both a native and state language, it is crucial to consider the types of interactive electronic information educational resources according to their classification and to utilize active, functional, and research-based types as much as possible. This is also corroborated by the experience accumulated in the field of language instruction worldwide.

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