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Constructivist approach in pedagogical science

Abstract: The article examines the problems of constructivist understanding of education, the innovations, opportunities and limitations that the constructivist model of the pedagogical process offers. The aim of the work was to analyze the constructivist model of education and those innovations and prospects for understanding the modern educational process that the constructivist approach brings. Constructivism changes the view of teachers and other scientists and practitioners in their view of what is happening in the relations of people in education. Due to its controversial nature, the development of the ideas of constructivism in the context of the development of educational ideologies and technologies leads to the reconceptualization of the traditional model of education, and the constructionist model of education itself can and should become the object of systematic methodological, theoretical, empirical and applied research. Any of the educational approaches available now can be disclosed as an example of a constructivist model of education, the leading features of which are the dialogic nature of education, the focus on understanding the inner and outer world in dialogue with significant other people, the consideration of such a dialogue as a process of building a person's own life world and himself, as a creative "rediscovery" of the basic truths of human existence, as the adoption of socially and personally significant decisions in a situation of educational, professional, life choice.

Keywords: education, pedagogical process, constructivist approach, intersubjectivity, reflexivity, consensus.

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Introduction

Postmodernity, the era of the late XX and early XXI centuries, leaving, leaves a lot of interesting and productive developments, which undoubtedly includes constructivism. Challenging the existence of reality as such, constructivism proposed several options for solving the problem of a person's comprehension of himself and the world, united by a common idea of production of internal and external reality in social dialogue, in the interaction of people and groups (actors and co-actors) interested in solving problems, united in situational, substantive, active collaborations (associations, groups) to develop an optimal and satisfying consensus solution to the problem for all participants as stakeholders. Constructivism has

changed the way people look at relationships in a number of areas, including management and education. Today, abroad, and, to a lesser extent, in Russia, the constructivist approach is among the most influential approaches, within the framework of which explanatory schemes are proposed for analyzing the realities of educational practice of teaching [1; 2; 3; 4].

The purpose of the research problem

The purpose of our work was to analyze innovations and the prospects for understanding the modern educational process in the context of a constructivist approach.

Research methodology and technique

The paper uses a systematic approach to the analysis of the problems of didactic communication in the context of the constructivist model, and comprehends the prospects for understanding the modern educational process in the context of the constructivist approach.

Research results

Constructivism as an ideology, methodology and technology has brought many interesting and important points to the understanding of educational interaction, didactic communication and directions of its development [5; 6; 7; 8]. Unfortunately, in the practice of education, constructivism is partly implemented abroad, but not in Russia. This is somewhat paradoxical, since foreign researchers, inspirers and developers of constructivist ideas in education, the cultural-historical theory of L.S. Vygotsky, along with the works of J. Dewey, J. Piaget, is interpreted as an example of social constructivism [9; 10; 11; 12]. Didactic communication appears in the constructivist model not as a concomitant phenomenon of interaction between the teacher and the student regarding the educational content, but as a certain self-valuable reality, constructed by the student himself with the active participation of the teacher. This very important "innovation" favorable for the development of the education system contains a response to the claims of modern "e-learning", education using ICT or "digital education", postulating that in the world of educational "E-Text" the role of the teacher will be reduced to a guide or dispatcher, directing the search for information necessary for learning at a particular stage of "continuous education". In constructivism, a teacher is not only a necessary "detail", but is a center of "power" (and even "power") that structures the educational interaction of subjects. The assimilated information is considered as a source material for joint creative (re- or de-) construction, therefore it cannot be considered in isolation from its carriers, as an extra-personal and extra-temporal standard. As a result, the course of work on the detection and awareness, processing and comprehension, acceptance and rejection, taught in dialogue with the teacher / teacher and other schoolchildren / students of one or another didactic content, is built in the logic of a detailed search, open discourse, encouraging critical judgments ("critical thinking") Trainees and its structuring, reflexive activity of schoolchildren and students in relation to the surrounding reality. To what extent the educational content lends itself precisely to this style of presentation and interpretation, the question remains controversial, open and until now solved only partly at the level of individual programs and methodological developments. A general convincing theory of the message of educational content by the supporters of the constructivist approach, in our opinion, has not yet been created.

