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ESTABLISHMENT OF THE SUBJECT IN THE DIGITAL EDUCATION: COGNITIVE PRACTICES SYNTHESIS

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Abstract

The choice of this research theme is determined by the necessity for knowledge reflection as a mechanism for the disciplinary matrix arrangement that serves as the basis of education, training, and upbringing of a new type, meeting the modern society request; as a new paradigm of the modern education being formed on the strategic audit basis of the basic pedagogical models, the methodological principles, the didactic methods, the educational ideas, being developed with the modern pedagogical science and practice, the cognitive practices are their vivid example. This article focuses on the epistemic potential of modern pedagogical science, which forms the education subject that allows teachers to use the latest technology in teaching and to actualize the education practice-oriented nature. The leading method in this problem's study was the analysis of the cognitive practices, allowing identifying the mechanisms of the modern education diversification and modernization. The authors describe the range of the traditional and non-traditional approaches to understanding the existing and emerging procedures of knowledge, which help to expand significantly the range of the teaching means in the educational process by developing the students' cognitive skills; assessing the state of the modern information and communication support. The materials presented in the article, contribute to the reflection of the developing hybrid world, the digital media, and the creating transmedia products; they provide the education subject for a new instrumentation for work, necessary for acquiring biased knowledge; they also develop the subject's creative thinking and expand the potential of using social networks.

Keywords: Education subject, cultural transmission, network product, cognitive practices.

1. Introduction

For non-conflict existence in the information society that changes radically all social institutions, it is necessary to turn to the modern education phenomenon, regarded as a social elevator (Gershunsky, 2002). The education today is the person's independence in achieving the goal; the person's activity in extremely uncertain conditions (Boguslavskij, 2016). We will reflect modern education as the synthesis of cognitive practices. Education plays the role of cultural transmission, providing the subject with strategic and operational success in life (Kornetov, 2009).

According to the Presidium meeting of the Presidential Council for Strategic Development and National Projects, the Passport of the National Project "Education", developed by the Department of Education of Russia for the period from January 2019 to December 2024, including 10 federal projects were approved. The goal of the project "Digital Education Environment" is to ensure the global competitiveness of the Russian education, to join the ranks of the 10 top countries in the world as for the quality of basic education (Tass, 2018).

2. Problem Statement

In modern education, there is a wide range of traditional and non-traditional approaches to the cognition procedures understanding. Such cognitive practices include programmed education; distance; informatization of education; development of informational and educational environment. We will also note the hermeneutic and phenomenological approaches to cognition; the practices of deconstruction and postmodernism; the linguistic theories and studies about the language. In compliance with the given problematic, the epistemological discourse is important for researchers, since the subject of study is cognition (as the moment of nature's evolution and its product) (Mikeshina, 2009). Thus the habitual binary thinking becomes impaired; any form of intellectual despotism is rejected; the simplified reduction on the disjunction principle is removed; the reflexive knowledge about the human cognitive activity is accumulated due to the computer technologies expansion, etc. (Kanke, 2009). The cognition can be informative and systemic, developing in traditional discourse but it can be non-systemic, peripheral, and sometimes outrageous in nature. Thus, we have two types of cognitive practices: on the one hand, these are epistemological and logical-methodological practices; on the other hand, this is artistic and humanitarian thinking. In the format of the modern education practice development, we will consider this phenomenon as "soft power", which provides the national security; increases the Russian education status; accumulates the human resource that is important for the national education competition; develops the society infrastructure; develops new standards of modern educational design; optimizes the life activity and stability of the ecosystem influencing the formation of the education subject.

3. Research Questions

Research questions are the following:
- Analysis of the definition of concepts introduced in the study.
- Reflection on the range of cognitive education practices.

▪ Consideration of challenges of the system of modern education.

4. Purpose of the Study

The aim of the study is to consider the experience of formation of the subject in the digital education taking into account the example of the establishment of cognitive practices in the XXI century.

