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THE FORMATION OF INFORMATION CULTURE AND SECURITY FOR THE USE OF ICT BY ADOLESCENTS THROUGH THE INTERACTION OF EDUCATIONAL AND FAMILY ENVIRONMENT

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ABSTRACT

The most effective means of the information security of a person is the high level of information culture. The issue of information culture has become especially relevant due to UNESCO transition from the information society conception to the knowledge society conception, where the knowledge is a strategic resource because of information processing. Development of information culture is currently considered as one of the key purposes of modern education. Its successful achievement in the educational process determines whether a person is able to effectively interact with the modern information space.

Key words: information culture, information security, competences, children and adolescents, pedagogical technologies.

INTRODUCTION

A fundamental characteristic of modern society is the increasing role of information. The expansion of the scope of application of information and telecommunication technologies in everyday human life has given rise to the new category of "information culture". At the same time, information culture acts as the most important component of the spiritual culture of the society as a whole, the various social groups, the individual. The latter necessitates the study of information culture, acting as a set of universal values that ensure the development of the cultural potential of society. Thus, it is important to note that it is not quite correct to correlate information culture only with the processes of computerization and development of information technologies. It is clear that the information culture is not limited to this, but also determines the value of information and opportunities for the development of society as a whole and the individual in the context of expanding knowledge and new technologies of search, processing, exchange, preservation of the information etc.

It is important to note that in modern society there is a struggle of two trends: on the one hand – the development of creativity, talents, initiative, on the other hand – accuracy, correct- ness and consistency in working with information. At the same time, creativity is also manifested in relation to the work with the general flow of information, when there is a need for the manifestation of creative abilities, thanks to which information self-regulation systems are created. It is obvious that the attitude of the individual to the information, abilities, skills and readiness to operate correctly with it are in the focus of consideration of the pedagogical community and are closely related to the understanding of information culture as an object of research of pedagogical sciences.

EXPOSITION

The information culture thus appears as a goal-setting component of identity formation of the adolescent learners, able and willing to operate with information flows, has shaped ways of handling and processing information rationally, are willing to encourage and support the work with information, meeting the needs of society.

In this context, education performs the main social function - the formation of the abilities of future graduates of educational institutions that would meet the relevant needs arising in the modern information society. This confirms the relevance of the research aimed at studying the development of information culture of the adolescent learners based on training methods of information processing.

In general, the graduate of educational environment should have a developed information culture that provides not only the process of operating information flows, but also assumes the achievement of technical and psychological pre-

paredness in working with information. Above, we focused on the fact that information culture is an important phenomenon, not limited only to technical skills of working on a computer, but we emphasized that the possession of modern computer technologies is an important element of information culture, its component.

The information society intensifies the contradiction between man and information environment. The objectives of the development of information culture of the learners allow the adolescents to reduce this discrepancy through the development of ways of handling information, skills of processing and use. At the same time, an important component is the psychological stability of the person to the enormous flow of information, inattention to which causes specific socio-psychological consequences.

Thus, the psychological component of the development of information culture of children and adolescents is directed on formation of such personal characteristics, which provide preservation of optimum functioning of mentality in the conditions of stressful information influence. The development of the information culture as a pedagogical process correlates with the actualization of emotional, volitional, intellectual, motivational spheres of personality that affect the flexibility and mobility of the psyche in the processing of information. Paying attention to this, let us consider the definition of information culture in general and from the point of view of pedagogical technologies.

By analyzing the work of different authors, it can be noted that information culture is an independent area of the general culture of the person as a whole. Its exact expression is seen in the interaction between each individual, the information environments surrounding it and the space as a whole. In other words, the information culture is understood as a set of knowledge, skills and abilities to work with the information found with the use of modern information technologies, where the main components of information culture are information and computer literacy.

That assumes the presence of specific knowledge, skills and abilities to find the necessary information, the methods of storage, a competent use, the transformation and creation of new information, using the new information technologies. Possessing information skills and abilities requires accurate identification of the information needs of adolescents, which are at the heart of the effectiveness of information se-

curity. For this purpose, the sources of information used should be identified and evaluated by adults. The information is first analyzed, synthesized and interpreted correctly and critically. The search for the most reliable and complete sources of information is of particular importance for qualitative perception. A high level of human information culture also guarantees the probability of choosing the right information.

