

## Література

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## GENERAL APPROACHES TO HEALTH-SAVING USAGE OF SOFTWARE AND HARDWARE IN DIFFERENT COUNTRIES OF THE WORLD

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The purpose of the study is to determine foreign approaches to the health-saving usage of software and hardware (SHT) in the educational process.

The development of information and communication tools (ICT) is an integral part of social development in various countries around the world. Widespread introduction of ICT simplifies the acquisition of new knowledge, promotes transnational exchange of promising experience, raising the level of education of various segments of the population, regardless of their location.

Today, governments in developed countries are making significant efforts to modernize education systems, update the content of education, implement modern SHT programs and network technologies in education. Currently, the use of SHT is considered a necessary component to improve the quality of education by making changes in subjects, developing new practical skills, expanding, and enriching educational programs. PAZ are used to improve access to education for various social groups, to support self-study, lifelong self-education.

Regardless of what opportunities for the use of SHT are planned to be implemented in the educational process in a given state, for their successful involvement in the education system, in general, it is necessary:

- take into account the socio-economic and cultural conditions of the country;

- take into account the experience of other countries (in particular, similar in socio-economic characteristics);
- to correlate the degree of ICT development with the capabilities of technical, financial and human resources;
- develop a detailed action plan for employees at different levels of the education system;
- take into account the consequences of the involvement of ICT in the education system and their use by different categories of students, teachers, and the rest of society [3].

European researchers note that the introduction and use of SHT is one of the priority areas of education development over the past decade. The research shows a correlation between the use of SHT during training and students' results in exams, in particular: SHT has a positive effect on success in primary school, especially in language lessons; the use of SHT improves the achievement of students (7–16 years) in language, research, design, and technology; found a positive relationship between the duration of use of SHT and student performance in PISA tests; schools with a higher level of SHT provision show faster growth of grades than those with worse equipment; the presence of broadband Internet access in classrooms leads to a significant improvement in student performance in state exams, etc. [2].

In addition to the positive results obtained from the use of SHT, foreign experts in various fields of science, in particular Hainsworth A., Zlamanski R., Mukhametzyanov I., Robert I., Hakala P., Ciccarelli M., etc., note the presence of risks of negative impact on the physical and mental health of children and adolescents, which is associated with mental overload, ergonomically unbalanced use of equipment and furniture, violation of time norms of work with SHT, etc.

Many countries have accumulated significant experience in the safe and health-friendly use of SHT [1, 4], including in the educational process. Despite some differences, we can distinguish general approaches specific to foreign practice:

- introduction of programs, projects, initiatives for the development of ICT competence of the subjects of the educational process (administration, teachers, students, parents), their awareness of ergonomic, health-saving usage of SHT;
- creation of web resources to support health education, dissemination of information about the rules of safe use of SHT;

- conducting research aimed at determining the awareness of the subjects of the educational process on the safe and healthy use of SHT;
- development of scientifically substantiated standards, recommendations, ergonomic requirements to the workplace of SHT users, the definition of features, and rules of health-saving usage of different types of SHT.

The outlined approaches can be considered expedient for introduction into the domestic practice of health-saving usage of SHT, as in educational, industrial, household, etc. activities.

**Key words:** foreign experience of using ICT, health-saving usage, software and hardware.

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