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## **Individual educational trajectories in additional education of teachers**

**Abstract:** The theory and practice of modern professional higher and secondary education is actively looking for directions and technologies for improvement. Many scientists and teachers, other subjects and stakeholders of education believe that all social institutions, especially educational ones or those related to education, science and art (culture) should develop in accordance with the risks and requirements, limitations and possibilities of a changing present and unknown, unpredictable future and super-unstable, complicated present. These areas and technologies, as well as education itself, are very diverse. Their reflection and research can be carried out and partially carried out at various levels, in very different and sometimes unexpected angles, transforming not only professional education in itself, but also professional-labor, domestic and other social relationships. The purpose of the study is to understand the problem of studying individual educational paths of teachers' supplementary education in the context of solving problems: 1) to increase the productivity and effectiveness of training and future teachers, 2) to improve education, training and professional work of future specialists and specialists involved in their retraining, as well as 3) the organization and optimization of psychological and pedagogical support of modern educational and other professionally-work teachers in general and further education. Methodology and research methodology. The work includes a multi-level and multi-aspect, system-theoretical understanding of the problems of individual educational trajectories in the additional education of teachers in the context of solving the problems of increasing the productivity and effectiveness of educational and vocational training / retraining and the activities of future and already existing teachers. The proposed study serves as a continuation of the idea of the need for system analysis and the importance of identifying holistic strategies for studying and resolving the problems of building and implementing individual educational paths in the additional education of teachers, including in the context of increasing the productivity and effectiveness of educational training and the activities of future teachers. The results of the study. The paper notes that the centuries-old history of research on ways to optimize education in philosophy, culturology, sociology, pedagogy, psychology and other sciences allows us to identify several leading semantic guidelines that are continuums that are essential for the development and implementation of programs, methods and techniques for the formation of aspects. The article highlights the main binaries of the development and revision of different models and technologies of education as a process and the result of the formation and development of a person as an individual, partner and professional. The studying of the individual educational paths in modern pedagogy and psychology is a problem that should be based on numerous studies of education, training and upbringing) of a person as a person, partner and professional, accumulated by the science of Russia, Kazakhstan, and other countries

of the former USSR and the world as a whole, throughout the emergence and development of education. It is also darkly connected with the interpretation of probabilistic scenarios of future education transformations, the construction of education foresight projects.

**Keywords:** individual educational trajectories, individual educational route, additional education, psychological and pedagogical support.

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## **Introduction**

The theory and practice of modern professional higher and secondary education is actively looking for directions and technologies for improvement. Many scientists and teachers, other subjects and stakeholders of education believe that all social institutions, especially educational ones or those related to education, science and art (culture) should develop in accordance with the risks and requirements, limitations and possibilities of a changing present and unknown, unpredictable future and super-unstable, complicated present. These areas and technologies, as well as education itself, are very diverse. Their reflection and research can be carried out and partially carried out at various levels, in very different and sometimes unexpected angles, transforming not only professional education in itself, but also professional-labor, domestic and other social relationships (Arpentieva, 2018; Luksha, Kubista, Laszlo, 2018).

## **The purpose of the study**

The purpose of the study is to understand the problem of studying individual educational paths of teachers' supplementary education in the context of solving problems:

- 1) to increase the productivity and effectiveness of training and future teachers;
- 2) to improve education, training and professional work of future specialists and specialists involved in their retraining, as well as
- 3) the organization and optimization of psychological and pedagogical support of modern educational and other professionally-work teachers in general and further education.

## **Methodology and research methodology**

The work includes a multi-level and multi-aspect, system-theoretical understanding of the problems of individual educational trajectories in the additional education of teachers in the context of solving the problems of increasing the productivity and effectiveness of educational and vocational training / retraining and the activities of future and already existing teachers. The proposed study serves as a continuation of the idea of the need for system analysis and the importance of identifying holistic strategies for studying and resolving the problems of building and implementing individual educational paths in the additional education of teachers, including in the context of increasing the productivity and effectiveness of educational training and the activities of future teachers (Vildanov, Safin, Korchagin, Abitov, 2014; Khrapal, Sharifzyanova, 2015).

## **Results of the study**

Various aspects of the problem of studying individual educational trajectories in the additional education of teachers are addressed, but directed, practically not considered in a significant number of studies on the training and retraining of teachers. In modern education, the idea of individual educational trajectories is actively used.

