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Coherence as a Main Principle of the Modern Education Process Using ICT in the Humanities Disciplines

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Abstract

Constant and permanent reforming of the educational system of the high school and university education deprives the activity of all educational institutions of their coherence that is one of the defining development principles of a single person as well as entire social institutions and social systems.

Finding a solution to this more than the ever-relevant problem is impossible without analyzing elements imbued during reforms and their degree of influence on the creation of the current state of affairs. The purpose of this study is to give a structured description of apparent gaps in the functionality of humanities education, especially in teaching such subjects as literature and history. The methods used in this study are the most productive in human sciences: comparative and historic method (F.I. Buslaev is its founder in Russia), historic and functional, system, and structure and semantics methods. The conditions for creating psychological comfort in education for each of its elements assume complying the principles of the system and following the didactic principles ensuring the vital activity of the system.

The result is that the productivity of reinstating the system depends on whether professionals and society are ready to use previously created forms and methods that help the system to recover. The following study allows determining strategies in applying ICT in the educational process with heightening productivity and shortened risks for development damage of a student.

Keywords: didactic principles, the informative value of education, speech forms, systematic approach, ICT.

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Introduction

"Reform" (a notion and a process) of the education system is entering the stage of total digitalization. What is implied in this case as “reform”? In the voluminous report prepared at the Higher School of Economics, the authors identify 7 tasks that must be solved in the process of “updating” education. Why does the desire of part of the scientific community and government officials to minimize the forms of traditional education and replace them with digital technologies cause a negative reaction both from many university and school teachers? The constant and permanent reform of the educational system of secondary and higher education, as practice shows, deprives the activity of all educational institutions of a consistency, conformity and coordination, which are one of the determining principles in the formation of both a person and entire social institutions and social systems (Mkrtchyan, 2018). To prove a point (being in solidarity with supporters of the principle of rationality and sufficiency in carrying out this reform) it should be reminded what the word “system” means, since those who insist on total digitalization use this word on an ongoing basis.

Purpose and objectives of the study

The purpose of this study is to structure and describe visible gaps in the activities of the humanitarian education system, especially in the teaching of such disciplines as literature, history, a foreign language, since they are most responsible for the development of the speech personality, for the person’s self-awareness in social groups from family to humanity, “in the chain of generations: children - parents - grandfathers” (Soloviev, 2012)

Literature review

A literature review on the issue indicates, on the one hand, a broad discussion that unfolds when the public speaks about the education of the future, and artists and politicians, as well as economists of the highest rank, participate in this discussion. As for the humanities and pedagogy, and managers of different levels in education, here the discussion participants are not unanimous. The difference in opinions is determined by a number of reasons that are presented by didactic specialists (Grinshkun, 2004; Kapustin, 2007), sociologists (Kostenko, 2019), international groups of scientists engaged in the development of IT technologies (Uvarov et al, 2019; Anderson & Dron, 2011; Bol & Garner, 2011; Murphy & Manzanares, 2008; Novo-Corti et al., 2013; Postek et al, 2010) that promote the ideas of digital education and the creation of artificial intelligence. At the same time, strangely enough, speech-thinking activity, without which education is not conceivable at all, often falls on the periphery of the attention of scientists. In this regard, it is necessary to keep in mind the point of view on the state of teaching of individual disciplines (literature, for example, or a foreign language), and on the complex or set of disciplines in lectures and works of Professor Chernigovskaya (2013), based on the experience of predecessors in cognitive linguistics, and philosophy of philology.

Methodology

The methods used in the work are most productive in the humanities: comparative-historical (its founder in Russia is Buslaev (1992)). Repeatedly tested in the humanities, relevant up to this day in philology, philosophy, and in pedagogy, this method developed by Buslaev showed its productivity, as Zlobina writes in a number of her works (Zlobina, 2010). The basic principle of this method is based on the principle of systematicity, comprehensively developed by Sadovskiy in a number of fundamental works (Sadovskiy, 1974). The methodology chosen for the study allows us to describe the

existing problems not only in the synchronic and diachronic aspects, but to determine genuine priorities, referring to its variations: historical-functional and structural-semantic methods. This makes it possible not only to determine, but also to justify reasonably the strategic components in humanitarian education. The methods used in the work give grounds for the concept not to be a set of discrete points or ideas, but to represent a coherent, evidence-based work explaining the prevailing circumstances in the teaching of the humanities: national and / or native language, literature, arts, etc. The mentioned approaches indicate the necessary and paramount connection of education with life and socio-cultural practice, the comprehensive reliance on synthesis and convergence, which distinguishes the humanitarian sphere.

The problem that confronts us is multilevel and multidimensional, to solve it, it is necessary to identify the content of the keyword of this problem: "a regularly interacting or interdependent group of items forming a unified whole" ("System", no date). For comparison there is the definition in the Russian language – (gr. σύστημα – a whole, made up of parts; a connection) a multitude of elements with relations and connections between them forming certain integrity (Sadovskiy and Yudin, 1970).