5. Research Methods

We will consider the architectonics of the subject establishment experience in digital education on the example of the formation of the cognitive practice, which have been developed in the 21st century. For this, we will analyze the definitions of the concepts, introduced into the study. "Environment" is a sociocultural phenomenon that has the following characteristics: fine content: archetypes, meanings, symbols; multilayered substrate rich with diverse information material; intellectual substance inherent to its subjects (Bykasova, 2016).

The environments can be artificially shaped. In this regard, it is necessary to conduct a series of activities aimed at organizing different communities with diverse forms: methodical association of teachers, developing a model of the students project activities organization; the scientific and creative community of students; interdisciplinary, universal projects contributing to the further development of the environment. Modern students will work with another contingent of students, the so-called generation Z, so the following cognitive practices will be present in the arsenal of teachers: creation of an artificial learning environment (conditions for the new educational platforms and technologies development, effective interaction of subjects); expansion the applications' range in the practical work of social networks; gamification maximum use; implementation of artificial intelligence into the educational process; application of information submission new type – distant; extension the frames of mobile e-learning; additional virtual reality application; machine learning usage, etc.

The specially created environment is capable of forming the cultural activity subject; developing the meta-disciplinary abilities (readiness for self-development, the realization of moral choice, continuous education). The main functions of the environment are the following ones: multimedia, instrumentality, interactivity, extensity (Sharonov, 2008).

The media environment is a sphere which, through the mediation of mass communications, connects a person with the outside world, informs, entertains, promotes certain moral and aesthetic values, and has an ideological or organizational impact on people's outlook and social behavior (Kirillova, 2006). The media environment has different functions: communication, multimedia, instrumentality, interactivity. The modern media environment creates the prerequisites for the implementation of special didactic principles: information and communication principles, information and environmental principles (Bykasova, 2016). The concept "media environment" is comprehended as the media culture space and the mediatization process is interpreted as the media environment development (Sokolova, 2008). "The media content is the text's mediation with the technical capabilities of the transmitting channel, the dependence of the text's semiotic organization from the channel's format properties" (Kazak, 2010, p. 73). "The media text is a spontaneously arising and self-developing (synergistic) part of the social macro-

discourse; it is an independent and very specific kind of information and communication discourse of everyday life" (Khorolsky, 2013, p. 28). We treat the media potential as a combination of existing and acquirable:

- means (expanding the application range of social networks, the implementation of artificial intelligence in the educational process);
- resources (the extension of the mobile e-education, the use of the additional virtual reality);
- reserves (the application of the information presentation new type - distant; the use of machine learning, etc.), contributing to the education subject acquirement with innovations, ensuring its non-conflict existence in a digital society.

The media education and the media literacy of children and young people, the problem of determining the degree of reliability and objectivity of the broadcast media content is becoming most relevant today because of the large number of fake news, as well as the manipulation of consciousness, a sharp demonstration of fact-checking. The European and American media educators are developing methods for teaching schoolchildren and students with mechanisms for protecting against redundant and potentially unreliable content (Potter, 2010; Hobbs, 2011).

The research methodology is based on identifying the environment features, its development geometry, and the development vector, content. In the modern virtual space of communication, a special social sub-medium is created, contributing to:

- appearance of new virtual worlds that unite users all around the world;
- collaboration of students, teachers, parents (communication network form);
- formation of a systemic phenomenon: "the school spirit" as a certain emotional and axiological characteristic of relations.

The main attributes of the educational organization's environment are character, indicators, parts, discourse.

We have identified the main characteristics of the environment, possessing effects, properties, modification, relationships, factors (Schulz, 2006).

6. Findings

The modern education is drawn to the model that postulates three vectors of its development: whom to teach, how to teach, for whom to teach. Today, there is a change in disposition "child – adult", and a modern child is often more informed and prepared for life in a digital society. Today in the system of higher and secondary vocational education students are being trained so that they can meet the challenges of the:

- Blended learning: full-time + electronic. It is hard to imagine modern education without digitalization;
- The individual trajectory of the education subject development.
- The current situation aims the pedagogical community imperatively and a priori to create an educational ecosystem. The ecosystem is a combination of efforts for the interaction of the state, society, business, science in order to increase intensively the human capital and its reasonable, humane, economical application. For non-conflict ecosystem functioning network of

quantoriums is expanding; customization of program material are being held; automation and robotization is being introduced; cognitive flexibility is being used; emotional intelligence of the subject is developing.

