

## РОЗДІЛ IV. СОЦІАЛІЗАЦІЯ ОСОБИСТОСТІ: ІСТОРІЯ ТА СУЧАСНІСТЬ

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### THE SAFETY OF CHILDREN IN THE INFORMATION SOCIETY

*The article deals with the ways of forming junior pupils' informational culture, problems of children's training and education in the information society, preservation of moral values and humanistic component of informational technology implementation in the school and family cooperation. It also focuses on the problem of providing junior pupils' information security. Psychological phenomena associated with the obtaining of new information technologies have been presented.*

*It has been defined that junior pupils' informational culture is a system of knowledge and skills used for searching required information from the diversity of informational resources; the selection, evaluation, saving of the found information and critical thinking based on the moral and cultural values; the integration, structuring and creation of new information. Formation of junior pupils' informational culture occurs at "Steps to computer science" lessons. These lessons make them acquire computer skills through games playing. The drafted computer program "Steps to computer science Plus" (<http://dvsvit.com.ua/cxodunku/>) contains a number of mathematical problems, as well as science and native language assignments, which are focused on the development of logical thinking, some computer exercises are designed to adapt the child's hand to operate the mouse.*

*Modern technologies are very important for the organization of school educational process. The experience of Internet resource aiming to support distance learning for students of physical and mathematical school № 17 in Vinnytsya ([disted.edu.vn.ua](http://disted.edu.vn.ua)) has been described. The site is an integral part of the informational and educational environment (IEE), which is planned to "involve" the whole educational process in the gymnasium and later – all schools in the region, and further – Ukraine.*

*Empirical research confirms the fact that children of primary school are active Internet and social networks users (33.3 % of them have already registered) and master new forms of virtual communication, therefore expose themselves to dangers of the information environment. The diagnosis found out that 85.2 % of respondents use computer as a toy, 70.4 % – to watch video (cartoons), 48.2 % for teaching and learning purposes, 26 % – for other purposes (as parents indicated: fun searching, watching the weather, social networking, homeworking).*

*Thus, teachers and parents should join their efforts to develop a system of means and tools for children acquiring knowledge, developing abilities and skills that make up the security of their life in the information society.*

**Key words:** *junior pupils' information security, informational culture, Steps to computer science, distance-learning support.*

**Introduction.** The priority task of primary school teachers in today's information society, above all, is to form creative, fully developed children, direct cognitive development and properly motivate their learning activities,

maintaining a humanistic orientation. Practical experience shows that students today are interested in everything that is connected to the computer. Therefore, teachers must be able to take advantage of modern information technology to awaken the interest of children in learning activities, and to know the content, forms and methods of teaching, a tradition and a culture of learning in the information society.

**Analysis of relevant research.** The problem of the introduction of new information technologies, multimedia learning attracted the attention of many researchers. In particular, the formation of computer literacy, information culture of the person, prospects and problems of implementation multimedia in learning have been considered by V. Bykov, R. Hurevich, A. Hurzhii, K. Elshyr, M. Zhaldak, Y. Zhuk, I. Zakharova, G. Kiedrovich V. Klochko, G. Kozlakova A. Kolomiets, Y. Mashbyts, I. Pidlasyy, E. Polat, J. Robert, S. Sviridenko, A. Spivakovskiy, A. Khutorskoi, D. Chernilevsky.

V. Bondar, I. Ziaziun, N. Kuzmina, N. Nychkalo, S. Sysoieva and others explore the features of formation and development of the creative person in the information society.

D. Hrachev, I. Devterov, V. Zuev, I. Kadiievskaiia, A. Lyseienko, T. Malih, A. Shabunova and others write about the problems of education and upbringing of children in the information society, preservation of moral values and humanistic component of the information technology.

**Aim of the Study.** Humanistic research component of information technology, preservation of moral values in human terms in information society are relevant today.

Since children are not only less resistant to information and psychological influences, but rather adapt to rapid changes in IT, the first to learn and learn to use them, they are the most vulnerable categories of the population to the information threat.

It is therefore necessary to develop a system of techniques for information security of children, formation of information culture; teach them to work with information, adequate perception and evaluation of information, it is critical to understanding based on the moral and cultural values.

**Research Methods.** New search forms, information processing and storage generate new information culture, modern forms of interpersonal relations and the relationship between people and technology, between different people. There are new forms of mediated communication in social networks, forums, chats, blogs, which attract more and more children of primary school age.

