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**INTERNET TECHNOLOGIES IN EDUCATION AND  
COMMUNICATION CULTURE IN THE CONTEXT OF  
TELECOMMUNICATIONS**

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***Abstract***

The authors of the article consider the sphere of the Internet, generated by Internet technologies; its representation in the information and educational environment (IEE), the media-environment of society and education. In the era of global informatization of society and education, the spread of new digital media and learning environments, coupled with the new social demands of society for educational results, will require a completely new approach to understanding the values of ICT in the information and educational space. Under the influence of media culture in society formed a special type of mass consciousness – the mass media consciousness. The article describes the problems of modern media culture, awareness of which will help to preserve the humanistic ideals in the age of digital technology. The phenomenon of media culture is relatively new to the analysis of the cultural aspects of the information society. All these circumstances prompted the authors to indicate their opinion in this work. The status of media education, its essence and characteristics, has become one of the most controversial in recent years. There are grounds for both methodological and methodical nature, since the integration of education and media technologies in the educational process involves a number of internal and external factors that ensure the systematization and effective assimilation of knowledge, ensuring professional development and personal development. The structure forming media environment, media resources, personal media environment, media-culture is considered. The article explores the problems of the problem of media education, media-competency and media culture of subjects of education.

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**Keywords:** Education, information subculture, media, media-culture, security.



## 1. Introduction

The network technologies are known and used by everyone. Nowadays, a net is represented as the global Internet network, worldwide "web", WEB-technologies. Since the Internet covers the entire informational space of the planet, any active informational system, local or other network has an access to it.

The area generated by the information transmitted and stored in the nodal host servers, Internet technologies, human activities related to this information forms a huge diverse sphere, the "virtual world" with its laws, procedures, specifics of "life" in it. In fact, under the Internet we understand this electronic virtual world.

In Russia there appeared various scientific researches devoted to questions of formation and development of media education, for example works of the Russian media pedagogues L. M. Bazhenova, O. A. Baranova, E.N. Zaznobina N.B. Kirillova, M.M. Kovaleva, Yu.G. Korotenkova, A.A. Novikova, V.F. Oleshko, S.N. Penza, Yu.N. Usova, A.V. Fedorova, I.V. Chelysheva, A.V. Sharikova, et. al.

The growing role of modern media technologies in education has changed the conditions of communication of the subjects of education (J. Baudrillard, M. McLuhan, M. Castells, N.B. Kirilov, V. A. Monastyrsky, J. Potter, K. Razlogov, M.V. Fedoseev, et. al).

In the materials of UNESCO media education, as a priority area of pedagogy of the XXI century, the following definition is given: "media education (media education) should be understood as teaching theory and practical skills to master modern mass media, considered as part of a specific, Autonomous field of knowledge in pedagogical theory and practice; it should be distinguished from the use of media as an auxiliary means in the teaching of other areas of knowledge, such as, for example, mathematics, physics or geography" (Media education, 1984). It is important to note that in the era of globalization and creation of information and educational space education should be based on the study of all types of media, (Fedorov, 2015; Feilitzen, 1999; Kirillova, 2014; Klushina, 2016; Kryukova, 2013; McLuhan, 2003; Potter, 2001). With the advent of media technology it became possible to talk about the expansion of the usual channel of communication process (Kirillova, 2005).

Both media education and the study of the most technologies "media studies" (media studies) (International Encyclopedia..., 2001) are aimed at the formation of media literacy (media literacy)" (Comunicar, 2012) trainees, since media education is closely related to such concepts as "media literacy", "media competence", "medical culture", which also have different definitions. For example: media literacy" (media literacy) as "the ability to consciously and critically evaluate media texts, to maintain a critical distance in relation to the "pop-culture" and to resist manipulation", "... as the ability to acquire, interpret, analyze, and create media texts" (Worsnop, 1999), that is, to be able to work with information in any format.

