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## PHILOSOPHICAL ASPECT OF FORMING THE FOUNDATIONS OF NEW QUALITY OF EDUCATION BY TRANSFORMING THE INSTITUTIONAL ENVIRONMENT

### Abstract

The research highlights the foundations of a new quality of education formed by transforming the institutional environment. The study's methodology is a complex of approaches, revealing in interrelation the philosophical aspect of the formation of the foundations of the new quality of education - including systemic and personal-activity approaches; logical and historical approaches; qualitative and quantitative approaches; phenomenological and ontological approaches. The foundations of a new quality of education formed by transforming the institutional environment based on the philosophical aspect are proposed to be divided into two groups: objective and subjective foundations. Objective foundations have an impact on the education quality while not being conditioned by the institutional environment. Subjective foundations, on the contrary, are in a direct causal relationship with it. We consider it necessary to single out Informatization and Integration of Society among objective foundations. As subjective foundations, we single out Quality Assurance and the Dynamics of Interests of all participants in the educational, research, entrepreneurial and innovative processes. Subjective foundations are proposed to be considered in the European term Quality Culture structure.

*Keywords:* philosophical aspect, quality of education, foundations of a new quality of education, new quality of education stakeholders, transforming the institutional environment, informatization of society, integration of society, quality assurance, quality culture in education.

### Introduction

The concept of quality of education is revealed in the works by scientists in education, philosophy, sociology, political science, cultural science and economics. In each specific case, the definition of quality of education receives a specific context for a particular science. For example, in the writings of economists, there are attempts to establish a causal relationship between investment in the educational process and the quality of education. On the one hand, the specific methods of such research leave no doubt about the validity of the thesis "more investment in education - higher quality of education; less in-

vestment - lower quality" (Andreev & Gretchenko, 1998). On the other hand, such an approach cannot consider the delayed effects of education and the budget costs associated with compensating for the consequences caused to society.

Clearly, the relationship between investment in education and the quality of education is non-linear and should not be considered a correlation. Moreover, any such attempt goes against the philosophical aspect.

We have identified the most common characteristics in the review of interpretations, abstracting from the science to the definition it pertains to.

Understanding education as a process, in

some cases, is enough to consider its quality in the appropriate context. This approach is provided for by international standards ISO 9000:2015 (ISO 9000:2015 Quality management systems. Fundamentals and vocabulary, 2015), ISO 9000:2015 (ISO 9000:2015 Quality management systems – Requirements, 2015), IWA 2:2002 (IWA 2. Quality management systems - Guidelines for the application of ISO 9001:2000 in education, 2007), ISO 29993:2017 (ISO 29993:2017 Learning services outside formal education. Service requirements, 2017).

However, education is also a result. Furthermore, in ISO 9000:2015 standard, for example, quality (3.6.2) is formulated as the degree to which the set of inherent characteristics (3.10.1) of an object (3.6.1) meets the requirements (3.6.4) (ISO 9000:2015).

Considering education as a process and result, its quality is rightly studied from the standpoint of standards and recommendations for quality assurance in the European Higher Education (ESG 2015), developed by the European Association for Quality Assurance in Higher Education (ENQA), together with the European Union of Students (ESU), the European Association of Institutions of Higher Education (EURASHE) and European University Association (EUA).

It should be noted that the quality of education is “a cumulative indicator, with the criteria to be described in terms of the process (its input and resources) and its output reflecting the degree of satisfaction of the interests of the participants concerning the field of education” (Sedov, 2017, p. 54). For example, in work by Harvey and Green (1993), the term quality is revealed as a transformation (process) and as a goal (result).

The philosophical aspect should not allow the definition of a new quality of education through the entrenched idea of professional competencies as a non-alternative value for society.

The new quality of education is not only a cumulative but also a dynamic indicator, with the components and criteria changing as the social

order for education is updated, which is expressed, as a rule, in the relevant standards (educational and professional). The term new quality of education is often used in the abstracts of academic researchers in the context of discussing changes in the requirements of stakeholders and the transformation of the institutional environment.

It is participants in relations in the field of education who should be considered as stakeholders of a new quality of education, i.e., participants in educational relations and federal state bodies, state authorities of the constituent entities of the Russian Federation, local governments, employers and their associations (Moiseev, Pastukh, Nitsevich, & Stroevev, 2021). At the same time, participants in educational relations are students, parents (legal representatives) of underage students, teachers and their representatives, and organizations engaged in educational activities (Federal Law “On Education in the Russian Federation”, 2012).

We took the philosophical aspect as the key one in achieving the *purpose of our research*, which was to highlight the foundations of a new quality of education formed by transforming the institutional environment.

