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The analysis of the philosophical reflection on education of the future peculiarities

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Abstract: Aims: The purpose of this article is to consider the peculiarities of the format and content of education in the short and long term. The philosophy of education, based on socio-cultural trends determines the vectors of innovative development of education while preserving the fundamental target elements of this sphere of social activity. In accordance with the goal, the tasks are to highlight the quantitative and qualitative indicators of educational development as well as the formation of the integrity of the educational system in the context of dynamic civilizational progress. **Methodology:** The research methodology forms a symbiosis of general scientific, special educational and scientific, and philosophical methods. They provide a comprehensive consideration of education in a philosophical and reflective sense. The synergistic approach gradually strengthens the position in the aspect of philosophical and scientific interpretation of the education, defining interdisciplinarity and self-organisation of structural educational components as fundamental elements of the development of this sphere. **Results:** The results of the study suggest building a new paradigm of education in the future that will meet the requirements of the times. Among the main elements of the educational model of the future are the following: the content elements of education – the quality, and effectiveness; dimensions of the education format – the accessibility and innovation. **Scientific Novelty:** The scientific novelty of the study involves the inclusion of philosophical principles in the general characteristic of the educational process in the context of globalisation, technologisation, and other trends in the

civilizational development of the present and future. The introduction of synergistic guidelines for the interaction and coexistence of various systems operating in the educational system is a promising area of educational discourse since this arsenal achieves the integrity of the study of the educational environment. **Conclusion:** A philosophical comprehension of the prospects of education is an urgent issue of the scientific and ideological paradigm and focuses on the existential and semantic problems of the content of education and the epistemological and methodological principles of the format of education.

Keywords: philosophy of education, philosophical and educational reflections, innovativeness of education, educational strategies, educational paradigm, educational system of the future, prospects for educational development.

Introduction

Education has always been a polemic topic in the scientific and philosophical discourse. The periods of stability and linearity in the development of this sphere have actualised the problems of educational content. In times of rapid educational transformation, the format of the educational system has been at the forefront of scientific and philosophical research. The modern, eventful world requires a rethinking of the forms and methods of education. Logically, the future stage of educational interpretation should be devoted to the content and purposeful aspects of this sphere. However, the scientific and ideological picture of the world as a whole seems to be gradually moving away from the principle of sinusoidal variability to synergistic contexts of constant interchangeability.

The problematic issue of modern education is the inconsistency of training programs with the realities of modern social life. The design of modern education, either in terms of format or content (and in difficult cases - in both of these aspects), does not form relevant competencies (educational, scientific, educational) that meet the requirements of the times (Meyer & Norman, 2020). At first glance, the concept of educational design is a problem of format only, but this term also combines the substantive principles of educational development. It is a kind of educational paradigm that takes on an appropriate form depending on the socio-cultural conditions that dictate the conditions for the development and transformation of education. The key philosophical characteristic of this paradigm is the dynamism, which is expressed in constant updating, namely: changes in educational environments and transformation of the value and purpose principles of education.

Particularly, Orakcı (2020) states the proliferation of online educational environments as a response to the need for constant updating. The global dynamism is extrapolated to the educational space, putting forward the need for constant updating of curricula and organisational elements (Ramírez-Montoya et al., 2021). The education of the future is updated online, in a way similar to the needs of technological and digital tools. The speed of response to internal transformations and external stimuli will determine the effectiveness of education, as the traditional linear functionality of education can no longer cope with the challenges of the times.

Research Problem

The research problem of the article is focused on understanding the rapid growth of quantitative characteristics in the educational system, which is due to the inclusion of innovative elements in the educational space. The philosophical and dialectical analysis of this process implies the need to correlate the quantitative and qualitative components of education, which is expressed (or will be expressed in the future - near or far) in the creation of new educational environments and guidelines of organisational, methodological, educational, epistemological, spiritual and value-based nature. The

changes in the format of education and its content are becoming systematic, which determines the priority of dynamic development over sustainable development in this area of social activity.