Educational trajectories of training professional teaching staff are studied both in general and in the field of (re) training of specialists of different levels and professions (Vildanov, Safin., Korchagin, Abitov, 2014; Khrapal, Sharifzyanova, 2015). A comparative study of the features and processes of the development and implementation of an individual educational trajectory in the implementation of educational programs for the humanitarian and social sciences is also very promising (Andronov, 2015). It is noted that general academic educational programs and technologies, for example, competitions, act as a tool for constructing new

educational trajectories (Gaziev, Shoptenko, 2016; Finikova, 2019 and others). The implementation of individual educational trajectories is considered as a condition for the development of the socio-psychological competence of the student in the educational process of the university, a condition for the formation and development of the ability to learn and learn, build relationships with teachers and other students, etc. (Babenko, 2016). Particularly interesting are the design models for pupils and students of individual educational trajectories as a means of forming and developing their educational independence (Ignatovich, Grebennikova, 2018).

Very important and interesting are the problems of designing students' individual educational paths in the context of taking into account the socio-cultural conditions of the educational environment - a very important part of the research (Sergeeva, 2019). Designing and evaluating an individual educational trajectory in an adaptive electronic educational course, in the conditions of distance learning and education mediated by digital technologies (Esin, 2018; Koblova, Kataeva, Shesheneva, 2013; Sinchurina, 2019) - one of the interesting opportunities for the development of IOT in general and additional education. The problem of choosing individual educational trajectories by students in the context of international educational activity is very relevant here. The electronic educational environment is an important condition and assistance in building and implementing (including reflection and correction) an individual educational path, including in a cross-cultural context (Zharov, Taratukhina, 2014; Khrapal, Sharifzyanova, 2015).

The problems of individual educational paths are considered in the context of the implementation of competency-based and other practice-oriented approaches, including when using information-digital educational systems / environments. Yu.V. Tolbatova describes, for example, the competency-based model for a student to determine an individual educational path in a higher educational institution (Tolbatova, 2012).

In modern education, the main processes in general and additional education, including the education of teachers, are:

- Individualization of education (the need to build an individual educational path), humanization and humanization (the transition from the concept of functional, pragmatic preparation to the concept of human development as a person and further as integrity), the general orientation of higher education towards the development of a future specialist as a person, and not just a professional;

- Integration processes in education (interdisciplinary communications and integrated courses, meta-subject, synergistic approach, non-linearity as the presence of optional disciplines in the curriculum, the possibility of each student participating in the formation of their individual curriculum, and co-creation of knowledge and skills already in the learning process and education at school and university), the development of advanced and continuing education, its intensification,

- Fundamentalization as a systemic, multilevel and multidimensional enrichment of the educational process with fundamental modern knowledge and skills developed by fundamental sciences and practices, appropriation of the idea of world unity, manifested in universal interconnection in the field of non-living, living, spiritual, correspondence of the content of university education with modern and predicted trends in the development of science and production;

- The rational use of traditional and modern teaching methods and means, the optimal combination of general, group and individual forms of organization of the educational process and the internationalization of education, (increased multiculturalism, increased social and educational-professional mobility, compliance of processes and results of training specialists with requirements that are presented in a particular field professional activities, ensuring their competitiveness

- Education is the unity of education and training for oneself and others. It is fundamentally incomplete and open, despite the fundamental nature of primary knowledge about oneself, people, and the profession received at school and university, a person has been studying all his life. Pedagogical education is a type of education necessary for all people, since all people develop and act as subjects of continuous becoming themselves as a subject of culture, continuous improvement - self-realization and self-actualization.

Moreover, all modern trends (including those highlighted by us as the most general and others, particular ones) have numerous and very solid foundations in pedagogy and education of the past. The centuries-old history of research on ways to optimize education in philosophy, culturology, sociology, pedagogy, psychology, and other sciences makes it possible to single out several leading semantic landmarks that are continuums of principle for the development and implementation of programs, methods and techniques for formulating aspects. We can include the following to them:

