

University of Zielona Góra

Faculty of Social Sciences

Department of Media and Information Technologies

INFORMATION TECHNOLOGIES

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Information technologies

- ✓ INFORMATION TECHNOLOGIES AND INFORMATION SCIENCE – BASIC CONCEPTS
- ✓ CONCEPTUAL SCOPE OF IT (INFORMATION TECHNOLOGIES)
- ✓ THE ROLE AND PLACE OF TI IN EDUCATION
- ✓ THREATS RELATED TO THE APPLICATION OF INFORMATION AND COMMUNICATION TECHNOLOGIES

Information technologies

- ✓ The concept of **information technology** is treated as a combination of computer science with other fields and technologies that interact with it and also influence its use in society [3].
- ✓ **Computer science** is a field that deals with various aspects of information, namely its collection, storage, processing and presentation, as well as its use in communication processes between objects, systems, people [3].

[3] W. Osmańska-Furmanek, *Nowe technologie informacyjne w edukacji*, Lubuskie Towarzystwo Naukowe, Zielona Góra 1999, s. 18

Information technologies

✓ *Information Technology* - IT (Information Technology) is a set of means (i.e. devices such as computers, external devices and computer networks) and tools (software) and other technologies that are intended to serve the comprehensive use of information. It therefore includes computers, information, computer science and communication. [4].

Information technologies

The conceptual scope of IT includes:

- ✓ the impact, creation, and use of media messages (including multimedia)
- ✓ social communication through information media
- ✓ social and ethical aspects of human activity in the field of IT
- ✓ analysis and synthesis of information (processing, selecting, and creating a coherent image from elements placed in different areas)
- ✓ use of IT resources and methods
- ✓ security of systems and data [3].

[3] W. Osmańska-Furmanek, *Nowe technologie informacyjne w edukacji*, Lubuskie Towarzystwo Naukowe, Zielona Góra 1999, s. 18

Information technologies

The role and place of IT in education:

- ✓ are an element of knowledge and a subject of teaching
- ✓ as unique means and methods of computer science, they constitute an excellent tool supporting the work of teachers (simulation, visualization of educational content)
- ✓ they enrich the range of pedagogical influences
- ✓ they allow to implement the idea of multi-sensory teaching [1].

[1] Osmańska-Furmanek W., Furmanek M., *Wprowadzenie*, [w:] *Technologie Informacyjne w warsztacie pracy nauczyciela*, M. Furmanek (red.), Oficyna Wyd. UZ, Zielona Góra 2008, s. 15-16

Information technologies

The role and place of IT in education:

- ✓ they are a kind of "mirror" in which the effects of one's own thinking are reflected (the student programs the computer, independently searches for errors and eliminates their causes)
- ✓ they support the individual development of the individual and enable individualization of teaching
- ✓ they facilitate teacher-student and student-student communication (communicators, e-mail, chats, discussion forums)
- ✓ they facilitate access to education (e-learning, courses, consultations, tutoring) [2].

[2] Jędryczkowski J., Prezentacje multimedialne w pracy nauczyciela, Oficyna Wydawnicza Uniwersytetu Zielonogórskiego, Zielona Góra 2008, s. 51-56

Information technologies

Threats related to the use of information and communication technologies:

- ✓ disappearance of traditional forms of information transfer, such as books
- ✓ less frequent use of cultural and educational centers (theater, cinema, museum)
- ✓ mass plagiarism of scientific works
- ✓ life in a world of illusion (virtual reality).

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