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Пространственные параметры в образовательной сфере: новые направления развития

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Аннотация. Социально-культурные, экологические и экономические факторы в постоянно эволюционирующем мире неуклонно стимулируют возникновение актуальных направлений и дисциплин в области образования. В данной статье определены новаторские векторы развития непрерывного образования. Применен методологический подход: анализ терминологических сочетаний, объединяющих философские, социально-культурные, экономические и образовательные концепции; оценка авторского опыта в области формального, неформального и инцидентного образования; проведение экспертного опроса, осуществленного онлайн в декабре 2023 года; контент-анализ подробных ответов, полученных от участников опроса. Исследование выявило неочевидные ранее источники для разработки междисциплинарной методологии, которая возникает на стыке разнообразных знаниевых доменов и в рамках практических исследовательских усилий, направленных на реализацию трансдисциплинарности. В работе обнаруживаются фундаментально новые методологические подходы, присутствующие в науке и современной философии, которые касаются непрерывного обучения как жизненно необходимой характеристики современного индивидуума. Исследуется потенциал, скрытый в неожиданных сочетаниях и на стыках ранее независимых областей знания. Это особенно значимо для преодоления проблемы сохранения человеческих качеств в условиях динамичного развития образовательных систем, интегрирующих человеческую природу с искусственным интеллектом. Инновационность работы отражена в выводах о методах исследования, наиболее адекватных для разработки нового психолого-педагогического знания в контексте непрерывного образования.

Ключевые слова: пространство непрерывного образования; измерения образовательной сферы; педагогические технологии; векторы развития образования; методы исследования образования; трансдисциплинарность; цифровой вектор развития; нецифровое направление развития

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METHODOLOGY AND TECHNOLOGY OF PROFESSIONAL EDUCATION

Original article

Spatial parameters in the educational sphere: new directions of development

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Abstract. Socio-cultural, environmental and economic factors in a constantly evolving world are steadily stimulating the emergence of current trends and disciplines in the field of education. This article seeks to identify innovative vectors for the development of lifelong education. A number of methodological approaches were used: a) analysis of terminological combinations that combine philosophical, socio-cultural, economic and educational concepts; b) assessment of the author's experience in the field of formal, non-formal and incident education; c) conducting an expert survey carried out online in December 2023; d) content analysis of detailed responses received from survey participants. The study revealed previously unobvious sources for the development of interdisciplinary methodology, which can arise at the intersection of various knowledge domains and as part of practical research efforts aimed at realizing transdisciplinarity. The work reveals fundamentally new methodological approaches present in science and modern philosophy, which relate to lifelong learning as a vital characteristic of a modern individual. The potential hidden in unexpected combinations and at the intersections of previously independent areas of knowledge is explored. This is especially significant for overcoming the problem of preserving human qualities in the context of the dynamic development of educational systems that integrate human nature with artificial intelligence. The innovativeness of the work is reflected in the conclusions about research methods that are most adequate for the development of new psychological and pedagogical knowledge in the context of lifelong education.

Key words: space of continuous education; measurements of the educational sphere; educational technologies; vectors of education development; educational research methods; transdisciplinarity; digital vector of development; non-digital direction of development

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Introduction

Since the time the term «lifelong education» was officially introduced into the reference and normative documents of UNESCO, it has become the subject of in-depth scientific study. The concept of a never-ending learning process is being developed as an independent idea in the context of emerging efforts to promote universal education. The view of education as a never-ending process became the motto of the post-war period of the 1940s and 1950s, reflecting the desire of people to live in a society where everyone could realize their full potential for peace, friendship and progress [Luksha, 2021].

Commencing in the 1960s, diverse domains have been persistently delineated within the ambit of lifelong education research. These encompass mandatory adult education; instructional support for individ-

uals encountering life challenges; vocational training that mirrors societal and technological transformations; continual refreshment of workforce expertise; and economic policies that facilitate the availability of learning resources, among others. There has been an evolution from the simple organization of educational systems at various levels to an emphasis on stimulating the desire for lifelong learning, the willingness to engage in continuous self-learning and the importance of self-development.