## 2. Problem Statement

In the scientific works (Abdurazakov et.al, 2016; Fedorov, 2014; Abdurazakov et.al, 2017a; Abdurazakov et.al, 2017b; Comunicar, 2012) the problems of Informatization of education; design and implementation of information and educational environment; representation of the educational sphere in the currently emerging cyberspace (Abdurazakov, Korotenkov & Mukhidinov, 2016); problems of media

education, Smart education, media competence and media culture of education subjects were briefly discussed (Korotnikov, 2012; Fedorov, 2015; Comunicar, 2012; Hartai, Andóczy, Horváth, Jakab & Szijártó, 2014; Górecka, 2012; Gutiérrez & Tyner, 2012; Tulodziecki & Grafe, 2012). But the *issue of communication* of the subjects of the educational process, the *problems of media education, media competence and media culture of the subjects of education remains beyond the scope of discussions.*

### **3. Research Questions**

Research questions based on the research problem, the following questions are considered in the work as a whole:

- roles and places of the Internet, media, Smart technologies in education and media education;
- the content of the concept of "media environment" and "personal" media environment of the subject of education;
- understanding of the need for the formation of media competence and media culture of the subjects of education;
- formation of skills of the subject of education to identify the elements of information literacy and media culture;
- media culture and information ethics and the basics of communication culture of the subjects of education in terms of telecommunications.

### **4. Purpose of the Study**

The main purpose of the investigation is to study the problem of the formation of "digital and media" culture of the subject of education, designed to counteract the process of "digitization" of the individual; a deeper understanding of modern trends in the development of media education and media competence and in determining the conceptual content of the process of formation of media culture of the subjects of education.

### **5. Research Methods**

The research methods were determined by the goals, objectives and conceptual approaches implemented in the study:

- methods of theoretical analysis (comparative, systemic, logical, generalization of experience): study of psychological, pedagogical, methodological and technical literature;
- methods of comparative analysis of domestic and international experience in the implementation and use of media, Smart, Internet technologies in education;
- proximations, analysis of products of activity of subjects of education for compliance with of information and education resources (IER), electronic educational resources (EER) and media information requirements of the system-activity approach in education.

### **6. Findings**

The Internet is considered by the subject of education as an integrated resource of cognition, education and self-education, instruction and self-instruction, spiritual and cultural development of a

person. This resource as a diverse metasystem (open, self-developing) incorporates continuously expanding set of informational objects, educational, methodical and sociocultural resources, information and education resources (IER), electronic educational resources (EER), the diversity of links between them, elements of informational education management.

As a cognitive resource of knowledge, the Internet sphere is represented in the media environment, including a variety of media means, media technologies, media systems that transform information into an accessible form for perception, reproducing it in expressive forms.

A component of the Internet as an integral educational resource is the educational environment, a component of the media environment is the educational media environment that has a purposeful and specific representation.

Using the modern information technologies achievements in the learning process opens access to new sources of information for him. It provides completely different opportunities for creativity of subjects of education and increases the effectiveness of their independent educational and cognitive activities. These factors contribute to the formation of a whole new informational and educational environment (IEE), which is characterized by (Korotnikov, 2011):

highly developed informational technologies, developed means of presenting and providing information to the consumer;

specialized technologies and means of the learning process organization;

means of evaluation (monitoring, diagnosis) of educational results, centralization of teaching, methodological and laboratory equipment.

Media environment is divided into "natural" and "artificial".

The *natural media environment* is an informational aspect of the modern social and cultural environment created and developed by the whole society and individuals. It includes electronic objects of mass media, periodicals, computer informational networks, etc. The natural media environment is self-governing, while being influenced by the social and information environment, also "naturally" developing in modern society conditions.

The subject - "natural" media environment dialogue is self-governing, but *unordered*. Therefore, it refers to one of the most important factors of modern informational education and the socialization of its subjects in order to ensure both its productivity and ordering.

*Artificial media environment* is the result of its purposeful designing and formation. That is, it is specialized, intentional and therefore "unnatural".

The educational media environment is created by a modern pedagogical system with the aim of organizing optimal conditions for an intentional informational and cognitive interaction of subjects of education with this environment elements, their socialization and personal social and cultural development. Consequently, it is "*artificial*".

Thus, the educational media environment is an open, evolving social and informational system that interacts with IEE and the general social and informational environment (Korotnikov, 2012).