An important function of modern education is a course on the further use of distance education, which is often identified with training and teaching. The training is the purposeful transfer process of social and historical experience; the organization of the knowledge and skills formation; this is what the learner gets from interacting with the educational institution as a whole, with teachers studying. The educational content choice is one of the most important issues of modern pedagogy. The degree of responsibility for the educational content selection is indicated with serious quality control. We will consider the teacher's role in shaping architectonics of the subject establishment experience in digital education. A modern teacher is the transmedia products architect whose tasks are as follows:

- to anticipate the media text influence the education subject. It is possible to do this with the preventive analysis and the objective assessment of the media text by a teacher who is able to work out the appropriate recommendations for countering the manipulations and to make the media text an assistant in identifying the society members, adapting an individual to the society, harmonizing a person. Without harmony, it is difficult for the subject to perceive the outside world in a complex way, to form oneself as a person of the 21st century.

- to build a modern transmedia product. For this, the trainees develop new soft-competences ("soft" competencies), which are expanded through the use of a computer, laptop, TV screen, other gadgets, and mass media.

- to carry out the media competencies reflection. It is known that media competencies can mutate. This process is expressed in a greater part of the subject's independence: the narrative search, the use of the libraries electronic resources, the Internet, etc., for creating a real product. The teacher accompanies the process of the education subject establishment, who is mastering not only multimedia and cross-media, but also transmedia.

- to promote the non-conflict entry of the education modern subject into the digital society of the XXI century, as a modern teacher is a "didactic engineer", cooperating with "digital" students and schoolchildren.

- to create the long-developing products of the transmedia nature. The quality and the effectiveness of the education is greatly increased in the age of information technology (for example, performing PowerPoint presentations involves using not only video clips, pictures, diagrams, but also animation, etc.).

Created modern transmedia product has a complex architecture, rich in various resources. This architecture is mobile; the borders are open; its development is multi-vector and operating; the content is integral, constantly updating. The most important place in the formation of the architecture of the transmedia product of the XXI century occupies the environment that promotes moral and aesthetic values; it has an ideological or organizational impact on the worldview and social behavior of people, protecting the sacred landscape from the (media) text manipulation.

The education modern subject develops the independence of thinking; it seeks to cultivate the taste, to enhance the culture, to adapt to the society in a non-conflict way, to resist the emerging cyber

threats and cyber-attacks. The soft-competences, acquired by the education subject, demonstrate "the reference points" contributing to updating the media education content, which is necessary for the domestic school due to the rising risks of the pedagogical stability when creating the digital education.

The education is the hardest mechanism that generates the best spiritual, scientific, methodological and didactic practices. In this context, we believe that modern education should be developed in three main areas: the spirituality formation, the development of the didactic, the artificial environment creation.

I. The society spirituality depends on the quantity and the quality of the mental material accumulating by the previous generations. The scientific and technical progress generates not only the latest technologies and materials, but it also presents certain challenges for the education system. Such a challenge was the modern society digitalization and the Internet development, that attracts the attention of adults and children to the content and narratives in the education practice. There is no doubt that there are advantages and disadvantages of this innovation: a person develops the various types of neuralgia from computer hobbies, the vision suffers, and the uncontrolled aggression arises. The pedagogical aikido will help to minimize risks and to cope with this phenomenon. Translated from Japanese, Aikido is "the path to the spiritual harmony". The harmony is the proportionality, and without awareness of all parts of the whole harmony, it is difficult for a person to perceive the outside world, to form oneself as a person of the 21st century. We define the pedagogical aikido as a set of spiritual practices aimed at the personality harmonious development: the will development, the self-control, unlocking the individual potential, the emotions regulation, the relationships restoration, gaining the strength.

