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Computer use by nine-year-old children

One of the important phenomena accompanying contemporary globalization processes is forming of the information societies. In my opinion, this phenomenon is unavoidable and general. The access to modern media (Internet, television, radio) dynamically develops forming of these processes. Today, both Internet and television are the "universal" sources of information and knowledge. From the theoretical point of view, they seem to be the most important tools of contemporary education (Izdebska 2007; Bernát, Bernátová 2011; Czaja-Chudyba 2009; Tanaś 2007; Kłosińska 2006). This text is a presentation of computer use by 9-year-olds in the process of their education (learning) and in other activities. It also shows readers both the positive and negative aspects of computer use by children (in the context of research questions and children's answers).

The research process

120 children (60 boys and 60 girls) – pupils of the 3rd grade (of the elementary schools in the Malopolska region) were tested – in the context of research questions:

1. *How much time do children spend using the computer*?
2. *Why do children use the computer*?
3. *What motifs inspire children to play computer games*?
4. *What are the positive effects of computer use* (*by children*), *in the opinion of the tested nine-year-olds*?
5. *What are the negative consequences of computer use* (*by children*), *in the opinion of the tested nine-year-olds*?

Analysis of the results

Regarding question 1: 61 children (50.8% of all the children tested), 42 boys and 19 girls declared that every day they spend more than three hours of their free time with the computer. Therefore, it can be interpreted as an actual fact that play with the computer fills all of the children's "free time" after their school lessons.

The results show that children spend their free time every day passively, in the physical sense. It "inspires" faulty posture of children's bodies.

Regarding question 2: Computer games are the nicest form of boys' relationship with the computer (37 boys' answers). Other boys use the computer for learning (13 boys' answers) and for listening to music (10 boys' answers). Girls use the computer first of all for listening to music (29 girls' answers), for playing computer games (19 girls' answers) and for learning (12 girls' answers). The children surveyed spend the least time with the computer for writing their homework. Only 25 nine-year-old children (20.8% of all tested children) use the computer for learning (or rather *primarily* for learning).

Regarding question 3: 118 children (98.4% of all children tested), 60 boys and 58 girls declared that they like computer games. In the context of children's answers, the tested boys are interested in action games (24 boys' answers) and "fighting" games (20 boys' answers), and the tested girls like adventure games (32 girls' answers) and logical games (14 girls' answers). Adventure games and logical games have little popularity among the tested boys, just as "fighting" games and strategic games have little popularity among the tested girls.

Having fun is an important factor inspiring the tested boys for playing with the computer (43 boys' answers) as well as satisfying boredom is a major initiator of girls' playing with the computer (42 girls' answers). 20 tested children (10 boys and 10 girls) suppose that knowledge is a factor inspiring them to use the computer.

Regarding question 4: The presented research shows that 110 children playing with the computer (91.7% of all children tested), 52 boys and 58 girls have come across educational games. This fact shows that computer- and Internet-assisted education develops dynamically in contemporary Poland. It also proves that learning with the support of the mass media

and multimedia allows the expansion of children's knowledge and skills. Computer and Internet use in children's education shows that these media combine learning and play, and also utility and pleasure, and they are attractive instruments for children's education.

85 children (43 boys and 42 girls) declared that educational games help them in their learning[1]. In the context of the children's answers, I suppose that educational games as well as properly selected Internet portals in fact may help children in their learning. Internet is an attractive tool for developing children's interests and helping in children's learning. Among those who have proposed attractive educational games for the tested boys and girls are teachers (41 boys' answers and 38 girls' answers) and parents (15 boys' answers and 17 girls' answers).

Regarding question 5: In the context of the presented research, I suppose that parents of the children tested are not aware of the potential evil in computer- and Internet-activity of their children. The tested boys and girls are not supervised by their parents when they play with the computer, also when they are using the Internet (46 boys' answers and 56 girls' answers). It seems that parents, especially parents of girls, do not restrict their children the computer access, and they do not control the time that children (especially girls) spend playing the computer. That fact was pointed out above when I presented the time that children spend playing the computer.

The research results show that 77 children (64.2% of all children tested), 28 boys and 49 girls feel tired after playing with the computer. Many hours of interaction with the monitor and the keyboard leads to back--pain and eye fatigue, and in effect to faulty posture of the body and to eye defects. Children playing with the computer forget about what is important and appropriate for them. They often neglect home duties, school duties, hygiene and even physiological needs.

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[1]   We ought to remember that in Poland, the package of textbooks (for pupils of the elementary schools) is often supplemented by a useful CD-ROM which allows stress-free repetition of the content of school lessons using educational games, cross-words, puzzles, songs, etc. Also Internet portals provide pupils education in various fields of knowledge (Polish language, history, geography, mathematics, physics, biology, etc.). Today, Polish children may use the Internet encyclopedias and dictionaries, virtual textbooks and books, and also audio-e-books (virtual books to listen to), etc.

67 tested children (41 boys and 26 girls) declared that they neglect their school duties (e.g. reading texts of children's literature). 20 tested children (10 boys and 10 girls) declared that they limit their meetings with peers. 2 tested girls felt asleep at time of the computer meeting.

The children surveyed use mostly the Internet communicator "Gadu--Gadu" (44 boys' answers and 34 girls' answers). Boys like on-line playing (29 boys' answers) and girls like web browsing (25 girls' answers). E-mail is not popular among nine-year-olds (only 3 boys and 6 girls have used e-mail).

29 boys (48.4% of all boys tested) and 15 girls (25% of all girls tested) have admitted that they did browse Internet sites "targeted" only at adults, with erotic images and also with pornographic images. The real number of the tested children who have browsed sites with erotic and pornographic images is probably higher. The erotic and pornographic images cause sexual excitement in nine-year-olds. Children's interest in sex (inspired by the Internet) is too early. This "adult" interest displaces other interests, which seem to be appropriate for children at this age. Incidentally, 24 tested boys and 31 tested girls perceive the alarming danger of Internet erotic and pornographic portals. Other children (64 tested nine-year-olds) rather do not perceive this danger.

Some children are also aware of computer addiction, others do not understand that they may become subordinated to the computer as a machine, or in reality to their sensations experienced during the play with the computer.

Polish teachers ought to be obliged to organize valuable computer education in Polish schools, which would show all children the positive effects of computer use (e.g. for learning) as well as its negative consequences.

(Translation: M. Muchacki)

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