Research Focus

The focus of the study is defined as the search for philosophical and methodological algorithms that will accompany the philosophical and dialectical process of transformations of quantitative and qualitative characteristics of education in the context of the prospects of the globalised world. Traditional models of sustainable education are already demonstrating their inability to respond to the challenges of the times. Innovative paradigms of the educational system (even theoretically flawless ones) cannot be formed without a proper adaptation to the real practical educational process. That is why the issue of transition in education is now becoming more acute, requiring a comprehensive (scientific, philosophical, cultural, and worldview) understanding of the problems in modern education and ways to solve them in the future.

Research Aim and Research Questions

The purpose of the scientific article is to systematise the philosophical and educational searches for the optimal format and value expediency of the content of education in the future. The multidirectional and systematic characteristic of the quantitative and qualitative components of the educational space ensures the fulfilment of the fundamental philosophical and educational task of forming the integrity of the educational system and its effective correlation with civilizational processes in the society of the future. The influence of innovative elements significantly expands the potential of education, while requiring new value guidelines to reconcile the interests of internal and external elements of the educational space.

Literature Review/Theoretical Overview

Scientific and educational achievements in the field of education of the future can be divided into several clusters:

- philosophical and educational characteristics of modern education and the projection of their results on future educational strategies - the actual continuation of the sustainable development of fundamental conservative education in the new socio-cultural conditions;
- transformational ideas designed to reform the educational system in line with globalisation challenges (technologisation, informatisation, multiculturalism, interdisciplinarity);
- formation of innovative models of educational development, where the key characteristics will be based not on traditional educational guidelines, but on innovative elements.

Frank & McDonough (2020), in their study of educational development strategies, note that we will not find a linear and sole interpretation of education in the scientific literature in the near future. The educational discourse will be “at the crossroads” of pedagogy, science, philosophy, psychology, logistics, and other components that will form a new educational environment.

Globalism has become a trend that extends to almost all areas of social activity. Such realities could not but affect the topics of nowadays scientific, educational, and philosophical-educational discourses. Studies of the development of globalisation are important in that they provide an objective assessment of the state and prospects of the educational sector (Ismoilov & Farxodjonova, 2020). In this context, Krishnamurthy (2020) proposes to define philosophical and educational perspectives based on the experience of force majeure cultural and historical processes and events, in particular the Covid-19 pandemic.

Hughes (2020) emphasises the importance of adhering to the norms of humanity in the education of the future. Such a priority in educational development strategies indicates the preservation of the supremacy of the content component of education over the form of functioning of this sphere. One of the theories of future education development that combine the philosophical concepts of content and format is the transrational concept, which is designed to implement educational projects in the post-truth worldview paradigm of our time (Kester et al., 2019).

The group of researchers Tesar et al. (2022), analysing the realities of the sociocultural space, formulates a clear question of scientific discourse: what is the future of the philosophy of education? The modern educational and philosophical scientific tradition interprets the prospects of education in an expanded and diverse way. At the same time, the philosophy of education offers a holistic strategic vision of the prospects of this field. Therefore, for a specific philosophical and educational understanding, the future of education is not a characteristic of the functioning of the educational environment (no matter how innovative or even revolutionary it is predicted to be), but the fulfilment of the educational mission of socio-cultural significance.

Research Methodology

General Background

The study actualises a number of philosophical, dialectical, and synergistic approaches to the use of general scientific and scientific, and educational methods. Achieving the results of the study is possible only with a combination of methodological principles since a linear approach is inappropriate when considering a dynamic system, which is education in the context of globalisation progress.

Brothers et al. (2019) emphasise the need to create a regulatory framework to regulate the processes that take place in all areas of social activity. Education is not an exception to this list, as the dynamism of civilizational development has led to a significant increase in new environments and conditions for its functioning. All these elements require regulation - both systemic and normative, as well as worldview and situational.