It is important that "According to the methodological principle of constructivism in philosophy, psychology, sociology (J. Kelly, J. Piaget, A. Schutz, K. Gergen, P. Berger, T. Lukman, V. S. Stepin, U. Maturana, F. Varela, R. Vatslavik, I. Glaserfeld), knowledge is not contained directly in the object (in "objective reality") and is not extracted from it in the course of "movement from relative to absolute truth", but is built (constructed) by the knowing subject in the form of various kinds of models, which can be both alternative and mutually "[13, p. 129]. The plurality of truth gives rise to its pluralization and patchwork, its "correspondence" as relativity to specific people and groups of people, situations and relationships.

This is noted in many works, including the relativism of antiquity, the Middle Ages, modern times, etc. (Heraclitus, F. Aquinas, O. Spengler, M. Blok, L. Fevr, A. Ya. Gurevich and others), but especially in postmodernism (M.P. Foucault, J. Derrida, J. Lacan, J. Baudrillard, K. J. Gergen, R. Barth, J.-F. Lyotard, F. Guattari, A. Vezhbitskaya, F. Capra, K. Knorr-Cetina, P. Vaclavik, E. von Glazersfeld, H. von Foerster, U. Maturana, F. Varela and G. Roth), etc., - where the concept of deconstruction of culture develops, the result of which is multiplicity, uncertainty, fluidity / emergence of reality [14; 15; 16]. There are many ideas

and theories of a constructivist sense in psychology, including educational psychology (J. Kelly, J. Piaget, J. Grinder, R. Bandler, etc.). P. Watzlavik substantiated the very concept of constructivism as a "science of reality", which recognizes reality as a construction of the one who observes it, that is, the construction of the observer himself [17, p. 7]. A subject means any participant in didactic interaction: teacher, student, psychologist, manager, parent, etc. There is a close connection between the pedagogy of constructivism and philosophical constructivist concepts (P. Watzlavik, U. Maturana, F. Varela). Constructivism in pedagogy is an important part of research and applied development: "From the point of view of a constructionist, socio-psychological research is capable of participating in the creation of new forms of cultural life. By developing new theoretical languages, research practices, forms of expression and methods of intervention, psychology creates favorable conditions for cultural transformation" [18, p. 43].

So, in the studies of J. Piaget, it is illustrated that in a person's understanding of himself and the world, his "logic", the specificity of the cognitive and other activities of the subject is reflected, that different cultures can have specific, different from each other logics and "psycho-logic", which is sharply different from the realistic representation given, for example, in the works of P. Ya. Halperin, who believed that logic is hidden in the very objects of knowledge and their relationships. Objectivity is an important part of dialogue in cognition and other spheres insofar as the world "dictates" how it can and should be understood. According to R. Tagore, the truth should be considered as a dialogue that strives not for an independent reality, but for consistency between human understanding as a whole and "individual" understanding, reflecting a particular point of view [19, p. 43-44].