The transformation of the institutional environment is considered in the works of both foreign and domestic authors. D. North (1990) has made a profound insight into the concept of institutions as the rules of games contributing to understanding the actions of counterparties and forming the fundamental structures of any society. According to him, institutions allow us to make rational choices and maintain competitive relationships. Concerning our research problem, we can say that due to the evolution of institutions, the most effective rules are established for the interaction of all stakeholders in the educational process. At the same time, another scientist, R. Coase (1937), pointed to the presence of certain transaction costs, which, thanks to the established institutions, become minimal. The interaction of all stakeholders in the educational process, carried out based on existing institu-

tions, becomes effective (Tikhonov & Novikov, 2020). Over time, with the emergence of new requirements in the educational process, institutions transform. Inefficient rules that do not reflect current socio-economic processes are being replaced by new ones that improve the quality of education. Among modern scientists studying the processes of transformation of the institutional environment in education, one can single out I. Frumin and other scientists from the State University - Higher School of Economics (Russia) (Frumin et al., 2020). Scientists have shown the emergence of new institutions in education under the influence of digitalization. This applies to the emergence of such new institutions as distance education, massive open online courses, individual digital learning trajectories, tutoring in a digital environment, and the student's digital footprint (Akhmetshin, Vasilev, Kozachek, Meshkova, & Mikhailova, 2021; Mikhailov, Tikhonov, & Margarov, 2022). Institutions and their transformation in education depend on internal (subjective) and external (objective) factors. Among the variety of such factors in the present study, emphasis will be placed on such as the requirements for the quality of education by various stakeholders of the educational process. This formulation of the question in the context of the institutional paradigm leads to the need to study the phenomena of quality of education and quality culture of education in current conditions with the enhancing role of digital technologies and integration processes (Vorontsova, Arakelyan, & Baranov, 2020).

The polysemy of the term quality of education actualizes several issues, including the issue of forming the foundations of a new quality of education through the transformation of the institutional environment. The problem of this study lies in the question: "What are the foundations of new quality of education, formed by transforming the institutional environment, taking into account the interests of all participants in the educational, research, entrepreneurial and innovation processes?"

## Methodology and Organization of the Study

The methodology consists of a systematic approach underlying the study of quality culture as a system; a personal and activity approach used to study the potential for technocratic and humanistic paradigm integration; logical and historical approaches; qualitative and quantitative approaches; phenomenological and ontological approaches.

In this paper, the authors adhere to the fundamental idea of the need for technocratic and humanistic paradigm integration. The technocratic paradigm in education has been adopted in higher education to the level of a non-alternative value, while the supporters of the humanistic paradigm in education have enough arguments in their favour.

We apply phenomenological and essential approaches relating to a number of categories used by the authors in this work. Semantic analysis of terms, generalization of definitions, and formulation of the authors' definitions of concepts like education quality assurance and education quality culture are made on the basis of the rule for defining a concept through the closest genus and specific difference.

The study of quality culture as a system is based on a systematic approach. So the quality culture of education is studied as a system with all its essential properties: integrity, emergence, synergy, hierarchy, etc.

Logical and historical approaches are implemented in the review of many years of work of our colleagues. Thus, for a number of years (in 2002-2006, 2010-2012), scientists of the European University Association (EUA), together with the Union of Rectors of Germany and the Scottish Quality Assurance Agency, have been studying quality culture in universities. The results are presented in the European Quality Assurance Forum (EQAF) materials. A review of published reports has confirmed the idea about the interdependence between quality culture and satisfac

tion of the interests of all participants in the educational, research, entrepreneurial and innovation processes. Along with this idea, another one has been confirmed - the effectiveness of standards and recommendations for quality assurance in the European higher education area (hereinafter referred to as ENQA or ESG standards and recommendations) was provided by an individual approach.

### Research Results and Discussions

The foundations of a new quality of education, formed by transforming the institutional environment, are proposed to be divided into two groups: objective and subjective foundations.

Objective foundations have an impact on the quality of education while not being conditioned by the institutional environment. Subjective foundations, on the contrary, are in a direct causal relationship with it.

Among the objective foundations, we consider it necessary to single out informatization and integration of society. As subjective foundations, we singled out education quality assurance and the dynamics of the interests of all participants in the educational, research, entrepreneurial and innovative processes. Subjective foundations are proposed to be considered in the structure of the term quality culture.

The integration of society, for example, pre-determines progress also in a country having no key discovery. Such mutual support has determined the orientation of education towards the international specialization of production, the specialization of domestic production and the advanced nature.