The priority of systematic approach over discrete

Every system exists as long as it maintains a dynamic balance of particulars and the whole; it is the "living connections" between the elements that contribute not only to the preservation but also to the development of the system. The injection (single or continuous) into the system of any, even the most advanced elements, without first working out how they will affect its activity, the process and the result of the activity is fraught not only with errors, failures but total imbalance. The use of heterogeneous, multi-level and multi-tasking information in electronic media often introduces a malfunction in the work of the education system aimed at the specific, predetermined result of the student. This malfunction manifests itself during various forms of knowledge and skill assessment and certification. The education system, the educational process as a system include two parties that organize them: a teacher (in the broad sense, a teacher of any kind) and a student (university or college student, undergraduate, etc.) - a student in general. In this explicit and clear living connection - the dominant component appears to be targeted communication. That means numerous communicative exercises that contribute to the growth and development of not only the student's intellect, the activity approach assumes that a student of any discipline does not receive a set of knowledge, but possesses knowledge that allows him to enter the society as a creative (tvorcheskiy) person. The concepts of "tvorcheskiy" and "kreativniy" person are not the same thing. In the Russian language, there is a word "tvorcheskiy" that means capable of creating, inventing something also with cultural or artistic value, producing ideas, create his own "product", as they say now. A relatively new word "kreativniy" is a loan translation of an English word "creative" appeared in the late 90s; originally, it was used in business to determine a quick-thinking person capable to solve the most complex problems and find innovative solutions for them (without the implication of any cultural or artistic value of the result of the creation). The difference is obvious: a person who is "tvorcheskiy" is able to become a leader in various fields of spiritual and material culture, science, industry.

*"*Kreativniy*" and "*tvorcheskiy*" – a result of education*

A "kreativniy" person, with all their knowledge and intellectual viability, is aimed at solving tasks that are set by others. The terminology matters when we approach an acute debatable question, and this question consists of the following:

- is it possible to switch to teaching exclusively in the digital field;

- if possible, then what disciplines (natural, social science, humanities) are to be transferred or the transfer should be total;

- if it is impractical to resort to total transfer (that means part of the lessons in part of the disciplines is conducted "live"), then what is the measure and proportion of the presence of the ICT in the teaching of the discipline;

- what is the positive or negative impact of minimizing the use of ICT.

As you can see, upon closer examination, the problem is that when introducing digital technologies it is necessary to determine the following points:

- whether the priority of health-saving technologies has been preserved in the educational process;

- whether doctors have conducted appropriate experimental work;

- have new recommendations been developed, or do we focus on existing ones that limit the student's presence on a computer, and therefore, replacing traditional learning with digital is not possible since it is a risk factor for physical and mental health;

- have the most effective forms of digital education been identified, meaning, have the relevant research work been carried out by subject specialists, sociologists, and psychologists to identify the most effective forms of educational activity.

Human intelligence and artificial intelligence as a vector of educational development

This is one group of problems that can be solved in the foreseeable future, provided that society can realize the danger of the absolutization of digital education when the main goal of education is to create artificial intelligence and exclude from the "chain" of education a teacher, mentor, pedagogue and replace it with artificial intelligence (formalized artificial structure of knowledge transfer and assessment). Optimization in the education area aims to reduce the number of teachers by replacing their participation in the educational process with "Digital Educational Resources", "platforms", etc., which implies in the future a complete replacement of the teacher with artificial intelligence, which will be more effective than the teacher. Vernor Vinge (Vinge, 1993), an American mathematician and science fiction writer, in 1993 suggested that in the first third of 21st century an artificial intelligence that is several times superior to human will be created, calling this moment a technological singularity. This singularity is the point beyond which humanity will be controlled by a machine and will not even have time to realize this, the future will become unpredictable. The pursuit of artificial intelligence, the setting of the priority of machine technology over human technology, in general, misses the most important humanitarian component: the inclusion in the educational process of the interdependent rational and emotional components, firstly, and, secondly, any kind of moral rules. It can be assumed that in the study of IT-technologies this component is not necessary, it is minimized in the study of mathematics, physics, chemistry (Grinshkun, 2004), but the humanities - national languages, literature, history, culture have social and moral components as a basic principle.

The practice of transferring education to the digital space has shown that where a teacher leaves the process of the solution to the learning task up to the student and provides only an activity algorithm and exercises control, the material is acquired more slowly, discretely, out of the multi-aspect connections that the teacher voluntarily or involuntarily makes in the process of live speech communication, giving prompts and reminders. Compared to the live education process, the model of simulating live communication through classes in Skype, Zoom, etc., is less effective, since the "distance", the feeling of "separation" and "remoteness" of the subject and the object of learning influences the learning outcome. Moreover, many traditional forms of teaching and communication between teacher and student are excluded.