In modern society, which is in a state of continuous development, there is a desire of pedagogical reality to correspond to post-non-classical ideals, which entails changes in strategies, values, meanings and models of behavior in the educational sphere [Bajborodova, 2021]. However, the analysis of educational processes is often carried out using outdated classical methods of pedagogy, which, recognizing

learning as an endless process, do not sufficiently include data on cognitive processes and tend to pragmatic interpretations, operating under the Olympic motto «Faster, higher, stronger!». In our understanding, the emergence of a new research methodology in the field of lifelong education is expected at the intersection of various fields of knowledge, mainly through applied research, which is aimed at implementing the principles of transdisciplinarity [Rozin, 2020].

Educational researchers seeking new approaches and ideas are faced with the need to determine which aspects of «lifelong learning» should be studied and for what reasons. This involves the task of identifying new methodological approaches available in the scientific and philosophical communities and exploring perspectives that offer seemingly paradoxical combinations and interactions of previously independent fields of knowledge. The issue of selecting the most efficacious research methodologies to advance our understanding of psychology and pedagogy within the context of lifelong education continues to be of significant importance.

The development of new directions and subject areas in the education sector is steadily stimulated by sociocultural, environmental and economic factors characteristic of a constantly evolving world. The complexity and unpredictability of modern society are undeniable and do not require additional evidence [Stegnij, 2023].

Research methods

The introductory section identified a number of issues associated with permanent education, which become apparent through an analytical review of documents and information brochures issued by the United Nations and UNESCO, as well as through an examination of materials published on the websites of educational institutions, both nationally and internationally level. The sources consulted for this inquiry include peer-reviewed articles, assessments of studies undertaken in the past three years, and comprehensive discussions on the principle and practice of continuous education. During this investigation, various methodological approaches were utilized to scrutinize the aforementioned documents. These strategies included: a) an examination of terminology usage that bridges the domains of philosophy, socioculture, economics, and pedagogy; b) contemplation of individual educational experiences and endeavors within formal, informal, and incidental learning environments; c) execution of a digital questionnaire targeting experts in December 2023,

which underscored the pressing necessity for a holistic approach to education across one's lifespan, particularly given the backdrop of a global pandemic; d) a detailed content analysis of the extensive feedback furnished by respondents of the survey.

In the context of the scholarly project «Modern Views on Lifelong Education» a cohort of experts with a focus on the educational hierarchy and distinguished scholars from renowned Russian higher education institutions were consulted to provide their expertise. A cohort of seventy-eight seasoned educators and architects of educational syllabi contributed their expertise by responding to a compendium of open-ended inquiries, which are as follows:

1. Please delineate the domains you deem pertinent within the ambit of lifelong education and elucidate the rationale behind your selection.

2. In your estimation, what are the theoretical and conceptual underpinnings that can be discerned in the realms of science and philosophy today, including the confluence of disparate branches of knowledge?

3. Propose the most efficacious methodologies for the enhancement of extant scientific and practical cognizance in pedagogical sciences amidst the backdrop of accelerating worldwide transformations.

Research results

The investigation has revealed that an abundance of changes within the sociocultural, economic, environmental, and technological domains in recent periods has catalyzed innovation within the educational sector, broadened perspectives globally, and altered the comprehension of interpersonal dynamics within the framework of knowledge exchange. The onset of globalization, the ease of access to information, the convergence of physical and digital spaces, the diversity of educational approaches and cognitive processing methods, the trend of commercialization, and changes in student strategic behaviors have all played a role in the development of new features in the educational terrain

Globalization, convenient access to information, the merging of the material and virtual worlds, the diversity of learning modes and information processing methods, the phenomenon of commercialization and changes in the strategic behavior of students have introduced new characteristics into the educational environment [Baskakova, 2019]. This evolution necessitates the exploration of new research avenues and themes within educational studies in our study, the vast majority of participants (97%) agreed with a certain problem: a significant

lack of data regarding the arguments influencing individual preferences when choosing educational trajectories, methods and pedagogical approaches.