We have singled out informatization as the second objective basis. On the one hand, informatization has provided a more knowledge-intensive world order. On the other hand, it has endowed society with problems that the information singularity can explain. Modern ideas about the possibilities of information are more comprehensive, so the expectations (needs) are higher.

The above factors (integration and informatization of society) determine the dynamics of the interests of participants in the educational, research, entrepreneurial and innovation processes (Zelentsova & Tikhonov, 2020). The interests of the participants in relations in the field of education may be formalized or not (by educational and professional standards), but they are not interconnected and change over time.

It should be noted that the integration of society, the informatization of society and the dynamics of the interests of education stakeholders, in addition to apparent advantages, also have disadvantages: import dependence, information singularity and time compression.

Import dependence is a direct consequence of the integration of society. In the context of the orientation of education towards the international specialization of production and the specialization of domestic production, the loss of strategic partners (history contains enough examples, there are also precedents in our time) leads to uncertainty in these very beacons, to the loss of time required, for instance, to train the missing staff.

Note also the presence of the butterfly effect, inherent in informatization in the modern world. In other words, it is possible to express so that knowledge can be represented in an array of information so that it loses the critical property of "truth" and receives many interpretations of meanings (even the opposite). More and more publications are using the term information singularity to explain the senselessness of a person mastering a new volume of theoretical material in a certain subject area.

As we understand it, time compression is the "acceleration of historical time" (Kapitsa, 2004), characterized by relatively shorter development of educational, research, entrepreneurial and innovative processes and their interaction. The interaction is becoming more and more vulnerable. For example, education can no longer guarantee quality training of a specialist because a whole generation of equipment could change at the enterprise during the student's training. Therefore,

the dynamics of the interests of participants in educational, research, entrepreneurial and innovative processes in the objective conditions of time compression can lead to an even more significant mismatch among stakeholders.

As a kind of response to the challenges of our time, we propose to consider another basis of a new quality of education - quality assurance.

Note that the term “quality assurance” in the context of education did not take hold in Russia to the extent that it could, based on ENQA materials. This thesis does not deny the fulfilment of obligations under the Bologna process. We only talk about the term “quality assurance”. More familiar to society are the concepts that make up the meaning of “quality assurance” - management and quality assessment.

The value of the term “quality assurance” is a system-forming concept that includes the whole spectrum of activities around education essentially. This is borne out by the ENQA materials and is confirmed by the works of scientists (foreign and Russian) investigating the problems of quality of education. So, for example, quality assurance is written in the document “ESG 2015”: “The term quality assurance is used in this document to describe all activities within the cycle of continuous improvement” (Standards and recommendations for quality assurance in the European Higher Education Area, n.d.). Attempts to define the term “quality assurance” led Russian scientists to the international standard ISO 9000:2008 (later ISO 9000:2015) (Azaryev, 2012). This standard contains a dictionary that allowed (excluding ambiguity) to identify all components of the concept of “quality assurance”: management (all parts of management - planning, management, provision, improvement) and evaluation (Azaryev, 2006).

In collaboration, a group of employees from Saint-Petersburg State Electrotechnical University, Moscow Institute of Steel and Alloys, Moscow State Technological University “Stankin” performed research (2006-2010) To develop framework documents that could be used by any vocational training organization (technical/col-

lege, institute/university). One of such documents defines “quality assurance of education” through the management parts (planning, management, maintenance, improvement) and evaluation. Partly because of this, quality assurance was soon identified by the academic community with quality management (National standard of the Russian Federation GOST R ISO 9001-2015, 2015).

However, the semantics of these two terms should be considered precisely in the context of the educational organization since education is considered not only through the notion of “process” but also through “result”, associated “resources”, and necessary “documents”. In addition, ISO 9000 does not include quality assessment as part of quality management. On the contrary, ENQA standards and recommendations are built in the logic of such an assessment, for example, program assessments, academic performance assessments, etc.

As a result, by guaranteeing the quality of education, we mean the activity of the educational organization, which is related to management (planning, management, maintenance, improvement) and evaluation.

Note that ENQA standards and recommendations have covered not only the higher education system. On the official websites of secondary specialized educational institutions (educational organizations of secondary vocational education), one can see evidence of the commitment of the staff of educational organizations to European standards. So, as a rule, the sites contain information of “open access” - the mission, vision, policy and goals of the organization in the field of quality, etc.

Colleges are actively involved in competitive activities, for example, in the Rosobrnadzor Competition Quality systems for training graduates of vocational education institutions.

Thus, according to ENQA standards and recommendations, vocational education responds to a new understanding of the quality of education among the leading potential employers (colleges).