The need to take into account the education process for the formation of a complex of discipline competencies

The history of education shows that a comprehensive focus on results, which is especially emphasized in the declarations of supporters of digitalization, is vicious. In education, not only the specific result is important, but to an even greater extent the process, the logic of mastering and appropriating knowledge, skills. The obligatory accounting of the process, the use of various logical ways of studying the material not only allows you to master more effectively and independently the discipline but also develops mental and socially adaptive learning mechanisms. At the same time, we note that digital education strives to unify and simplify logical moves and chains, which simply "dulls" and makes the student dependent on one or more tools of educational activity.

It is necessary to keep in mind the fact that the lack of live social communication not only creates communication problems, which are already clearly visible, but also leads to medical disorders, such as panic attacks and other mental disorders, but forms a strong dependence on the machine, addiction comparable to other painful addictions (Chernigovskaya, 2012).

A solution to this problem is impossible without an analysis of the elements introduced during the reform period and how much they contributed to the creation of the situation in education that has developed to date. Works by Kostenko (2019), Chernigovskaya (2012, 2015, 2019), Arnold (2008), etc. indicate the need for serious analytical work to solve the current state of affairs in education. In this article, it is hardly possible to exhaust all aspects of the problem, but it is possible to point out those weak links in the system whose strengthening can contribute to its recovery. The state and performance of the transferred to digital education schoolchildren and students speak for themselves better than any kind of scientific research, especially in 2020.

Conclusion

It is necessary to understand that there should be a basic condition for the system functioning: student's joyful work is able to secure the future not only for the system but also to each of its subjects, each student. This condition can be fulfilled provided that all the components of the "homo cognoscens" phenomenon are taken into account. Currently, this isn't happening, especially in the field of understanding the special functions of consciousness and language in the development of the educational mechanism. The use of IT-technologies does not lead to the development of a mental and emotional aspect of the personality of students, prevents socialization, and leads to the replacement of sensory experience with momentary emotions. The most important purpose of education is the high degree of socialization of citizens, their responsibility for their lives, the life of the family, people, the homeland, which are not possible outside the real educational social environment, not discrete, sporadically organized, but systematic, in which the student exercises in

mastering the system of a particular discipline. The digital world cannot teach this very systematic nature; it consists of clusters, platforms, services and servers, that is, separate, discrete structures. Discrete not in the term of physical connectivity, but semantic and social seamlessness.

The development of strict requirements to the digital educational resource will make the search of the content of an acceptable level less time-consuming. A tagline like “read by the best lecturers of the world” is far from valid, firstly, because it is a subjective idea, secondly, even the very best content should be implemented in the program of a certain discipline and fulfil the requirements of the federal competences.

The conditions for the creation of psychological comfort in the education of all its elements imply the observance of all the principles of the system, as well as following the didactic principles that ensure the vital functions of the system. The teaching process should mainly be conducted in a traditional school by highly qualified teachers who are aware of the role of a systematic approach in the mastering the educational material. They have mastered the skills of speech in general and speech of science, the foundations of which they teach. A systematic approach requires learning not only the facts, as they are, but also to use these facts in various educational, speech and life circumstances and connections with the moderate use of digital technologies.

Recommendations

In the humanitarian sphere, the transfer of knowledge should be an important component of the structural complex: perception - reproduction - production in fluent speech. Consequently, the development of speech in the study of individual disciplines is undoubtedly much more productive in live communication. Mastering the discipline requires the student to reflect and introspect during the learning process. This component is minimized and sometimes erased at the present when there is optimization going on even in a traditional school, and it is even more reduced in digital education. Reflection suggests not only an independent determination of the student’s level of awareness but also editing, reproduction of the results of educational activities, building a model of self-education. That is why all decisions made at the state level to create of various educational platforms, especially popularizing reading by children, adolescents, and family should not be campaign-like - they should be accompanied by programs for analyzing the quality of educational material presented on these platforms. Coherence in education is ensured by the attention given to the development of speech in all of school and university subjects in a wide cultural space with the awareness of the role of electronic resources, for example, National Digital Library, in particular, its section “Russian Children's Book”. This coherence is achieved by determining the proportion of the student’s time spent in the electronic information space during the class hours and outside of it. Does the process of staying there justify the goal, which should be obvious? Can it be a source of psychological and even physical deviations in personality development? And finally, the managers of the education system should be aware of the two components that make up the goals of education: to preserve fully the traditional systemically organized learning process, master and use moderately the elements of a digital developing resource with a specific productive task. It is important to apply certain restrictions with an understanding of the dangers of abuse of IT technologies for physical and mental health, as well as take into account efficiency in comparison with traditional systemic education.

The productivity of bringing the system into working condition depends on how professionals and society can take advantage of the already created forms and methods that contribute to its restoration and development.

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