

# Digital education as a method of reducing pedagogical goals and objectives

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**Abstract.** The article focuses on a comparative characteristic of pre-digital and digital education. The study methodology deploys the differentiation of philosophical and scientific paradigms. Pre-digital education is associated with the classical paradigm. Accordingly, the parameters of pre-digital education include the notions of finite and true knowledge, a singular type of learning algorithms, a balanced learning process, and the deterministic influence of educational programs. The indicators of digital education are identified within the framework of the non-classical and post-non-classical paradigms. The non-classical form of digital education is characterized by the presence of alternative educational programs, the polysemantic object of study, infinite knowledge, and pragmatic orientation. This form of education accentuates the subjective and personal context, the opportunities for plural explanations, and the technologies for studying the singular, the local, and the fragmental. Digital education contributes to modeling infinite discourses and intersubjective practices. All educational innovations within digital education appear as a way of ontological and gnoseological construction. Digital education enhances the role of interdisciplinary education. The competencies of “cross-cutting” and extensive understanding of a complex subject appear. Students should be focused on the results of teaching in various disciplines. A consequence of the expanding learning opportunities is the necessary reduction of pedagogical goals and objectives.

**Keywords:** pre-digital education, digital education, digital project.

## 1 Introduction

The Russian theory of education appears to be experiencing a turning epistemological situation associated with the problem of conjugating the forms of understanding the educational process. For a long time, the Soviet and Russian pedagogics had been dominated by the classical description of educational objectives. What is put at the forefront is the comprehension of fundamental educational standards the understanding of which predetermines the effectiveness of cognitive and practical efforts. It is assumed that all variations in the structural and elemental scheme of interaction between a teacher and a student are based on the following foundations.

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First, the nature of the educational process is pronouncedly normative. As a result, a student obtains a complete, essentially shaped competency product the assimilation of which involved their personal, subjective resources. These resources are deliberately formed by a teacher and, consequently, the subjective-objective and subjective-subjective components of education are structured by common goals and objectives. Second, education manifests as a mechanism for obtaining true knowledge the mastery of which will be in demand at any stage of socio-political and economic development. From the pragmatic standpoint, such a form of the functioning of education is by no means archaic.

## **2 Methods**

What are the epistemological results of the discussion of the pre-digital type of education? In answering this question, we propose a hypothesis that pre-digital and digital education involve different ways of solving pedagogical problems. The demonstration of these differences requires deploying the philosophical and scientific paradigm methodology. This allows identifying the criteria for the selection of objectivity to be studied and the limits of the use of semantic means. A specific feature of this methodology lies in it being sufficient to substantiate the functioning of any element of the educational process that is immanent exclusively within the given paradigm. The advantages and disadvantages of educational technologies are also explained exclusively within the framework of the respective paradigms.

## **3 Results and discussion**

The limiting lines countering the costs of absolute relativism, nominalism, and eclecticism are important in the introduction of educational innovations. Such pedagogical distortions are virtually not characteristic of pre-digital education. However, they cause significant difficulties in achieving pedagogical goals in the modern era. Relativist ideas in pedagogics and the rejection of educational standards largely eliminate the objective-objective aspect of education. The procedure of modeling takes on the role of the primary reality studied by a student. In this case, the subjective-objective disposition of education is equated to the intentions in the consciousness of teachers and students. Nominalistic views are fraught with other educational errors. Attempts to get rid of the concept of the common lead to antiessentialist sentiments and, consequently, unjustified fragmentation of disciplinary learning. As a result, a student starts facing difficulties in understanding the holistic nature of the studied subject. Social and humanitarian sciences are deprived of the system-forming storylines that hold individual facts and images together. Various eclectic views are also common in modern methodological algorithms. Their emergence is partially explained by attempts at the universalization of the description of supercomplex and indefinite states.