There exists a lacuna in comprehending the cultural nuances of various social layers engaged in the educational process, as well as a dearth of insights into the lived experiences of students and educators in light of the progressing educational benchmarks, notably amid the profound shifts in educational paradigms prompted by the pandemic and the ensuing isolation. Consequently, it is imperative to continuously reflect upon terms such as «lifelong education», «interdisciplinary approach», «personal development», «educational process», «training» and «intergenerational continuity» given that the significance of these concepts is undergoing transformation [Bodrunov, 2022].

Furthermore, it is pertinent to engage in discourse regarding the definitions of pivotal educational subjects of today, which are being shaped within the framework that preserves the distinctions between formal, non-formal, and informal education, and also through the intentional blurring and reconfiguration of these demarcations in academic discourse.

In the discourse of formal education, scholars refer to the systematic exploration of goals, objectives, pedagogical approaches, and underlying significances. Conversely, informal and spontaneous acquisition of knowledge, which is intertwined with life experiences, fortuitously enhances cognitive faculties, thereby advancing the 'zone of proximal development' and fulfilling pedagogical and informational roles [Bryanskaya, 2021]. The fusion of these categorically different approaches gives rise to a variety of individual educational trajectories, which was identified as important by 78% of respondents.

Expert answers to the second question also deserve significant research interest and attention. To improve modern pedagogical knowledge in a rapidly changing world, it is necessary to focus on the most effective approaches. It is pertinent to underscore the significance of interdisciplinary research and expert analysis pertaining to the theoretical and conceptual underpinnings of contemporary science and philosophy [Kondrat'ev, 2022]. In philosophical movements based on the equivalence of knowledge and life, existentialism occupies an important place. It offers a framework for understanding learning as a never-ending process in which every action is an act of learning. In this context, education is seen as a tool for deepening an individual's potential for self-realization, the key to creative development and self-determination. Research aimed at analyzing the exist-

tential differentiation of paths of self-realization and their expansion through lifelong education, which goes beyond formal education and becomes a lifestyle, is promising.

Approximately 43 % of survey participants recognize a synergy between the ethos of lifelong learning and the core tenets of humanistic psychology. This alignment includes a focus on individual uniqueness, the holistic aspect of humanity, the significance of internal experiences, and the inclination to derive insight from one's own life experiences, along with aspirations for personal fulfillment and self-actualization [Moiseeva, 2022].

In this vein, the execution of longitudinal research would prove exceptionally beneficial, allowing for extended observation of educational participants. Such research would facilitate an analysis of the correlation between their individual pathways of personal growth, their achievements of personal and social value, and the educational routes they have either chosen or been assigned.

Lifelong learning is an essential component in fostering a life experience perceived as positive and brimming with opportunities, promoting personal development. The field of positive psychology delves into the mobilization of life's resources to surmount despondency and setbacks, the reshaping of life perspectives, the reorientation of life's focal points, the sustenance of motivation, the perpetual surmounting of personal impediments, and contemplation on accomplishments [Romanova, 2020]. This perspective, which is bolstered by empirical evidence, is intimately linked to the concept of continuous education, as indicated by 37% of survey respondents.

Investigations aimed at enriching our comprehension of the human condition are mirrored in contemporary anthropological literature that intersects with philosophical and psychological discourse. These inquiries enhance the development of introspection, cognitive acuity, and communicative competences, particularly during the critical stages of maturation.

The transformation of the anthropological characteristics of modern man, which is actively discussed by 63% of experts, has a noticeable impact on the cognitive abilities of the individual. This refers to accelerated development, the emergence in children of fundamentally new (relative to previous generations) features of thinking and perception, as well as a slower aging process and an increase in the period of active life.

Digitalization makes significant adjustments to unfamiliar (previously unobserved) patterns of be-

havior and reactions. A number of studies carried out in 2020 highlight that the influence of modern information and communication technologies extends far beyond the technical aspect, affecting the structures of cognitive processes and cognitive aspects of individuality. However, such changes are not always welcomed by experts in the fields of anthropology and psychology. Individuals grappling with the persistent stress associated with global digital integration are compelled to adjust to a diminished capacity for sustained focus on a singular, substantial task [Azoev, 2021]. Cognitive psychology specialists have observed a marked enhancement in the cognitive competencies of the average computer technology user in recent years [Danilaev, 2021].