1) education is considered as a single process and the result of training and education of a person in which these parties are closely related.. As wrote Yu.M. Lotman (Lotman, 2003; Lotman, 2010), there are schools of knowledge and schools of conscience, which is especially important when teaching a person to work with other people: "The humanities exist in order to provide humanity with a continuous ethical memory, without which it is unthinkable, without which it will not survive. Memory is expressed in the fact that we know what we write, what we receive from our ancestors and pass on to our descendants. This is the culture.... Humanitarian knowledge is organically linked to conscience.... Humanities alien to moral and ethical problems are professionally unsuitable " (Lotman, 2003 p. 230), and each time brings to life certain accents associated with a deficiency of one or another understanding of the world (Asmolov, 2018; Asmolov, Logvinova, 2016). As noted by A.N. Leontyev, "Today there is a crisis of education. The very essence of the education crisis is the impoverishment of the soul when enriched with information " (Asmolov, Logvinova, 2016, p. 9). Therefore, a modern teacher is a person who provides a trinity of functions: a) motivation and motivation of a person to develop, to learn and work, b) his orientation and support of development, as well as 2) help in updating competencies, learning how to learn. Therefore, education and upbringing are now, as always, closely related in such a way that the quality of education and the quality of education are directly correlated: for example, "deep", active and creatively oriented learning, unlike superficial, reproductive, passive learning, is not simply the transfer by the teacher as the subject of education and training of "objective" knowledge and skills, meanings in a certain subject-professional field, but also broadcast, the dialogue of the "subjective" meanings of all subjects of education, the search for truth in the image communicative interaction as a dialogue between communities and people, sciences and concepts, etc.;

2) education is directed to the formation and development of a person's ability to appropriate and master the experience of past generations, as well as to process this experience, creatively transforming it, becoming a subject of culture, and not just its object; education itself can act primarily as a "training" education, aimed at transferring knowledge and skills, the formation and development of competencies and "human capital", and as an educative education, including motivating (Asmolov, Logvinova, 2016);

3) education makes sense the transfer of global, universal and universal scientific, theoretical and practical knowledge, the teacher is a mediator between generations and cultures. However, there are a number of ethnopedagogical educational systems, as well as divisions of education into stages, types, etc., each of which is aimed at educational interaction regarding a separate part of reality, for example, pedagogical;

4) education is aimed at the formation and development of a person as a psychophysiological (individual) and cultural-historical (social) integrity: on the development of a person as a unique spiritual-cultural and autonomous corporeality and more or less unique psychophysiological properties of the creature, its self-realization (in modes of self-realization and self-actualization), as well as on the formation and development of man in the context of the tasks of realizing his social being (being a subject and object of social influences Interactions);

5) education is aimed at becoming a person by a person, a partner and a professional, all these aspects of the formation and development of a person are closely related and not possible without special training and education - the transfer, appropriation and creative transformation of human meanings of human life;

6) education is both individualized and standardized. So, the modern Federal state educational standards, which in Russia and Kazakhstan begins to be actively transformed from 2005-2006, are, first of all, a new ideology and methodology of education and life in general. It is based on the postulates of cultural-historical psychology and methodology of understanding the world of such scientists as L.S. Vygotskiy (1982, 2983, 2003), A.N. Leontiev, V.V. Davydov (1996), V.P. Zinchenko (2002), A.A. Leontiev (1983) et al.. At the same time, standards begin to converge with the sciences, primarily the pedagogical ones: they reflect the most modern trends in the sciences of education, and also offer new ways to build relationships and behavior in a world where the key challenges are the challenge of uncertainty, complexity and diversity. Therefore, it is important to see the role of standards in the logic of variative developing, motivated education as a key trend in supporting the diversity of individuality in the formation of a person as a person, partner and professional (Asmolov, Logvinova, 2016).

7) There is general education and additional education, between them, of course, there are multiple intersections and interconnections, but the transfer of work forms, criteria for evaluating school and university general education to additional is unproductive and inefficient. The key to any education is motivation, both general and additional education are devoted to its development. However, they implement this task in different

ways. The integration of additional education with school and university is important, but should not lead to their mutual dissolution: for general education, the leading line is the line of training, including professionalization, familiarization with the standards of social and professional life, to the needs of society, and for additional - the line upbringing, socialization, including self-preparation of a person for life, to minimize the risks of development and life in a changing world, these are formations of one's choice. The methodological foundations of their integration can be found, for example, in the works of anthroposophists, in the writings of D. B. Elkonin (2013) and J. Heyzinga (2019), about game activity as a methodology and educational strategy, in studies of practice-oriented education, etc. (Avdulova, 2018; Arpentieva, Karpenkova, Nichiporenko, Gasanova, 2016; Gasanova, 2020). There is much more technology in continuing education than basically, something can be borrowed, but one of the problems is the expertise and validity of the development and implementation of programs of additional, not just general education.