II. Didactics. The peculiarity of the modern education didactics is that it retains its own subject-oriented character, it expands the didactic implicate; it stimulates the new learning technologies development. In the pedagogical context, this function should be taken into account in cases when certain events violate the usual situation for the students/teachers that significantly complicates their learning activities. The way out of this contradiction, we see the application of the methodological innovations contributing to the emotional stress removal and imparting the confidence in their own strength. In this regard, the person, who makes decisions on the basis of rapidly changing grounds, is the main one in the learning process. The linear setting of the tasks is not relevant today, but the following postulates are very important:

- a variety of approaches to solving the problems;
- learning is always a process and never a result;
- today the key skill is the ability to recognize the patterns and see the meaning between the knowledge areas;
- the learning process is the process of making decisions.

III. Environment. For the successful implementation of the education process, the state of the environment (quality characteristics, resources, geometry, etc.), in which it is carried out, is important. The environment is

- Surrounding, having configuration, a navigation system, own information field, development trajectory, the potential of integration interaction;

- A semantic continuum that connects a person with the outside world, which informs, promotes certain moral and aesthetic values, has an ideological or organizational impact on people's outlook and social behavior;

- Structure with the properties of connectivity, integrity, controllability, depending on the saturation of its various resources (Kuznetsov, Vovchenko, Samoilov, & Bykasova, 2018). The pedagogical science allows creating a favorable environment for the education subject existence in the society, developing new practices that allow the learner to analyze the situation and to conduct the surrounding team audit.

The modern educational space is a combination of various environments which traditionally existed in one form or another in the practice of Russian education and constituted its genetic resources. The concept proposed definition "environment" allows us to use the functions of this concept: methodological, explanatory, transformative. We will consider them.

- The concept methodological function consists in the possibility of organizing the project activities of the educational subjects. In such projects, not only information technologies are taken into account, but also the psychology of relationships which are formed between subjects and objects in the course of joint activities: connections, sympathies, hobbies.

- The concept of descriptive function allows characterizing the environment as the pedagogical phenomenon that forms the joint activities subjects' education in the field of social relations. The joint activity is a system of interactions between the education subjects, which is not static but is constantly expanding and improving. The interaction of all project members is aimed at creating a socially significant product, which increases the participants' motivation; it leads to the educational result achievement.

- The "environment" concept explanatory function is that the ways of the project participants' subjectivity establishment are clearly revealed through their gradual integration into joint activities.

- The environment transforming function consists of the joint activities organization aimed at the horizontal relations formed between the joint activities participants.

The variety of artificially created types of environments forms the personality various qualities. For example, the scientific environment disposes to conducting the laboratory or field research (the scientific thinking development); the patriotic environment fosters love for the motherland, pride for the country in which a person lives, loyalty to duty (the devotion development to the motherland); the sports environment unites all participants of the educational process through competitions in various types of sports (the healthy lifestyle formation); the anthropogenic environment forms a sense of responsibility for water, land, air, soil and living organisms (the students' environmental culture of), etc.

The artificially created environment development takes into account the following principles:

- Stereotyping and social inclusion (the subject accepts the stereotypes of behavior in the society and enters the communication circle without a conflict);

- The subject activity (the development of existing rules, the "spirit" of recreation, the desire to occupy its own niche in the micro-society, etc.);

- Continuity and consistency (the relationship of the sensual and logical, rational and irrational, conscious and unconscious in the subject's behavior);
- Integrity (the best didactic samples are concentrated in the artificially created environment, the new methods are practiced, the innovations are being tested);
- Communicativeness (a specially created environment is a comfort and psychological relaxation, disposing the subject to a sacred conversation, which removes certain difficulties during socialization) (Blair & Serafini, 2014);
- Meta-subject ability (a set of knowledge received in the artificial environment in the horizontal and vertical structures).