Concurrently, while there has been an increase in responsiveness, the expansion of peripheral awareness, and a boost in cognitive capacity, this may coincide with a retardation in the evolution of the emotional-volitional and motivational-consumptive realms. Such deficiencies could influence the development of a child as a cognitive entity, particularly during the initial phases of lifelong learning. A significant 87 % of participants in our research emphasize the importance of addressing these critical issues.

Within the realm of pedagogy, there exists a paucity of understanding regarding cognitive processes, which are rigorously examined in the natural sciences [Ardabackaya, 2021]. Pedagogical scholarship is cautiously endeavoring to grasp and integrate this knowledge pertaining to brain functions, cerebral capacity, the operation of the hemispheres, as well as sensory and subliminal responses, among other aspects. According to feedback from 57 % of those surveyed, advancements in cognitive and gender psychology could enhance the advancement of humanitarian educational technologies. These technologies encompass methodologies for the organization of experiences, investigations into the physiological facets of cognition, the recognition of the unconscious elements of cognitive activity, and the combined impact of cognitive structures. The issue of how various pedagogical techniques can affect the development of these structures continues to be of significant interest. Experts suggest that it is prudent to engage in such dialogues within the context of dynamic and synergetic paradigms [Baskakova, 2019].

In such an educational milieu, the learner autonomously ascertains the importance of educational [Karpushova, 2019]. The modern educational process increasingly focuses on the need for independent choice of educational strategies and approaches, as well as on the personalization of the educational

trajectory within the framework of lifelong learning. This trend embraces a variety of educational routes, including vertical advancement, expansion of horizontal connections and parallel mastery of disciplines, and also includes elements of digitalization and principles of openness in the educational process, forming a unique combination of spatial and temporal dimensions, creating a kind of chronotope.

Being in an information and educational environment, a person is constantly in the process of self-discovery. In the context of pedagogical influence, there is a need to diagnose the student's temporal characteristics to determine the suitability of educational decisions, assess readiness to demonstrate the level of knowledge, analyze the stages of individual development, taking into account sensitivity to new knowledge, motivation and desire to continue the educational process.

The findings of a recent survey, with 65 % of participants concurring—an increase observed over the previous six months - underscore the significance of investigating the formation of goals and meaning, the deliberateness of actions and consciousness, the emotional evaluation of one's educational trajectory, and the interplay between an individual's current cognitive stance and their antecedent experiences [Didkovskaya, 2021].

Interdisciplinary and transdisciplinary methodologies are increasingly pertinent, as they address not only the intricacies that emerge from integrating various disciplines within the educational sphere, but also examine the nexus between information technology and communication theory. The successful completion of this assessment is crucial for advancing humanitarian technologies intended to counteract the manipulation of consciousness [Aganbegyan, 2021].

Additionally, there is an increasing focus on developing strategies to maintain and improve the caliber of human resources within the educational arena. Primarily, such research is focused on examining the transformative dynamics and possible alterations in personal identity that arise during interactions between individuals and artificial intelligence.

The alienation of young people from the heritage created by previous generations may have roots in the fact that the knowledge and achievements of mankind are increasingly being transferred to electronic databases, where the custodian is no longer human, but technology. Computers are not yet able to fully sense and share the emotional states of people, especially in areas that require compassion and empathy, for example, in art, which gives rise to problems of sociocultural heritage.

Contemporary young individuals are progressively perceiving education primarily as a means to achieve individual accomplishment, career progression, and economic well-being, while the significance of education for personal growth and societal advancement is often diminished. While these objectives are not inherently conflicting, the consideration of their hierarchical arrangement warrants attention. Concurrently, there has been a notable decline in the emphasis on the cultivation of values such as tolerance, empathy, and the comprehension of others' behavioral motivations. Eric Fromm's maxim «to be, not to seem» takes on particular relevance in the context of the spread of simulation educational activities.

According to experts, in the field of continuing education, attention should be paid to the increasing number of people excluded from active economic activity, including the elderly and youth, who face difficulties in adapting to the conditions of new technological revolutions and are not sufficiently synchronized with modern trends. It is important to effectively and efficiently use the possibly unique experience of these people [Poholkov, 2022].