Important addition is the fact that the ESG uses international standards of the ISO 9000 series - used in many companies to protect their business reputation.

In this regard, for several reasons, it is simply necessary to be guided by ENQA standards and recommendations in higher education.

Effective tools for this work are materials prepared by a group of employees of Saint Petersburg State Electrotechnical University, Moscow State Technological University "Stankin", Moscow Institute of Steel and Alloys, and Tomsk Polytechnic University on a state assignment in the period from 2006 to 2010:

- Materials for vocational training organizations on the selection of a quality assurance model from among developed;
- Materials for vocational training organizations to adapt the selected quality assurance model and prepare it for implementation;
- A dictionary of key terms to avoid ambiguity in work on the implementation of the quality assurance model;
- Materials for audit of the quality assurance model in the organization of vocational education, assessment of the level of maturity of processes in the organization and identification of perspective directions for improvement of the quality of education.

This package of documents, approved by the Federal Educational and Scientific Supervision Service in 2005 and tested in 2006, makes it possible not only to get acquainted with developments in the form of effective models of man-

agement and evaluation of the quality of education but also to choose the most suitable, adapt, implement and develop quality assurance based on audit results (both external audit and internal / self-evaluation).

From 2006 to 2010, several other materials were prepared by almost the same team, led by authors from the Saint Petersburg State Electrotechnical University, which made it easier to adapt to the chosen model of quality assurance of education. Materials are not only ready-made templates for completion but also recommendations for working with these templates. For a number of years, the university itself was engaged in training specialists (through the system of additional vocational education - advanced training courses) from different parts of Russia and CIS countries to work with the whole package of documents and audits (external and external and internal). As a result, a roster of expert auditors of quality management systems in vocational training organizations, registered with the Council of the Federal Service for Supervision in Education and Science, had been established by 2010.

Listed materials recommended for implementation in the establishment of quality systems since 2007

Having processed these materials, we obtained an adapted process maturity model (Fig. 1), which the authors submitted to the IV All-Russian Scientific and Practical Conference "Quality Management in Education" in St. Petersburg for discussion by colleagues.

		PROCESS MATURITY LEVELS			
		Definiteness	Reproducibility	Ability	Efficiency
QUALITY ASSURANCE	Planning	Consumer requirements are <i>formalized</i> , process outputs are <i>defined</i>	Customer requirements are <i>defined</i> in terms of the process quality outputs, and process inconsistencies are formulated in terms of the discrepancy between the process quality outputs	<i>Formalized</i> input and internal characteristics of the process quality	Identified, minimized (eliminated) activities that do not add value
	Control	<i>Measurement and fragmentary analysis</i> of some process quality characteristics	<i>Measurement and analysis</i> of the process output indicators (practised constantly). Implementation of <i>corrective actions</i> (search for causes of inconsistency, confirmation)	<i>Measurement and analysis</i> of input and internal characteristics of process quality ( <i>preventive actions</i> )	Management of “problem points” (practised constantly)
	Support	<i>Documentation</i> governing activities within the process	Process <i>documentation</i> defines the collection and analysis of process quality output data. Authority and resources to maintain process quality outputs within requirements	<i>Authority and resources</i> to change process quality outputs	The system of training the process participants. The practice of disseminating information within the process about changes in customer requirements
	Improvement			Process improvement in terms of process quality inputs and internals	Determination of alternative ways of the process development
	Evaluation	There is feedback from the consumers of the process	Process quality outputs are <i>within established limits</i>	<i>An increase in customer satisfaction</i> with the process quality outputs is recorded	Assessing the impact of changes in the process on its efficiency

Figure 1. Maturity Model of University Processes in the Context of Quality Assurance.

Figure 1 presents a process maturity model interpreted through the quality assurance framework in education. The accumulated experience of training employees on quality management in education makes it possible to judge the effectiveness of such a treatment of the model.

The model allows colleagues (primarily process managers) to independently determine the maturity level of the process they are engaged.

Determining the maturity level of a process according to the model shown in Figure 1 also can help in the following:

- in defining the activity (i.e. a component of quality assurance in education: planning, management, provision, improvement, evaluation), with the level lower among the others in the process under consideration;
- in highlighting the activity with the level higher among the others in the process under consideration;
- in identifying points of growth - types of activities that require additional elaboration for enhancement;
- in outlining those characteristics of the pro-

cess in general terms that need to be obtained in a particular activity – to increase the maturity level of the process as a whole.

One can fail to see the humanistic paradigm (culturological approach) in education in the proposed model. However, the technocratic paradigm (competency-based approach) has precise contours. There is also a particular bias in the work of researchers who, in solving problems of the quality of vocational education, rely either only on the technocratic (competence) paradigm or (which is extremely rare) put the humanistic paradigm at the core of the solution.