The cultural and historical retrospective demonstrates the actualisation of experience in any sphere of social activity. The educational experience is an important stabilising element that regulates the development of the educational system. Hagg & Gabrielsson (2020) give experience the role of a guide in the educational system. The philosophical principle of phenomenology has been successfully applied in the current study, as experience acts as a kind of litmus test for educational transformations. Guided by the concepts of primary and secondary experience, which form the paradigm of empirical phenomenology, the unique status of education in civilizational development is determined. Such guidelines are necessary not only for use in the educational system of our time but also become priority vectors for the development of the industry in the future.

Corbett & Spinello (2020) propose the methodological concept of connectivism, which has been widely used in the educational field. With the increasing use of ICT, the problem of communication and information flow in different interpretations has become quite acute. New formats of communication between participants in the educational process, new information technology models of digital communication - all this requires new principles of organising the educational process in the segment of communication. In this regard, connectivism is a pragmatic, practice-oriented principle. Its key task is to transform all types of intersubjective and inter-objective relations in education, in accordance with the available information and technological resources.

The study often uses elements of methodological systematicity. The systemic positioning of education has many positive manifestations, as it forms a holistic intra-educational design and promotes the integration of external educational principles into the general cultural space (Buchanan, 2019). The systemic or the design thinking is a relevant methodological aspect of modern educational discourse, as it expresses the fundamental priorities of the development of the educational paradigm at the present stage and will express educational trends even more fully in the future.

The development of education of the future is consistent with the worldview constants of civilizational progress. Particularly, in the methodological dimension, traditional models of determinism are transformed into quasi-determinism, which involves adding the concept of "multi" to all components of the educational system: multi-disciplinarity, multi-methodology, multi-technology, multiculturalism, etc. (Morgan, 2019).

Data Analysis

Voit (2019) notes, that due to the active spread of "data generation, data mining, and advanced computational modelling," education has found itself in a new technological and digital space. Big Data in education is a kind of benchmark for the future (Baig et al., 2020). Despite the demand for and relevance of this information and digital tool, it has not yet become widespread in the educational process. The reason for this is the preservation of the subject-oriented principle of education, which is not changed by objective factors. Based on the educational realities and prospects of the near future, data for philosophical and educational research will still be obtained from traditional educational environments, although with a significant increase in the share of innovative mechanisms.

Research Results

The education system is quite sensitive to socio-cultural changes. Historical experience shows that the educational process has changed relatively frequently. Unlike the format of education, the content and goals of this sector are rarely influenced by external factors and have been transformed only a few times during the historical development of civilization, and even then in the form of correction, not radical transformation.

Education management aims to fulfil several vital sectoral functions (Perrone & Tucker, 2019). In addition to managing organisational, educational, and methodological processes in the education system, the segment of educational development planning is also important. Elements of the educational system must be mutually coordinated. It is possible only if the sector systematically functions. Situational management is possible in force majeure circumstances that require non-standard solutions. However, such a format cannot be appropriate in the long term, giving way to the substantive principles of the integrity of education. In addition, automated decision-making is now being actively established in the educational system, radically changing the usual proportionality of the subject-object relationship (Cerratto Pargman et al., 2023).

The main characteristics of the education of the future are concentrated in the segments of content and format (see Figure 1).

Figure 1

Content and form of education of the future in terms of practice-oriented elements

Source: author‘s own development

In the scientific and educational discourse on the format and content of education elements, one of the key issues concerns the philosophical understanding of the human dimension of education. In the practice-oriented dimension, this problem is expressed in the full use of human potential in the educational process (Brothers et al., 2019). Education, as well as the entire socio-cultural development, will largely depend on how quickly it is possible correlating rational and sensual components with scientific and technological achievements.