Educational media environment should be a *person-oriented environment* in which:

informational equipment of educational processes is fulfilled;

personal features of interaction between subjects of education and its elements are taken into account;

psychological support in interaction with the resources of social culture is provided to the process of personal development.

The **personal media environment** of the subject of education is generated by his interaction with the general media environment (society, the world), both "natural" and "artificial". Physically, it is only limited by its needs and culture as a rightful subject of the social and informational environment. Formation of the media competence of the subject of education is impossible without his personal contact with all the layers of the media environment - natural, artificial and their combinations.

The personal media environment of the subject of education is an integrated association of its two intersections: the natural media environment of society and the artificial environment of its educational institution. It is necessary for this association to become a system (metasystem) education, and its "natural" part (subsystem) to be managed by an "artificial" one.

Since the management of the student's interaction with the media environment is mediated, it is performed at the level of his personal media environment (condition assessment, control, adjustment) management by the pedagogical system representatives - pedagogue. It is rather realized at the level of management of individual educational pathways - their formation and implementation with the support of teachers and administration of the IES. This is the main field of subject interactions in the media environment of the school.

These subject correlations are expanded by a multitude of student relationships in terms of their personal media environments. That is, it is a subject-subject relationship that realizes the *relationship of personal media resources of students*. The inter-system interaction of students' media resources will in turn continue up to inter-system correlation of personal media resources of students and their teachers, personal media resources of many teachers, and in the near future up to **intersystem interaction of all personal media environments** (students, teachers, subjects of government).

The information resources of the educational environment, the media environment, the application of which is provided by the programme and the goals of education, subject education, are, as a rule, the *national property of society* and, therefore, are mediums of high culture, contribute to the increase in educational competence and personal culture, media culture of subjects of education.

However, many documented free access publications that fall into the educational environment from the information exchange system, the Internet, contain dubious information or simply disinformation. That is, they can only formally refer to informational resources. Therefore, it is necessary to ensure that the interaction with them is not only effective and useful, teaching and developing, but also safe for both sides of this interaction.

Here we are interested in subject-object interaction and its management. Its major requirements are efficiency, legitimacy and safety, *informational security*. In order to achieve these requirements, first of all, the *media competence of all subjects* of education is required, which transforms into their media culture, *personal media culture*. The one and only external management (administrational or by teachers) is insufficient for this interaction. Self-governing of subjects of education by their interaction in the media

environment of the society and the educational media environment, informational and communicational interaction of the personal media environment is required.

The subject of education should be "equipped" with means that provide for, first of all, its protection from faulty information (minimization of such an interaction), and secondly, minimization and elimination of possible negative consequences of such communication. And, it is clear that it is impossible to completely secure the subject from such communication and the corresponding negative impact, and this is not necessary.

It is necessary to have purpose and criteria for selecting information involved in the educational environment, its materiality and reliability signs, as well as the ability of subjects of education to critically assess information when browsing the Internet, the media and other sources available to them.

By *critical attitude of the subject to information* we mean:

the subject's invariant ability to evaluate and analyze objectivity and reliability, ethical correctness, correspondence to reality, social and cultural and moral values of the new information;

the ability to differentiate usefulness of the environment information for its socially conditioned personal development, productive applicability.

Critical attitude to information is a necessary condition for critical thinking aimed at the development of society, its information resources, knowledge and culture and expressing the subject's ability to analyze and synthesize information.

In case the information refers to formal information resources, it is much harder to recognize "pitfalls" (negative factors) in it. Therefore, in each specific case, in each specific case of subject teaching, there should be its own criteria for selecting information resources (in form and content).

The law *officially* (formally) relates all the documented information issued in accordance with documentation requirements to information resources, giving, at the same time, equal rights and opportunities to all authors and their other right-holders, as well as users in their field of application. Therefore, any document of the information sphere can be considered as a resource.

At the same time, in accordance with the very concept of "resource", it provides for the presence of a positive potential (resource - a means, an opportunity, a reserve), which implies its content evaluation. Not every environment object with document requisites *possesses these properties*. However, in fact, there is no antagonism between the form and content interpretations of the concept of the document.