Ideas about the multidimensionality of a student's inner world and alternative educational technologies appeared in Russian pedagogics in the 1990s [1]. The figure of the teacher-guru, the key carrier of knowledge, was moved into the background and interpreted as a transpersonal function [2]. Non-classical education typically deals with polysemantic types of objectivity. One of them appears in the form of a plural reality ruling out finite and unambiguous conclusions about it. For example, the problem of plural and alternative understandings of the history of Russia in these years is not qualified as an educational difficulty at the level of educational institutions. The conceptual picture of the world ceases to be associated with the goal of achieving single-type true knowledge. In use are numerous discursive practices, essentially unpredictable intersubjective communication, pragmatic-

truth viewpoints. A student enters the world of situative goals, discontinuous historical and social life, and local values and gets acquainted with non-verbal decision-making protocols.

A student is becoming a rightful participant in the educational process, its creative element [3]. The subjective-objective educational structure functions in the form of subjective-subjective interaction while the normative and objective interpretation of learning gives way to activist views on the thought-activity nature of education [4, 5]. What are then the errors of the non-classical type of education? The conceptual facade of polyvariant educational reality leaves open the question about possible combinations of alternative educational programs and criteria for their accuracy. Emphasis on the personal characteristics of education may lead to its holistic parameters associated with social ontology and universally significant values being overlooked.

In Russian pedagogics, the post-non-classical understanding of education is yet at the stage of conceptual and institutional formation. Supporters of a synergistic approach to education were the first to declare themselves [6, 7]. Due to their research efforts, the categorical and conceptual teaching aids are being substantially updated [8–11]. The synergistic version of education successfully presents the systemic methods for solving complex pedagogical problems.

Digital education expands the boundaries of post-non-classical understanding of pedagogical phenomena [4, 12, 13]. The currently emerging integration of digital and humanitarian education can result in an educational practice new in its systemic aspects. Digital education is indifferent to the difference in ontological conditions. To an equal degree, digital reality is a form of expression of reversible and irreversible patterns, changing conditions, and complex order. All these forms are included in subject learning. Digital education possesses a unique resource for universalizing heterogeneous subject matters and combining diverse pedagogical tasks.

Ontologically, digital humanities serve as a certain type of project reality. Digital design provides a unique possibility for interdisciplinary implementation of the educational process. We compare these potential possibilities with the concept of three worlds proposed by K. Popper [14]. Essentially, the third world involves systemic vision. Its semantic content contributes to the formation of multidisciplinary knowledge and the combination of conceptions and educational programs. The flexibility of the truth criteria is compensated by the renewal of concepts and the growth of scientific knowledge.

Digital education is fundamentally changing the understanding of the role of the third world. Strictly speaking, the virtual border between the worlds is being erased and the need for such a demarcation is no longer present. An ideal, virtual-material, and objectified world is simultaneously created in digital design. The distinction between subject-object and subject-subject learning mechanisms becomes conditional [3].

All of them are found in the united subject and methodological field of project learning. A project as a digital educational product comprises ontological augmentation. At any point in time, multidimensional stable content and situations of varying degrees of disequilibrium are being localized and modeled in it. The project being constructed serves as a form of problematization, a type of critical practice, a way of systemic operations, an exploratory search algorithm, etc [15].

## **4 Conclusion**

Digital education expands the epistemological context of discourses; more precisely, they are translated into the category of ontological construction. Learning subjects and objects can change places, functions, and structural locations. In a digital project, the studied object can be presented in the form of closed classical education, the procedural forms of non-

classical modeling of a complex reality, and, which is especially important, the virtual visualization of multi-vector changes in super-complex systems.

The creation of a project product calls for a sufficiently high level of interdisciplinary university interaction, particularly between informatics and philosophy, informatics and physics, informatics and humanitarian knowledge, etc. The specifics of digital project-making also lie in the emergence of a new type of ontology of the studied objectivity: micro, macro, and mega states, as well as intersystem and intermedia interactions. For instance, when studying economic theory, a student has to focus on the results of interdisciplinary knowledge (for example, the history of economic studies, mathematics, statistics, philosophy of economics, philosophy of science). A student can acquire an additional competence, the ability to scan through the sections of educational programs.

Thus, in digital education, the polydisciplinary picture of the educational process is united into a single whole acquiring possible subject and epistemological unity. The necessary dynamism of educational programs is preserved. The possibilities of digitalization of education are comparable to the results of the reduction of complex and systemic goals and objectives set in this area of intellectual and practical activity.

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