In our opinion, the development and implementation of individual (personal) trajectories of education of teachers in additional education (Arpentieva, Kassymova, Lavrinenko, Tyumaseva, Valeeva, Kenzhaliyev, Triyono, Duvalina, Kosov, 2019; Arpentieva 2018; Kassymova, Yurkova, Zhdanko, Gerasimova, Kravtsov, Egorova, Gasanova, Larionova, Arpentieva 2018):

1. - represents a systematic activity that requires for its successful implementation to take into account the totality of its formal, procedural, substantive and effective aspects;

2. the development and implementation of individual (personal) trajectories of teacher education in additional education is a systematic activity that requires for its successful implementation (direct or indirect) participation and consideration of the characteristics of all subjects of the educational system (students and their families, teachers and other educational specialists institutions, administrations of the graduating educational institution and representatives of regional and federal educational bodies).

3. formal, procedural, substantive and productive aspects of the development and implementation of individual (personal) trajectories of teacher education in successful continuing education are closely related;

4. individualization of the educational path - this is the task solved by students in dialogue with the educational institution and its specific representatives in the form of 1) teachers involved in the development and implementation of more or less individualized educational programs; 2) the administration, directing and regulating the processes of development and implementation of various educational programs;

5. When developing and implementing individualized educational programs or their components within the framework of an individual educational path (route), the following features of students should be considered:

a) the value and target orientations of students learned during family and school education and training, their desire to achieve individually and socially significant goals, including in the context of self-actualization (the desire for existential fulfillment, development as a person, partner, professional) and self-realization (striving for social success, career and social growth);

b) subject-vocational orientations, their inclinations and abilities that encourage them to focus their main attention and activity on particular subject-specific aspects of the world, including inclinations and abilities that have developed in students under the influence of family and school education and upbringing ("immediate environment");

c) competencies and meta-competencies of students, namely the knowledge and skills that students have at one stage or another of becoming a person, partner and professional, including the ability to learn and learn, reflectivity, etc.), "zones of proximal development" for the successful implementation of the trajectory and the development of one or another (quasi) professional activity, competencies and meta-competencies, extracurricular conditions for their development as "informal" contributions of the immediate environment of students in the formation and development of these competencies;

d) successes and failures of the personal, partner and educational-professional formation and development of students and reference / significant persons (members of their families, friends and school tutors), vitality and preferred strategies for coping with various types of life difficulties and risks (personal, partner and vocational).

6. When developing and implementing individualized educational programs or their components within the framework of an individual educational trajectory (route), the following features of teachers, psychologists, social workers, and other specialists involved in the educational process, including

representatives of the administration and regional and federal authorities of educational organizations, should be taken into account (Arpentieva, Karpenkova, Nichiporenko, Gasanova 2016; Gasanova R.R., 2020):

a) the value and target orientations of teachers and representatives of the administration of the educational institution, as well as regional and federal bodies of administration of educational institutions, their desire to achieve individually and socially significant goals, including in the context of self-actualization (the desire for existential fulfillment, development as an individual, partner professional) and self-fulfillment (striving for social success, career and social growth), which they relay to students in the framework of bnoy and extracurricular situations;

b) subject-professional orientations of specialists, their inclinations and abilities that encourage teachers to focus on their particular subject-specific aspects of the world, the creative and reproductive abilities of mentor teachers relayed to them by students;

c); competencies and meta-competencies of specialists, namely the knowledge and skills possessed by teachers as individuals, partners and professionals, including the ability to learn and learn, reflexivity, etc.);

d) successes and failures of personal, partner and professional-career formation and development and career formation and development of teachers and other specialists, vitality and preferred strategies for coping with life difficulties and risks of various types (personal, partner and professional) of teachers.

It is important to understand - how much an adult makes elections, how much an adult - helps others to make them, how developed and confirmed their quality, effectiveness - the education program and the educational system as a whole. When developing and implementing individualized educational programs or their components within the framework of an individual educational path of a teacher in additional education, it is necessary to take into account the possibilities and limitations of the development and implementation of individual educational routes and methods for their implementation:

a) value and target orientations of created and implemented programs that form individual educational trajectories and their meaningful content ("route");

b) subject-specific classical and innovative programs that are existing and accessible for development and application, that is, specific routes of (future) specialists, as well as the forms / formats and training technologies that they implement that the educational organization / educational complex can offer / offers to students;