The documented form is a necessary condition for the existence of an informational resource: only the document is subject to copyright and legal protection. Further, its advantages are estimated by the potential consumer. "Resource" without content does not constitute a reserve and an opportunity, it does not have objective opportunities to become an invariant element of the environment and is condemned to go extinct. It gets more complicated with a "resource" that carries a negative content, the "merits" of which can be assessed by a certain part of the subjects of the informational environment.

In principle, the information resource is always subjective (it is created by the subject), and can receive a different rating (also subjective). But if it is completely subjective and carries immoral information or deliberate disinformation, it is only formally called a resource, not being it in content.

As mentioned before, the law considers information resources as an integral part of the *information system*, which implies their logical correlation with it and with each other. Therefore, the information resources of a certain environment are to be considered in correlation, according to the goals and requirements of the system to which they relate, or to the goals achieved through the systems containing them. In other words, the information resources related to the system themselves form (should form) a system with certain (expressed with form and content) regular connections.

An object that does not fit into any of the existing systems can only formally (temporally or permanently) be called a resource. Consequently, no information resource can be considered out of system, out of links to other objects (resources, documents), out of their system affiliation.

Since all our activities and the environment of this activity are systemic, all *informational resources are systemic*, and, consequently, can be systematized (structurally). System affiliation of the informational resource is determined by its purpose, specialization, focus. Such a resource not only completely corresponds (in form and content) to its "rank", but it can also be easily identified (recognized) in a variety of other resources of the information and educational environment.

The system affiliation of a resource in the general metasystem of informational (scientific and cognitive) resources means the presence of well-defined attributes of its description, and therefore of its formal representation and search. This allows not only to minimize the work of the subject of education of searching for the required resources, but to narrow its interaction with the environment, making it more focused, effective and safe.

*Content features* of the determination (presentation, search, recognition) required for the subject of the IER are, first of all:

the subject-specific or other teaching, adherence to it;

the knowledge - personal knowledge of the subject, acquired in training, abstract knowledge of the system of this training;

the context formed by the training content;

the existing level of the information subculture, which will prevent from misleading the subject;

the level of motivation, cognitive interests and social and cultural needs of the subject of education as a self-developing personality.

The following statement is relevant here: knowledge and culture can be acquired, formed, developed in individual interaction with the environment only on the basis of already existing knowledge, competence, culture, while this very interaction is aimed at increasing the level of knowledge, competence and information culture. In addition, the list of meaningful features, given above, gives us the conclusion that their significance depends both on the training system, work with information, and on the subject himself, his personal qualities, state and behavior in the information and educational environment, goals and aspirations.

As a result of the mutual expression of the above signs and the corresponding mutual development in the interaction of the subject of education with the environment, the development of his personal knowledge and culture, his critical thinking and critical attitude to information, his ability to correctly and legitimately use it develop:

The *critical attitude of the subject to information* are:

the subject's invariant ability to evaluate and analyze objectivity and reliability, ethical correctness, correspondence to reality, social and cultural and moral values of the new information;

the ability to differentiate the applicability of information of the environment for personal socially conditioned development;

the ability to determine the synthetic properties of the studied (analyzed) information;

the ability to create derivative information based on the effective use of informational resources of the environment;

the ability to systematize information based on its invariant relationships and regular correlations.

Critical attitude to information is a necessary condition for *critical thinking* aimed at the development of society, its information resources, knowledge and culture and expressing the subject's ability to analyze and synthesize information.

## 7. Conclusion

Education is aimed at developing the *information culture* of the subject of education, which has intellectual and spiritual (moral, ethical) aspects. It is the level of informational subculture that provides security:

the security of the subject as a self-governing subject-informational system that has a sufficient degree of invariance and resistance to negative influences;

the security of the informational environment from undesirable consequences of subject-object interaction.

Informational subculture is formed and develops not so much based on knowledge and morals as directly in the process of informational interaction, only when the subject is completely and independently immersed into the informational environment. However, the degree of this immersion should be manageable (at the level of appropriate informational impact) and controlled, based on knowledge.

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