The introduction of computers in all the spheres of human life creates psychological problems that require detailed study and decision. J. Babaiev (1998), L. Dziuba (2003), A. Doronina (1993), S. Yenykolopova and others (2006), A. Soroka (2002), B. Shneiderman (1992), M. Griffiths (1996), D. Scott

(1995), K. Young (1996) describe these psychological phenomena. These phenomena are associated with development subjects of the new information technologies: “personification” of the computer when it is perceived as a living organism; the need to “communicate” with a computer and features of the communication; various forms of computer anxiety; the responsibility of software developers for the consequences of their application; Internet-aggression and Internet-addiction.

Information culture requires knowledge of possibilities of new information technologies and ways to use them to achieve educational goals (J. Mashbyts, 1997, p. 250). Information Culture person is determined in work (A. Astafeva, 2003) – only one slice of culture that is formed in the process of mastering new information technologies, including computer.

After analyzing different information culture definitions, primary school children’s information culture can be defined as a system of knowledges and skills of searching the necessary information from Internet resources. The pupils have to select, evaluate, save the found information and have thoughts based on the moral and cultural values. Information culture should be included to the common cultural person and become an integral component in modern society; it is a necessary part of education of any person.

The lessons named as “Steps to computer science” have many opportunities for the primary school children’s information culture formation. Younger students acquire computer skills at these lessons, using game exercises.

A computer program “Steps to computer science” contains many exercises of mathematics, science, native language, music, focused on the development of logical thinking; individual computer exercises help improve the children’s skills to manipulate by the mouse (Fig. 1).



Figure 1. A computer program “Steps to computer science”

Developers consider that study of computer science in elementary school helps to activate cognitive abilities of children; work with models of natural phenomena with computer helps to form in children basic science ideology; it helps to develop logical thinking, expanding horizons of knowledge closely related to the computer science, develop creative imagination. Constant integration with other subjects positively affects the process of mastering and learning.

Most students have a computer at home but use it mainly as an interesting toy. Therefore it is extremely important to teach students to use the computer as a teaching assistant in acquiring new knowledge, finding the right information, the use of Internet resources, applied application of learned material. Students develop both specific practical abilities and skills, and information and communication culture.

Modern technologies are important for the organization of school process. Today many schools create their own Internet resources, and give information about school life and about different classes and children. Teachers can quickly inform parents about students' progress, school events in their life, certain meetings, events, organize cooperation between schools and families for the study of school subjects.

An example of such resource is on-line support system of students' distance learning organized in physical and mathematical school № 17 of Vinnitsa city ([disted.edu.vn.ua](http://disted.edu.vn.ua)). This educational online resource created Agency for Information and Communication Technology, which operates in the physical and mathematical school № 17 of Vinnitsa city and Vinnitsa city center of students' distance education. The site is part of the information-educational environment (IEE). The sponsors dream to "dip" the whole educational process in physical and mathematical school № 17 of Vinnitsa city, and then – all schools in the region, and further – Ukraine.

IEE is a complex network of software and hardware that uses the Internet and aims to:

- supporting the educational process in education institutions (new knowledge, the students acquired knowledge and control) <http://disted.edu.vn.ua> "Preparing for the lessons";
- preparing students for independent testing <http://test.edu.vn.ua> – "System knowledge test";
- intellectual competitions of pupils (contests, tournaments subjects) <http://www.olymp.vinnica.ua/> "Ukrainian center of schoolchildren's Olympiads by means of Internet";
- organization of life of the institution, cooperation with parents, their operative information on the status of current performance and pupil attendance <http://ios.edu.vn.ua/>;

- providing electronic document both in education institutions, and between governments and subordinate structures within the region <http://vmuodoc.edu.vn.ua/> “Electronic Document Management System”.

All software products have integrated into the educational portal <http://www.edu.vn.ua/>, located on its own technical platforms.

Any school city, region, Ukraine in the whole can use them in full, only with access to the Internet and contact the lab school № 17 for access rights.

An interesting experience of on-line system for remote support teaching students is the cooperation of the teacher U. Y. Pasihov, who teaches the subject “Steps to computer science” in class 2 with parents of younger students. Teacher posts each lesson designed on this site and attracts parents to help children in learning computer literacy.