However, many scientists and educators do not share optimism about constructivist research in pedagogy and psychology. For example, M. Matthews, T. Duffy, D. Johansen, J. Canselaar, believe that the popularity of constructivist pedagogy is associated with the methodological crisis of pedagogy in recent decades, including the lack of discourses that can explain the changeable, unstable nature of educational phenomena [20, c. 303], as well as the needs of developing new educational techniques, not theories [21, p. 2]. K. Gerzhen, S. Rowlands, R. Carson think differently: for them constructivism is one of the leading models and theoretical concepts of education of our time [22]: constructivism changes the understanding of the goals and values of education as an active interaction between a teacher and a student, the understanding of didactic interaction as intersubjective dialogue between the student and the teacher. At the same time, "the emphasis on the procedural nature of teaching means highlighting the importance of a method, a path in search of an answer, and not finding an "objectively correct solution", therefore, the "mistakes" of schoolchildren and students are considered in the context of how they "allow a glimpse into the organization of their empirical experience" [23, p. 15]. Education as a socio-cultural process makes it possible to check the constructions of reality of each student and teacher for "viability", to correct them if necessary: education is an intersubjective space and time for constructing meaning, including the meaning of learning and upbringing in themselves, in education, interindividual constructions of reality arise and develop collective "models of interpretation": a person understands that his reality is always "socially constructed" [24, p. 5]. The teacher helps students understand themselves and the world, but does not insist that the student must accept other people's understandings or build his own world. In the works of D. Dewey, for example, there is the term "active learning", which implies the understanding of the world as active co-creation [25, p. 84; 26].

Domestic researchers, psychologists and educators, sociologists and cybernetics, philosophers and culturologists are beginning to slowly develop constructivist models and offer their specific technologies in education (S.A. Tsokolov, E.G. Vinogradov, O.E. Baksanskiy and E.N. Coachman). In our opinion, special attention should be paid to studies of educational innovations (N.N. Pluzhnikova, P.V. Menshikov, V.M. Petrovichev and V.I. Ivanova, N. Babich, etc.). V.M. Petrovichev and V.I. Ivanova note that the culture of pedagogical research, as well as the culture of education in general, presuppose the methodological literacy of teachers, including an understanding of the constructivist aspects of knowledge and skills to be "mastered" [27]. N. Babich believes that constructivism helps to understand "social interaction as a starting point on the path to understanding the relationship between learning and teaching in different in the "school" - institutional contexts of the development of children, students, students, teachers from the point of view of their personal, social and professional formation and development" [23, p. 7-8]. It rests on the understanding of constructivism as "a theory about the limits of human knowledge, the belief that all knowledge is necessarily the product of our own cognitive actions" [20, p. 304], understanding oneself and the world is the construction of reality, and not a reflection of some internal or external reality existing

outside the one who understands, which is revealed at the moment of understanding [28; 29; 30], it "is an active process of constructing the subject's environment ... knowledge has an adaptive meaning and is focused on adaptation (adjustment) and survival ... knowledge serves to organize the subject's inner world and does not serve the tasks of describing objective ontological reality ... scientific knowledge ultimately should serve practical purposes "[31, p. 12-13], "knowledge is not what is in people's heads, but what people do together "[32, p. 270].

In general, researchers from different countries rely on the understanding that the "constructivist orientation" in its aspect sets "the main goal of education ... is the development of more and more complex and complex forms of thinking and problem solving within the essence or work space" and time [33, p. 32]. Learning is a process of enrichment, organization, reorganization and improvement of knowledge and skills, characteristics of a person and his abilities, "the development of the ability to use scientific concepts and ways of thinking, when necessary" [34, p. 312]. Learning is described as a process of transformation through participation in sociocultural activities [35; 36]. The teacher is engaged in "creating a platform" (the metaphor was proposed in the works of D. Wood, J. Bruner, and G. Ross [37] - applying methods of guiding students' understanding in the "zone of proximal development" [37; 38; 39; 40; 41], including intensive interaction in "Active group", personalized additional guidance from a teacher or a lecturer, non-delayed and meaningful feedback, confirmation as approval or disapproval, projection, and problematization, clarification and suggestions, reflection and confrontation, etc. [41, p 351]. Project-Based Learning, Critical and creative thinking skills are vital in pedagogical sciences as well. These skills are advised to be integrated into all subjects in school in Malaysia [42; 43]. According to K. Stone [40], a schoolchild or student as an active participant - an actor, a subject - of didactic interaction as an interpersonal interaction builds and develops mutual understanding, they achieve and maintain intersubjectivity through exchanges in which the student learns in interaction with more competent and those who have achieved more in one area or another than he, the participants [37, p., 272]. The platform and its creation as a process of support for learning computer etent mentor ("leadership of others", as well as guiding, teaching strategies, initiated by the teacher) are "an ongoing interpersonal process in which communicative exchanges of participants serve to create a constantly evolving mutual point of view on how to comprehend a particular situation" [40, p .180]. J. Van de Paul, M. Wolman and J. Beishuisen, R. Tharp and R. Gallimore, D. Wood, J. Bruner and G. Ross identify a number of support methods: modeling, situational management, feedback, training, polling and cognitive structuring [37].