The human component of overcoming the problems associated with the rapid and large-scale spread of innovative elements is becoming a key issue in the scientific and educational discourse of the future. Today, there are several algorithms for responding to transformational shifts in the industry by participants in the educational process: adaptation, integration, and the mutual development vector. While adaptation and integration have long been used in the practice-oriented space of educational systems and have fundamental theoretical foundations, the vector of mutual development is a relatively new format of coexistence in the educational space (Rahmatullah et al., 2022). The developmental strategy of education involves bringing human potential and technology capabilities to the same level. The key to the success of this approach is to avoid gaps between the information and technological development of educational systems and the ability of the participant in the educational process to master them.

A special place in the paradigm of education of the future is occupied by the personal characteristics of participants in the educational space. One of the ways to implement the principles of educational well-being is to use a positive psychological approach (Alam, 2022). The anthropocentricity of the education of the future is a key parameter for the success of this field of social activity. Cultivation of positive emotions, moral stability, principles of respect and tolerance, and the formation of personal character traits are all necessary elements of human-centred education. The new content of education is not only the acquisition of knowledge and competencies but also the formation of individual qualities of a person in the course of the educational process.

At present, there is a decrease in such human-dimensional educational parameters as professional enthusiasm, cognitive perseverance, learning productivity, etc. (Richmond et al., 2019). All of this leads to the transformation of the content of education without violating its essential guidelines.

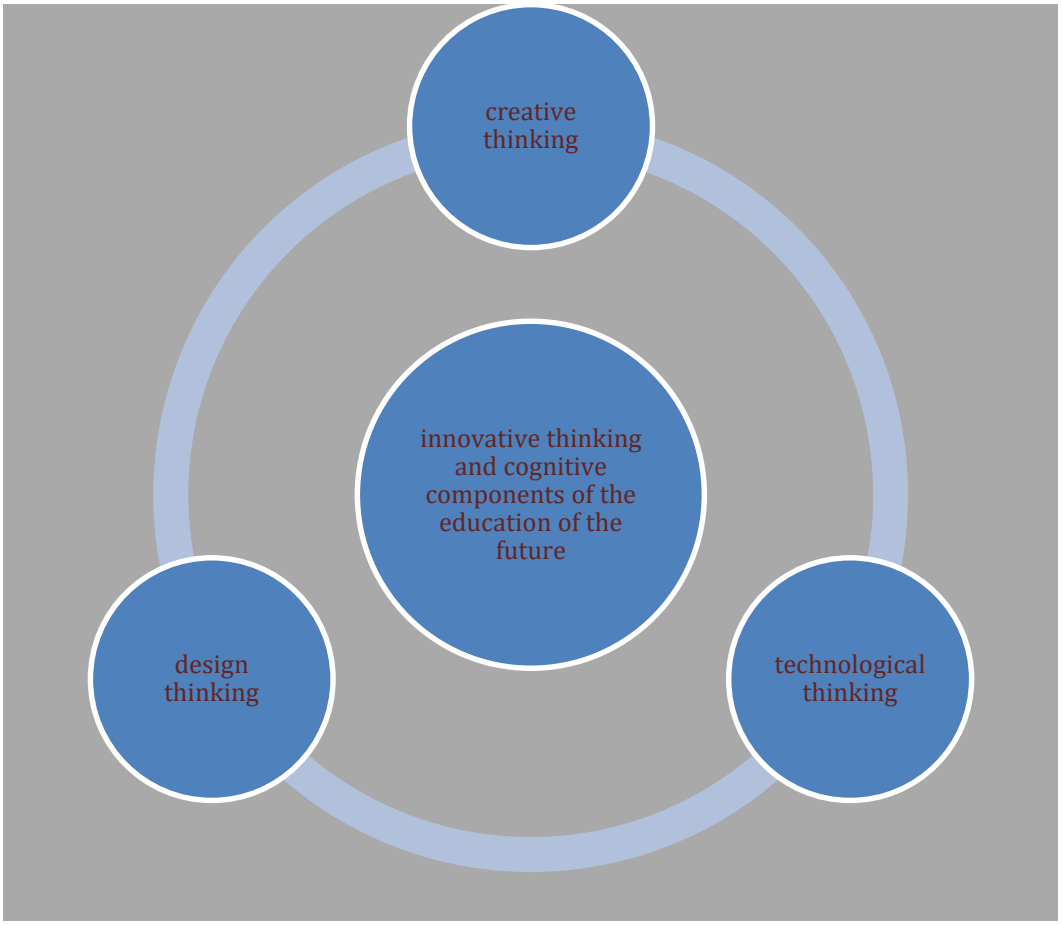
Since education is deeply integrated into the socio-cultural civilizational space, it is clear that social manifestations will appear more often on the scientific and educational horizon. Particularly, the problem of civic education and science continues the currently popular topic of the formation of civil society as a whole. Elliott & Rosenberg (2019) note, that the principle of mutual responsibility of society and education is currently being formed. On the one hand, civic institutions undertake to integrate into