In this regard, we note that the development of education in the direction of new quality, formed by transforming the institutional environment, in our opinion, must be considered in the context of the concept of quality culture.

One of the first documents to mention the concept of quality culture is the ENQA (ESG) standards and recommendations. For example, in the modern edition of the ESG, its development is presented as one of the basic principles of quality assurance in the European educational space. In the works of Russian scientists and educators, the term quality culture is predominantly found in translated materials and works devoted to the study of foreign experience. The term quality culture conveys the meaning of “quality as a shared value and collective responsibility of all participants in the educational process at a university” (Meshkova, 2010, p. 116). Quality culture is “a constant joint search for innovative mechanisms to support the teaching quality corresponding to the goals of the professional and personal growth of the teacher himself, the needs of students, the development strategy of the vocational education institution as a whole, and ultimately ensuring the high quality of educational results” (Meshkova, 2010, p. 133; Kamaeva, Zemsh, Gilmanshina, & Galich, 2021).

The semantics of the phrase quality culture in the works by Russian scientists is not yet presented in any sense that is different from the European sense. Furthermore, works on the quality culture of domestic education represent a projec-

tion of the original interpretation of Russian cases.

In this regard, we present the authors’ understanding of the concept of quality culture in higher education. Among the meanings of the word culture given in most of the analyzed dictionaries, we note such common ones as “a set of industrial, social, spiritual achievements of people” and “a high level of something” (Ozhegov, 2010, p. 313). Definitions similar to this can also be found in other studies (Alekseev, Katasev, Kirillov, Khassianov, & Zuev, 2020; Ismagilov, Molotov, Katasev, & Kataseva, 2019; Kildeeva, Katasev, & Talipov, 2021; Panishev et al., 2020; Mingazova, Subich, & Gazizova, 2020; Makhmutova & Anikin, 2019; Nazarov & Anikin, 2017). Summarizing the above, under the quality culture of education, we mean a set of values, norms, and rules of conduct through which the university ensures a high degree of compliance of the educational process (its input and resources) with the requirements of all participants in relations in the field of education.

In the period between 2002 and 2006, foreign colleagues of the European Association of Universities completed the project “Development of internal quality culture in European universities”, in which 134 universities took part. It was continued by the project “Research on quality culture in universities (EQC)”, carried out under the auspices of the European University Association (EUA) in conjunction with the conference of German rectors and the Scottish Quality Assurance Agency (2010-2012). A Russian representative from the Higher School of Economics also participated in it. The results of the mentioned studies were discussed at the European Quality Assurance Forum (EQAF) in different years. The analysis of the forum materials allows us to say that in higher education, the development of quality culture and stakeholders’ satisfaction is in a causal relationship. At the same time, there is no uniform concept for developing a quality culture. On the contrary, universities that demonstrate the desire for such development formulate different goals, applying even more

diverse strategies to achieve them.

### Conclusion

Taking into account the philosophical aspect, we propose to divide the foundations of a new quality of education formed by transforming the institutional environment into two groups: objective and subjective foundations. Objective foundations (informatization and integration of society) influence the quality of education without being conditioned by the institutional environment. Subjective foundations (education quality assurance and the dynamics of the interests of all participants in the educational, research, entrepreneurial and innovation processes), on the contrary, are in a direct causal relationship with the institutional environment. The identified foundations determine not only the positive development of education. Negative consequences include, for example, import dependence, information singularity, time compression, and bias towards the technocratic paradigm.

The subjective foundations for mitigating the negative impact of the above foundations are proposed to be considered in the European term quality culture structure. Education quality culture is the result of quality assurance and the process of quality assurance, including quality management (involving planning, provision, managing, improving) and assessing the quality of education.

A study of quality culture conducted in European universities in the period from 2006 to 2012 suggests the need to take into account the “culture of quality” as a primary factor in improving the quality of education. However, scientists unequivocally agree that there are no universal “recipes”. There are only common “dotted lines” for following their example. The Russian experience of improving the culture of quality is such (judging by the results of scientific research rather than formal reports) that it is possible to confidently say only about success in assessing the quality or in some part of management. We believe that developing “qualitative culture” as a

system concept in education is a lost profit. We could not help but note that the solutions in different cases were the more successful, the better they combined traditions and innovations.

The transformation of the institutional environment with a focus on the philosophical aspect (by which we propose to understand the objective and subjective foundations we have identified) should bring education to a new quality. This postulate requires confirmation by the results of experimental work. However, the arguments given in the article are sufficient to accept our position as a working one.

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