Creating a special (educational, informational, scientific, etc.) environment makes sense because of the communication organization at a qualitatively different level: it allows combining discursive and intuitive elements of students' creative activity in the communication process; theory and practice of the education subject. At the same time, a new form of dialogue arises between the subject and the object of the education – cultural and ideological, that means the cognitive practices synthesis, the symbolic relationship opening – the state of creativity.

7. Conclusion

The education today appears in such a cultural field when the subject is the integrity of thinking and activity that corresponds to the existential-anthropological concept of philosophy. The modern education develops and diversifies all the processes connected with the transfer of the values and meanings, accumulated by generations, to the student. The modern education (including digital) contributes to the construction of its own trajectory of educational and cognitive, creative research activities and the development subject. The factors in the modern education development are the information exponential growth, existing, but not fully applied, the potential of the Internet; network like the community of users, personalization of education, park of fitness machines and simulators; project activity, the platform for the experiment.

The modern education aims at a synthesis of cognitive practices are inseparably linked with the following ideas: creation of socially constructed education; development of constant and adapting education; implementation of personalized education throughout the person's life, necessary for one's successful, productive and responsible activities; formation of flexible human resources as one of the leading educational resources; development of mechanisms for the individual educational strategies realization for all categories of citizens; coping with the gap between the technological strength and the level of the social subject spirituality; educational infrastructure development; ensuring an effective system of socialization and self-realization of the education subject. The knowledge principles as a synthesis of cognitive practices are the difference between empirical and existential subject, rationality and continuity, the rootedness of knowledge in existence.

The modern education subject is a haptic, emotionally communicative, visually oriented person. The communication on public or semi-public platforms expands the possibilities of media practices aimed in the modern education at subject's familiarization with the essence, meaning, process of communication, the nature, types, forms of media; mastering the main technology in teaching the

education modern subject - visualization; obtaining an idea of the content production forms (online broadcast, iconography, animation, comics, phylactery, Internet memes, strips, etc.), its capabilities; forming the cultural code of the subject, reflecting the exponential growth of the information volume coming through the Internet, making network and information environment of a new type; mastering the methods of working with media, allowing to obtain the subject high net effect and to maximize the personal balance of an individual.

The skills and competencies of the education subject of the 21st century are mostly formed in the network since the Internet is an experimental platform for young people. Modern "digitally-born" children master the network from the age of 5, therefore the teacher's role as an educator, tutor, and architect of the transmedia products is growing. By transmitting a sequence of impulses, originating from the teacher, the pedagogical modulations occur as part of the educational process of children and young people, the perception features and media product analysis is actualized by the subject, the thinking strategy, cultural norms are formed, the interpersonal relations are designed as a part of adaptation to living conditions in a changing society. The pedagogical modulations in the modern media space are the complex formation performing the communicative function; their goal is the "point" formative impact on the addressee. In the media the pedagogical modulations help:

- in the education of children and adolescents in the system of formal (non-formal) education with the aim of competent perception of screen culture, cultural texts combining elements of visual, verbal, semantic information. The information, received by the education subject, must be decoded, assessed, assimilated/rejected, i.e. a series of mental operations: reflection-introjection-interiorization-internalization should be conducted. The hermeneutic approach application by the modern education subject contributes to the encrypted meanings comprehension, the trainee advancement along the educational trajectory;
- in the psychological balance formation (psychological adaptation and protection), emotional and imaginative state and active intellectual activity of the subject;
- in the implementation of youth projects in the field of science and technology (blogs, social networks, flash mobs, etc.);
- in the development of the person's creative potential due to the actualization of its heuristic dynamics.

The architectonics of the subject establishment experience in digital education as cognitive practices synthesis reveals to us a perfectly new standard of thinking built in the paradigm "picture-word-text". This subject matrix requires from a person not only the perception and processing of the content offered but also the selection and reflection of the material being translated; the evaluation and discussion of the techniques used in the text; the subject's awareness of the scale and relevance of used computer techniques, network resources.

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