the educational sphere all the progressive elements that have been adapted in everyday life in order to increase the effectiveness, accessibility, and comprehensibility of education in society. On the other hand, the educational sphere is aware of its responsibility for the formation of rational and spiritually oriented dimensions among participants in the educational process and ensures their proper training. Stracke (2019) proposes to use the concept of open education, which will meet the requirements of human rights and the public good. Ossiannilsson (2021) adds the principles of education democratisation to this list.

Considering the problem of the format of future education, it is worth updating the philosophical and epistemological aspect. The educational paradigm of the future will not be limited to standard thinking and cognitive activity. Innovative elements of thinking activity will be added to traditional types of thinking (see Figure 2).

Figure 2

Actual elements of thinking activity of the education of the future



Source: author‘s own development

Expanding the potential of thinking activity increases the level of students’ perception at educational levels (Almeida et al., 2021). The design thinking will shape the perception of real life in educational projects (Pande & Bharathi, 2020). The spread of constructivist philosophical principles will occur in unison with the growth of the technological and digital share in the educational environment. Any educational design should be empirically, theoretically, and politically regulated (Komljenovic, 2022). Creative thinking shapes educational diversity, which is vital for education in the context of the

dynamism of globalisation. Technological thinking involves both operating complex information technology tools and understanding their impact on the educational process.

The evolution of Education 1.0 through 2.0 to 3.0 and further to 4.0 has always been about the format of the educational space (Salmon, 2019). The development of education involved the transformation of educational environments in accordance with innovative innovations. At the same time, the axiological and target principles remained constant. Completely different prospects are predicted in the Education 5.0 format, since here the transformation of education will not be limited to a change in format. And the level of development of this sphere of social activity will depend on how deep the substantive transformations in education will be.

The sustainability of education has always retained a dominant status in historical and cultural terms. At the same time, the dynamism of the modern world differentiates the concept of sustainability in the educational system. While the content of education remains fundamental, the formats of education are gradually reoriented towards flexible principles. A striking example of this process is STEM education (Wahono & Chang, 2019). Flexibility requires new tools to ensure the integrity and relevance of education (Zolfagharian et al., 2019). Education is gradually moving into a regime of transitions, when characteristics are constantly changing, modifying the industry itself.

Discussion

The problem of educational innovativeness is the threat of creating even greater gaps between the subjects of the educational process (Kavadias et al., 2020). This is how one of the main contradictions of the education of the future is formed, when tools designed to realise a synergistic mission, on the contrary, dialectic the educational process. On the one hand, education is riddled with contradictions due to the involvement of an innovative component; on the other hand, the same component is designed to resolve the contradictions between the content and format of education, which involves all subjects of the educational process.

Stahl et al. (2021), guided by the example of the introduction of artificial intelligence into the education system, raise the current dichotomy: pragmatism-ethics. The cultural and historical development has repeatedly demonstrated various scenarios of clashes between the principles of practical efficiency and moral spirituality. In education, such confrontations are particularly controversial, since, in addition to external elements, the intra-educational cluster of contradictions of purpose (the confrontation between the educational and educational and educational components) is becoming more acute.

