

AN INTEGRATED MODEL OF TEACHING COMPUTER SCIENCE AND THE ENGLISH LANGUAGE IN THE INFORMATION EDUCATIONAL ENVIRONMENT OF SCHOOLS

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ABSTRACT

In work the integrated model is resulted teaching computer science and the English language in the conditions of the information educational environment of schools.

Keywords: English language, informatization, information educational environment of schools, multimedia.

INTRODUCTION, LITERATURE REVIEW AND DISCUSSION

The development of modern society is characterized by informatization as a global social process, one of the features of which is the integration of informatics and information technology with the subject areas of modern education. This actualizes the problem of creating methodological systems involving the construction of a unified [1-4].

The integration of informatics with other academic subjects not only helps to improve the quality of the educational process and the labor productivity of the teacher and student, but also solves the most important task of school education - the formation of the information culture of students based on interdisciplinary relationships. In particular, the widespread combination of "computer science and the English language" as a humanitarian specialty and a subject related to the field of science education is justified by powerful integration ties. Indeed, language acts as a means of storing and transmitting information from generation to generation, which, in turn, is a basic concept of computer science. Information, storage media, code, network communication - this is not a complete list of concepts that link the substantive aspects of language and computer science.

Recently, when teaching English, they use information and multimedia technologies, computer networks and the Internet. However, the effectiveness of their use is not always significant due to many objective and subjective reasons. In turn, the development of information technology in the course of computer science without a pronounced subject orientation occurs with low motivation. In this regard, it is of interest to build an integrated course "computer science + English language", which allows to improve the quality of training in these subjects in modern conditions.

It is important to note that in the documents on the modernization of education, raising the level of training of students in the field of natural sciences and the humanities is considered as the most important task in the formation of the information society. We believe that the effectiveness of the educational process of secondary schools in the Republic of Uzbekistan can be achieved by developing and implementing integrated learning models [3,4].

The existing education system, the measures envisaged, the developed systems do not always provide a fully qualitative result in the preparation of students for a variety of subjects due to

interruption in classes due to low and high temperatures, and therefore the inability to attend students in an educational institution, hence the reduction in the annual calendar interval training. In addition, in remote rural schools of Surkhandarya, Kashkadarya and Navoi regions, there is a need for teachers in some leading disciplines, and lack of full access to educational information resources.

The phenomenon of the integration of informatics in substantive activity is in the center of close attention and discussion of scientists, methodologists, and practical teachers. Researchers of the Republic of Uzbekistan, such as A.A., paid attention to the content and methodology of teaching computer science in a comprehensive school in the context of the informatization of the pedagogical process. Abdukadyrov, M Aripov, U. Begimkulov, N. Taylakov, U. Taylakov, U. Mirsanovi et al. [3,4].

Improving the quality of assimilation by students of educational material on computer science and the English language in secondary schools of the Republic of Uzbekistan can be achieved through the implementation of the integrated model "Computer Science + English" if:

- integration is carried out on the basis of a structural-functional scheme containing a target (a single set of quality requirements and conditions for the implementation of the educational process), content-structural (based on the principles of integration and completeness of content), technological (including the principles of parallelism and focus of education, completeness of the development of activities) and productive components;
- implementation of the model is carried out in the conditions of a developed unified information educational environment for schools of the Republic of Uzbekistan, providing distance learning.

In connection with this, the following tasks are formulated:

1. To identify the pedagogical capabilities of information technology and educational information environment in northern schools.
2. To identify the prerequisites for the creation of an integrated model of teaching computer science and the English language in the modern conditions of secondary schools of the Republic of Uzbekistan.
3. To develop an integrated model for teaching computer science and English in a developed information educational environment of schools in the Republic of Uzbekistan.
4. To identify and justify the pedagogical conditions for the implementation of an integrated model of teaching computer science and English in schools of the Republic of Uzbekistan.
5. In the process of the pedagogical experiment, check the effectiveness of the developed integrated model for teaching computer science and English in schools of the Republic of Uzbekistan.
6. To develop guidelines for the organization of the process of teaching computer science and English in an integrated model in schools in the Republic of Uzbekistan.

The integrated model "Informatics English", built on the basis of the structural-functional diagram containing the target, substantive-structural, technological and effective components, optimizes the educational process and ensures compliance with educational standards in computer science and English in the conditions of schools of the Republic of Uzbekistan;

The main pedagogical condition for the implementation of the integrated model "Computer Science English", which provides an increase in the quality of students learning the material in these subjects, is a developed unified information educational environment in the northern region, which allows the use of distance learning.