c) competencies and meta-competencies implemented within the framework of these programs, namely the knowledge and skills that are included by program developers and which are aimed at developing students as individuals (general cultural competencies related to the ability to understand and self-understand, as well as to manage oneself and the world) as partners (competencies in the field of relationship building and relationship management) and as professionals (professional competencies and metacompetencies), including the ability to learn and learn, reflective and critical abilities and self-management abilities, etc.);

d). technological security of the individual trajectory of education (route), experience in implementing these programs, the level of their testing and the possibility of operational correction and variability both at the level of technology and forms of education, and at the level of content (competencies) (Arpentieva, Kirichkova, Kosov, Feshchenko, Golubeva, 2018; Arpentieva, 2019; Kassymova, Stepanova, Stepanova, Menshikov, Arpentieva and Merezhnikov, Kunakovskaya, 2018; Kitsantas, Dabbagh, 2010; Lee, Blackwell, Drake, Moran, 2014).

### **Conclusion**

The studying of the individual educational paths in modern pedagogy and psychology is a problem that should be based on numerous studies of education, training and upbringing) of a person as a person, partner and professional, accumulated by the science of Russia, Kazakhstan, and other countries of the former USSR and the world as a whole, throughout the emergence and development of education. It is also darkly connected with the comprehension of options and scenarios for the development of education in the future, the construction of foresight projects of education.

## **Индивидуальные образовательные траектории в дополнительном образовании педагогов**

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**Аннотация.** Теория и практика современного профессионального высшего и среднего образования активно ищет направления и технологии совершенствования. Многие ученые и педагоги, иные субъекты и стейкхолдеры образования считают, что все социальные институты, и особенно образовательные или имеющие отношение к образованию, науке и искусству (культуре) должны развиваться в соответствии с рисками и требованиями, ограничениями и возможностями изменяющегося настоящего и неизвестного, непредсказуемого будущего и сверх нестабильного, усложненного настоящего. Эти направления и технологии, как и само образование, весьма разнообразны. Их рефлексия и исследование может осуществляться и частично осуществляется на различных уровнях, в самых различных и порой неожиданных ракурсах, трансформируя не только профессиональное образование само по себе, но и профессионально-трудовые, бытовые и иные социальные взаимоотношения. Цель исследования – исследование проблематики роли и возможности построения и реализации индивидуальных образовательных траекторий педагогов в дополнительном образовании в рамках постановки и разрешения задач увеличения результативности (продуктивности и эффективности) учебно-профессиональной подготовки и деятельности будущих учителей, совершенствования образовательных систем, учебно-профессионального труда будущих специалистов и специалистов, участвующих в их подготовке и переподготовке, а также организации и оптимизации психолого-педагогического сопровождения современной образовательной и профессионально-трудовой деятельности педагога в общем и дополнительном образовании. Методика и методология исследования. Работа включает в себя многоуровневое и многоаспектное, системно-теоретическое осмысление проблематики индивидуальных образовательных траекторий в дополнительном образовании педагогов в контексте решения задач повышения продуктивности и эффективности учебно-профессиональной подготовки / переподготовки и деятельности будущих и уже работающих учителей. Предлагаемое исследование служит продолжением представления о нужности системного анализа и важности обнаружения целостных стратегий изучения и разрешения проблем построения и реализации индивидуальных образовательных траекторий в дополнительном образовании педагогов, в том числе в контексте повышения продуктивности и эффективности учебно-профессиональной подготовки и деятельности будущих учителей. Результаты исследования. В работе отмечается, что многовековая история исследований путей оптимизации образования в философии, культурологии, социологии, педагогике, психологии и иных науках позволяет выделить несколько ведущих смысловых ориентиров, представляющих собой континуумы принципиальных для разработки и реализации программ, методов и методик образования аспектов. В статье выделяются основные бинеры разработки и пересмотра разных моделей и технологий образования как процесса и результата становления и развития человека как личности, партнера и профессионала. Проблема изучения индивидуальных образовательных траекторий в современной педагогике и психологии, – это проблема, которая должна опираться на многочисленные исследования образования обучения и воспитания человека как личности, партнера и профессионала, накопленные наукой России, Казахстана, и иных стран бывшего СССР и мира в целом, на всем протяжении возникновения и развития образования. Она также темно связана с осмыслением вероятностных сценариев трансформаций образования в будущем, построением форсайт-проектов образования.

**Ключевые слова:** индивидуальные образовательные траектории, индивидуальный образовательный маршрут, дополнительное образование, психолого-педагогическое сопровождение.



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