In modern education, the edtech principle is gaining popularity, and it is likely to become more and more established over time. Regan & Jesse (2019) note that education in the twenty-first century is a period of opportunity, and the format that can accumulate more innovative elements, forming a holistic educational structure in a particular educational institution, will be more productive and effective in this area.

Combining humanistic philosophy and pragmatic epistemology, Morris (2019) develops the concept of self-organised learning. Using the potential of the information, digital, and technological era, the learning is reduced to the acquisition of knowledge and skills that are available without an officially recognised translator (educational institution). This approach is progressive and revolutionary, but quite threatening in the context of education quality. The absence of paradigmatic educational principles destroys the existential foundations of education, which, in addition to disseminating knowledge, performs a number of other socially important functions. These socio-cultural functions of education

can be irretrievably lost in the absence of a systematic educational status. This can lead to the loss of the value purpose of educational outcomes.

The socialisation of education is practice-oriented (Diachok et al., 2020). Given the spread of pragmatic principles in the worldview of our time, it is easy to predict the increasing role of socio-philosophical influence on the strategy of educational development in the future (Kaushik & Walsh, 2019). The socially oriented purpose of education once again confirms the priority of existential and anthropological dimensions of education over epistemological and technological manifestations. At the same time, Drigas & Mitsea (2020) note the spread of the principle of metacognition in the research and educational spheres. Such epistemological over activity contributes to the proper functioning of the cognitive and psychomoral components of the cognitive process, which are fundamental factor in education. However, this positioning of practice-oriented elements does not imply the displacement of the target axiological component.

The idea of equality of access to education has crucial content dimensions. Benade (2019), analysing the educational strategy of New Zealand, concluded that the popular trend of equalising educational standards, regardless of the abilities of participants in the educational process (both teachers and students), did not meet expectations. The supremacy of format over content has no prospects in the educational sphere, which is focused not only on practical efficiency (like economics or engineering) but also on the ideological and value component of socio-cultural life.

The educational institution of the future will obviously have different forms in the material and organisational dimension but will retain its value-purpose function (Bujang et al., 2020). Emphasising this possibility, Pacheco (2021) warns against "slipping into passive technologisation", calling for "achieving a responsive, ethical and humane approach to education". This approach preserves the human-centred priority in education. The processes of technologisation, informatization, or digitalisation of education preserve the dominant status of the human being who controls and regulates these elements. This is how the symbiosis of humanity and technology in education is formed. At the same time, any shifts in one direction or the other disrupt the balance of tradition and innovation.

Conclusions and Implications

Thus, the education of the future is already forming philosophical principles and scientific mechanisms that will fuel it and keep it at the forefront of the worldview. Among the key philosophical and educational aspects of the prospects of education are the following:

- The content of education will retain its position in the context of educational components positioning, not yielding to formats that are rapidly changing and transforming, ensuring the sustainability and fundamental nature of the value and purpose component of education.
- The format of education becomes an environment in which innovative elements of organisational, logistical, educational, methodological, and research nature are actively introduced.
- Globalisation processes and information and technological innovations form the prerequisites for the gradual erasure of the boundaries between the format and content of education, offering a synergistic educational model in which everything is permeated by interaction and self-organization.
- Among the key characteristics of the content of education are the issues of quality and effectiveness, which are designed to preserve educational fundamentals, while correlating educational development with the pragmatic principles of the development of the society of the future.

- All innovations related to the format of education ensure accessibility of education and form innovative principles of development of this sphere, updating the algorithms of demand and expediency (rather than popularity and tendency).
- To ensure the development of the educational sphere in the future in accordance with internal educational transformations and external educational factors, there is a need to attract new criteria of thinking and cognitive activity, particularly: the creative thinking, technological thinking, design thinking.
- The education of the future in the philosophical sense will continue to play its unique role in the socio-cultural progress of civilization, but there will be changes in the positioning of this sphere in the worldview and practical picture of the world, in which education will become a more integrated element in relation to the society of technology and information.

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