The methodology for implementing the integrated model in the information educational environment of schools in the Republic of Uzbekistan allows us to improve the quality of students mastering educational material in computer science and English (academic performance, mastering of educational material), overcoming features that have negative consequences on the organization of the educational process in schools of the Republic of Uzbekistan. The expansion of the use of information technology in all areas of life, including education, served as a prerequisite for the emergence and subsequent development of integrated learning. The following factors contribute to this:

1. Open education in school disciplines: high-quality education is not always available to students in such regions due to certain significant environmental, climatic and socio-economic characteristics (territorial remoteness of the school, low or high temperatures, which results in lack of classes, lack of teaching staff in remote rural schools) Instead of the classical lesson system, adequate measures are needed to strengthen the line of individualization of learning integration, to increase the role of independent work, which can be resolved through the use of open learning technologies.

2. Interdisciplinary communications that have a comprehensive impact on the learning process from setting goals and objectives to the direct organization of teaching computer science and the English language and the results of the learning process.

3. A holistic worldview and information worldview, when in the process of integrated learning, ideas about information objects and their transformation in linguistic practice, including through ICT, appear.

4. The information culture of the student.

The integrated model should be a systematic form of combining two academic disciplines, which allows students to master the basic level of computer science and the English language, as well as deepen and expand their knowledge of these two subjects, taking into account traditional principles (consciousness and student activity in learning, science, systematicity and consistency , the relationship of training with practice, visibility, etc.) and specific principles (parallelism, intensification, taking into account factors that increase the focus of training Niya, enhance learning motivation, enhance the informative capacity of the maintenance, optimization and individualization of instruction). The integration of the two disciplines is carried out in a unified information educational environment (EIOS) (Fig. 1).

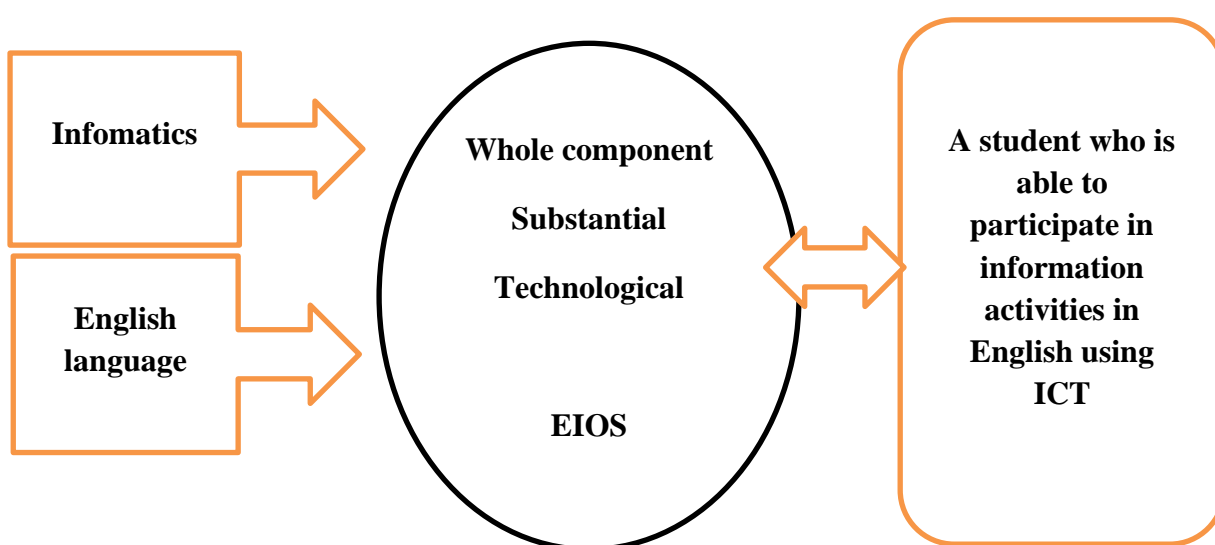


Fig. 1. The scheme of organization of integration of disciplines through EIOS

The result of integrated learning in such an environment is that the student will be able to participate in information activities in English using information technology.

The idea of building an integrated model is based on the cross-establishment of integrative links of all components of the methodological teaching systems for computer science and the English language (goals, objectives, methods, tools, content).

The study allowed us to draw the following conclusions:

1. A study of the actual practice of setting an integrated course in secondary schools No. 5, 102.134 in Tashkent and No. 17, 20 in the Jizzakh region revealed the feasibility of using a model for integrating computer science and the English language in order to optimize and improve the quality of learning educational material in the disciplines of the Republic of Uzbekistan, prerequisites for the integration of computer science and English courses in northern schools are identified.
2. A structural-functional diagram of an integrated model for teaching computer science and the English language has been developed, which represents a system of interconnected components (target, substantive-structural, technological, effective).
3. A system of pedagogical conditions for the implementation of an integrated model for rural schools has been developed. Learning success is possible if there is a developed information educational environment in which all these necessary conditions are realized, as well as distance learning.
4. The effectiveness of the developed integrated model for teaching computer science and the English language in the information educational environment of schools in the Republic of Uzbekistan has been experimentally confirmed.
5. Educational and methodological recommendations for teaching computer science and the English language on the integrated model in the schools of the Republic of Uzbekistan have been developed.

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