In this regard, the formation of information culture of the individual is at the present stage one of the priorities of the state educational policy and the most important task of the pedagogical process. This problem has become particularly relevant in connection with the transition of UNESCO from the concept of the information society to the concept of the knowledge society. It should be noted that the concept of the information society focused on the universal availability of information provided through the introduction of new information and communication technologies. Then it soon became clear that the sheer abundance, diversity of information received, as well as the speed of its delivery is not a guarantee of awareness and competence of the individual and society as a whole. On the way of transformation of information into personal knowledge, there are barriers, the most important of which is connected with insufficiently high level of information culture of the person that is with inability of the person to find, select, and analyze the received information. Taking into account the importance of this problem, UNESCO formulated the concept of a knowledge society. Knowledge is a strategic resource as a result of processing (selection, analysis, synthesis) of information, and the high level of information culture is a means of ensuring information security of the individual, as the most important condition for successful professional and personal development. Later, the fundamental statements of the concept became the basis of the National Strategy for the effective application of information and communication technologies in edu- cation and science of the Republic of Bulgaria (2014-2020). [1, 2]
Today we are increasingly aware of the need to solve the global problem to prepare children and adolescents in a timely manner for new living conditions and professional active- ties in the information environment, to teach them to act independently in this environment, to effectively use its opportunities, to be able to protect themselves from negative influences.

SURVEY, RESULTS AND CONCLUSIONS

To successfully solve the problem, an empirical study was conducted. The main purpose was to analyze the knowledge about the factors and prevent the risks associated with the use of ICT, as well as to create a safe information environment for adolescents. Based on this, to approve the methodology achieving the information culture, It is necessary to identify the factors that determine the selection of ICT that guarantee social security.

The survey was conducted among 145 adult respondents, including 78 parents and 61 teachers. The period of the study was from September to October 2019 in the cities of South-Eastern Bulgaria. Questionnaires were distributed at the place of residence, work, in the immediate environment. Respondents were familiar with a questionnaire and instructed to follow the instructions provided in it. The participation in the survey of adults of different age and sex structure, different place of residence and work, the direction of the sphere of professional interests, allowed to ensure the representativeness of the survey and reflect the views of different segments of the population on the issues raised. The main contingent of respondents were residents of regional centers of the area region - 59,32%, the residents of small towns – 26,92 %, and villages – 14,76%, respectively made up of the total number of respondents. The largest number of participants in the survey is represented by people of mature age (over 40 years) – 53,39%, people aged 25 to 40 years (32,28 %) of the respondents, and the young people under the age of 24 years (15,33 % of respondents). Most of the respondents (72,22 %) defined their occupation as "related to the problems of education". The survey was based on the hypothesis that the main factor in the development of information culture is education. Therefore, the process of forming the foundations of information culture is impossible without the guidance of the adults, whose tasks are to create such an information and educational environment that would lay the potential for enriched development of the child's personality and prepare him for life in the information society. Thus, with the questionnaire for the effective formation of information culture and ensuring the safety of children and adolescents, has been set the tasks of understanding the direction of informatization of the educational process and the formation through the informati-

zation of pedagogical activity of a single information space in the school and the family. It was taken into account that the process of creating a unified information educational environment will provide:
● the development of information culture of all participants of educational process;
● increasing the competence of teachers in the field of ICT application;
● the formation of parent`s information culture as one of the conditions for ensuring the safety of children;
● the change of character and orientation of interaction of participants of educational process;
● strengthening cooperation between parents and the educational institution to improve the educational process on child safety;
● increase the creative potential of children, the development of their readiness to learn in a school environment.

In this regard, the questionnaire contained 15 questions from six directions in the following areas:
* the degree of security and integration of ICT in the processes of education and upbringing in the educational and family environment;
* the influence of information and educational space on interests and values, orientation and development of children and adolescents;
* the organization and place of process of formation of bases of information culture and safe use of ICT by children and pupils;
* the knowledge and compliance with information security rules and regulations when working with ICT from adults and children;
* the activities and forms of development and improvement of information literacy, competence of adults and children in the safe use of ICT;
* the awareness of the risks and threats to the health of the ICT user, symptoms and measures to prevent the computer addiction, in the context of an excessively long time a work with them.

The responses showed a difference in the motivation of the adults - teachers and parents, to choose information for the use of ICT. The desires, preferences and interests of parents and adolescents coincide to some extent, but this is not enough. The formation of information culture of ICT use begins with the development of critical thinking and responsibility for their behavior in front of the computer. Only then are habits developed to adhere to the rules of the safe Internet.