Conclusions

In our opinion, the essence of constructivism, including in the field of teaching and pedagogical reality, comprehensively reflects the basic postulates, such as:

1) The process of teaching and upbringing in modern schools and universities is based on information about the reality surrounding students, obtained not only from teachers and parents as mentors, but also from the student's or student's own experience, If a new idea does not fit into the existing one of the subject of education value, semantic, behavioral, etc. the framework, the learner with the support of the mentor and the "educational platform" created by him as a system of strategies for the development of the individual and his understanding of himself and the world, should try to reconstruct it. To do this, he can use the resources of training and education on the part of a professional teacher / mentor / tutor, resources of self-study and self-education, as well as resources of group training and education (network, organizational, etc.) as mutual training and mutual education.

2) In understanding the phenomena of the surrounding reality, it is necessary to distinguish between personal and social aspects, meanings and so on. The social aspect is associated with the generalization of the experience of one's own and others' interaction with nature and with the world of physical objects and with the community, its separate groups and subgroups, including ethnic, clan, family, marital and friendly relations, considered in the context of their social significance, social values. The personal aspect encompasses the experience of interactions of the subject himself and his relatives with other individuals and groups, correlated with the formation of the individual as a person, partner and professional, in the context of personal meanings and the significance of these processes. Naturally, the social and personal contexts closely intersect, the harmony between them ensures the well-being of society and the individual at all levels of their existence and development, and differences and contradictions act as the driving forces of development.

3) Knowledge and skills transmitted to the learner or learner are constructed, deconstructed and reconstructed in the course of researching a problem situation in order to achieve a "consensus" within groups of (self-, inter-) teaching and (self-, inter-) learners (as heterogeneous actors - participants in the "activity group / situational association / educational collaboration", etc.). Knowledge and skill correlates with the norms and values of this group, its idea of the meaning of human existence, its goals. The knowledge and skills of a person, like a person himself / herself, are tele-oriented: living in the present, remembering the past, a person is able and seeks to change him / her and the world, striving for the future that he constructs consciously or unconsciously, voluntarily or involuntarily, independently or jointly.

4) The question of the "truth" of the knowledge, skills, traits and abilities transmitted and cultivated in the learner, according to the pluralistic model of reality (as constructed and reconstructed), cannot be resolved unambiguously. The teacher can and should talk about different understandings of the surrounding person and the reality inside a person, about the boundaries, possibilities and limitations of the application of this knowledge and skills, about the pros and cons of certain traits and competencies.

Constructivism changes the view of teachers and other scientists and practitioners in their view of what is happening in the relations of people in education. Due to its controversial nature, the development of the ideas of constructivism in the context of the development of educational ideologies and technologies leads to the reconceptualization of the traditional model of education, and the constructionist model of education itself can and should become the object of systematic methodological, theoretical, empirical and applied research. Any of the educational approaches available now can be disclosed as an example of a constructivist model of education, the leading features of which are the dialogic nature of education, the focus on understanding the inner and outer world in dialogue with significant other people, the consideration of such a dialogue as a process of building a person's own life world and himself, as a creative "rediscovery" of the basic truths of human existence, as the adoption of socially and personally significant decisions in a situation of educational, professional, and life choice.

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