The intertwined issues of overpopulation and untimely deaths are often recognized within the framework of societal engagements that transcend individual significance. The aforementioned groups of citizens particularly necessitate sustained and systematic educational interventions along with the delineation of their application. To this end, the formulation of an inclusive system that encompasses assessment, motivation, skill enhancement, and lifelong educational integration is imperative.

Investigations situated at the confluence of educational theory, economic studies, and administrative science hold substantial scholarly intrigue.

This is evidenced by the opinion of 63 % of survey participants. Education is seen as an environment for transforming knowledge into intellectual capital, as an opportunity for transforming knowledge into valuable resources. At the same time, there is an awareness of the need to control the diversification of educational forms and institutions involved in lifelong education in order to avoid their uncontrolled development. In this domain, it is imperative to depend on trustworthy data and forecasts of high quality, given that education not only influences individual trajectories but also constitutes an investment in cultural and societal advancement [Merenkov, 2021].

Discussion

During the examination of the conundrum linked with the boundless and open nature of the information landscape, juxtaposed with the paradoxical reluctance of humans to harness its potentially limitless resources, intriguing and promising research avenues emerge at the disciplinary intersections of ecology and psychology, ergonomics and sociology, as well as axiology and cognitive science. To exemplify the constraints in selecting strategies for behavior, one may reference the current educational system, the prospects of which have been scrutinized by upwards of 78% of survey participants. This underscores the imperative to devise strategies for the deliberate crafting of educational milieus and contexts devoid of homogeneity [Ardabackaya, 2021].

The pervasive nature of connectivity and media exchange is increasingly becoming a hallmark of the era marked by the digital revolution. A significant proportion of experts (two-thirds) underscore the necessity of exploring the connections between key pairs of terms: «information and knowledge», «knowledge and education», and «information and learning». This exploration is crucial to establish a unified informational and educational environment that supports the independent intellectual development of individuals engaged in learning.

The informational perspective contributes significantly to addressing issues related to the accessibility, boundlessness, and challenges in managing the deluge of information, as well as the potential alteration of personal value systems and the skewed perception of reality, particularly within the framework of continuous education [Moiseeva, 2022].

Addressing these challenges may involve exploring methodologies for the judicious and meticulous utilization of content, deliberate crafting of informational queries, and intentional engagement with digital resources. Such practices aim to diminish, rather than exacerbate, the ambiguities of life, thereby enhancing overall well-being. Within contemporary scholarly dialogues, the issue of extracting pertinent data from a plethora of sources—often characterized by a state of informational disarray - remains insufficiently examined. The development of a new field called «information pedagogy» is an important step in understanding strategies for the transfer and assimilation of knowledge in the context of the educational process. In this regard, it is necessary to pay attention to issues such as «interactivity», «information technology» and other relevant concepts.

Conclusion

Experts highlight the noticeable lack of methodological frameworks for solving these problems. In areas of interaction between practical problems and various scientific directions, new incentives arise for studying the educational space. In response to the questions raised at the beginning of this study, participants emphasize that only future events, in conjunction with the collective efforts of experts in the field of education, will determine the extent of its effectiveness in overcoming the identified challenges. According to the theoretical framework posited by economists within the domain of institutional theory, advancements in innovation consistently surpass the rate at which institutions responsible for the generation and distribution of sophisticated knowledge evolve [Gromov, 2023]. The academic field acts as a determining factor for the directions of synergy between basic and applied scientific research, following a multidisciplinary approach. Thus, clusters are formed at the intersection of scientific misconceptions and practical needs that accumulate innovative potential, which can also be effective for the field of lifelong education [Rudskoj, 2018].

The lifelong learning space plays a critical role in remaining resilient in the face of technological innovation, environmental challenges and economic transformation. It is a territory where it is necessary to consciously and effectively resolve the inevitable conflicts that arise at the intersection of personal and public interests. In addition, educational activities, supported by scientific developments and practical endeavors, ensure the continuity of human civilization, since both social and biological human existence depends on the transmission of knowledge and the development of productive cognitive processes. Expressed with a touch of pathos, education is envisioned as a profound, enduring, and, in the ideal scenario, perpetual engagement among the individual, society, and culture.

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