The range of questions to the respondents to determine the extent of the spread and application of ICT in the processes of education and upbringing in the educational and family environment required a choice of answers from 7 proposed closed and one open options. Answers allowed establishing with 62 % of availability and wide access of children and pupils to modern communication technologies and equipment in a family and educational space, used with more than 70% of cases for computer games, communication in social networks, viewing of cartoons, movies, listening to music, etc. At the same time, the guidance of adults the computer-gaming and entertainment activities of children is insignificant. Only 13.5% of adults provide direct assistance, direct the fun, and play activities of their children using collaborative play. The remaining 86.5% of adults go about their business and do not interfere with the game

play. Up to 30% of the respondents use ICT for educational activities and additional information for the accumulation of new knowledge and self-development. From the data obtained, it is clear that the children from a very early age have virtually unlimited and free access to various modern ICT tools without prior knowledge and training in a certain culture of their safe use. This leads to a distortion of children's perception of the real meaning, place and functionality of modern technologies, limiting them only to the entertainment function, which does not bring significant benefits in the further development and education of children, as well as their professional development in the future. Further, when forming the foundations of information culture, it is necessary to take into account the high availability of ICT tools and the availability of practical and intuitive skills of using technical means in most modern children. Therefore, work with them should be based more on the information component and the culture of ICT use in general.

The analysis of the adults' responses to the influence of information and educational space on the personality of a teenager showed the following:

35% positively perceive and understand the nature and extent of ICT impact; about 30% are both positive and negative about their children's work with the computer, and the remaining 35% negatively assess the use of new information technology products in children's education. The received actual data confirm the remarks established earlier in similar surveys. The data show that it is inexpedient to use products of technical development of society, computer technologies, various devices of communication and new technologies in education of children without explanation of their place and value for society, their functional characteristics and certain technique of safe use, the psychological protection from destructive information.

The children of the digital society must master the new concepts, tools and competencies generated by ICTs and be aware of their advantages, opportunities, limitations, their causes and consequences.

The next set of questions concerned the responsibility and functions of social institutions in ensuring information literacy of adolescents. The respondents' opinion was in line with our expectations that prior training and skill development are necessary for the correct selection of information, the formation of information culture and competence for the safe use of modern ICTs. This requires timely diagnosis of harmful information for the physical and mental health of adolescents.

Naturally, the implementation of the processes of information culture formation was associated mainly with the organization and conduct of training in the educational environment by the computer science teachers, specialists, class teachers - 78%, the parents -18% joint efforts of the school and family - only for 4% of the respondents.

Another series of questions to respondents revealed the level of knowledge and continuous implementation of standards and rules of information culture and safe use of ICT by participants of the educational process. Up to 40% of them confidently and consciously comply with these standards, and the remaining 60% - satisfactorily or poorly. This position puts forward the need to plan the personal trajectory of ICT competence and the continuous improvement of skills in the field of information technology for the teachers of educational institutions and for the parents of children and adolescents. Such a statement will provide an understanding of the place, meaning and function of ICT in children's lives and will allow:
• to stimulate their cognitive activity and help them in motivated development of new knowledge and its expansion;
• the children to get basic skills and infomation activities;
• to use the capabilities of modern ICT tools in a variety of activities without compromising the mental and physical health of adolescents.

The answers to the next set of questions concerned readiness and participation in activities and forms of education, development and improvement of information literacy, competence of adults and children in the safe of ICT. The data obtained confirm positive adoption and attendance of information and educational measures – about 40% of respondents; about 30% of respondents report with regret that these activities are limited, i.e. only once a year; up to 24% – relying on them selves and are not interested in it; and the remaining 6% – are not informed, but support and would participate if they knew. Thus, the results of the survey indicate the need for:

• Organization of permanent training: problem lectures, seminars, consultations, discussions, round tables, for teachers and parents;
• Conducting lessons (class hours, games, trainings, quizzes, contests, lessons of informatics and information technology) with adolescents in order to form an information culture;
• Participation of adults and children / pupils in joint activities and forms, projects on the problem of formation of safe use of ICT.

In addition to the previous questions to clarify the knowledge of the adults about the risks and threats to the physical and mental health of children, the user of ICT in general, in conditions of excessive time spent on the computer, the symptoms and prevention of computer addiction were asked the next questions. As a result, it became clear from the answers that the majority of respondents (up to 86.5%) are aware of the essence and extent of the positive and especially negative impact of ICT tools and products of the information society on modern children/adolescents, and are familiar with both the general features of computer addiction and measures of its prevention and eventual prevention. However, the ability to adequately respond and confront possible threats in a virtual environment is quite low due to the lack of methodological competence, experience and maturity.

The remaining 13.5% of the surveyed users use ICT for family education and upbringing. As a result, a conclusion can be made that most parents are aware of the need availability for information culture. The modern technologies replace direct communication between the child and the parent. There is no adult control over the choice of sites, partners, the nature of the child's contacts with other important people for his communication. The consequence of children imitating Internet heroes is the wrong motivation of behavior choices and the inability to limit their dependence on ICT. In this case, adults are useless for the socialization and development of their children, because they do not control their interests and activities.

In general, the survey and its results confirmed the need for multifaceted work to improve the competence of teachers and parents in the field of information culture and the safe use of ICT in the educational process.

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