System of distance education helps the teacher and children’s parents actively engage children to work with a computer, of course, with all the physiological, psychological and ergonomic requirements. Such forms of cooperation between school and family are positive because they are useful as not only an educational effect but also as the fact that children see how to use the computer not only to play games but also for learning.

**Results.** The world community focuses on the problems of information security of children. So in 2011 the program of Microsoft “Partnership in Education” Department of Preventive and Social Policy of UNESCO in Ukraine held large-scale survey “Awareness of Ukrainian on the safety of children in Internet”. The survey conducted in 11 regions of Ukraine gave the following results:

- 96 % of Internet child users aged 10 to 17 years and 51 % did not know about the dangers online;
- 52 % of children use the Internet primarily for communication in social networks, and leaving their mobile phone (46 %), home address (36 %), and personal photos (51 %);
- 44 % of children are at potential risk (placing personal information), and 24.3 % were in risk situations (go to meet with virtual acquaintances);
- 72,5 % of children want to get more information how to protect themselves online.

In order to identify the real state of the problem, we conducted a pilot research with 38 children of primary school and their parents in physical and mathematical school № 17 of Vinnitsa city.

In the process of diagnosis it was detected that computer as a toy uses 85.2 % of respondents, view the video (cartoon) – 70.4 %, for the purpose of teaching and learning activities – 48.2 %, for other purposes – 26 %.

All interviewed children have access to the Internet, 33.3 % of them registered in the social networks. They have placed their personal data for public use and new types of virtual communication.

The phenomenon of finding new forms of communication has been described in the work [S. Paulussen, 2004]. The Internet is especially important for people whose real lives because of certain (internal or external) causes are relatively interpersonal depleted. In these cases, people are more likely to use the Internet and various forms of it as an alternative to its real environment. In particular, the Internet – or online communication – training can have certain characteristics that neutralize the symptoms or even causes difficulty in real communication.

**Conclusions.** 1. So, to protect the child from deeper immersion in a virtual world parents need to communicate with the child on various topics to discuss what they were doing in the Internet. Parents have to control how much time a child spends in the Internet. Because problem occurs when the child spends excessive amounts of time in virtual content, and parents have no control over it.

2. Our research led to the conclusion that the school and the family have a great responsibility for the children's information security in today's information society.

3. The results of the diagnosis is confirmed by the fact that children of primary school age are active users of the Internet, social networks and acquire new forms of virtual communication. Therefore, teachers and parents should jointly develop a system of measures and tools for children acquiring knowledge, developing abilities and skills that make up the security of their lives in the information society.

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## РЕЗЮМЕ

**Имбер В. И.** Безопасность детей в информационном обществе.

В статье рассматриваются пути формирования информационной культуры младших школьников, проблемы обучения и воспитания детей в информационном обществе, сохранение нравственных ценностей и гуманистической составляющей

*внедрения информационных технологий в процессе сотрудничества школы и семьи, обеспечения информационной безопасности младших школьников. Эмпирическое исследование подтверждает тот факт, что дети младшего школьного возраста являются активными пользователями сети Интернет, социальных сетей и осваивают новые формы виртуального общения, чем подвергают себя угрозам информационной среды. Описываются психологические феномены, связанные с освоением субъектами обучения новых информационных технологий.*

**Ключевые слова:** *информационная безопасность младших школьников, информационная культура, «Ступеньки к информатике», дистанционная поддержка обучения.*

## **АНОТАЦІЯ**

**Імбер В. І.** Безпека дітей в інформаційному суспільстві.

*У статті розглядаються шляхи формування інформаційної культури молодших школярів, проблеми навчання й виховання дітей в інформаційному суспільстві, збереження моральних цінностей і гуманістичної складової впровадження інформаційних технологій у процесі співпраці школи і сім'ї, забезпечення інформаційної безпеки молодших школярів. Емпіричне дослідження підтверджує той факт, що діти молодшого шкільного віку є активними користувачами мережі Інтернет, соціальних мереж та опановують нові форми віртуального спілкування, чим піддають себе загрозам інформаційного середовища. Описуються психологічні феномени, які пов'язані з освоєнням суб'єктами навчання нових інформаційних технологій.*

**Ключові слова:** *інформаційна безпека молодших школярів, інформаційна культура, «Сходинок до інформатики», дистанційна підтримка навчання.*