

## THEORETICAL ASPECTS OF FUTURE TEACHERS INTELLECTUALITY DEVELOPMENT

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**Abstract:** The purpose of the study is to identify the main problems and prospects of the education system in the context of innovative development, as well as intellectualism of future teachers. The authors of the article conducted a factor analysis of the ongoing reforms in the education system. The transition of the economy to the innovative way of development and the overall socio-economic situation in Kazakhstan and other countries requires a rethinking of some priorities prevailing in politics and focusing on building a new type of society based on the development and mutual integration of three main elements such as education, innovation, and research. These elements are impossible without intellectualism and critical thinking. The formation of innovation policy should contribute to the development of a set of measures in the system of higher professional pedagogical education that organize and stimulate innovative activities and promote the integration of education in the scientific and technical space. This integration process will serve as the basis for the formation of the strategy and tactics of innovative development based on intellectualism and critical thinking.

**Keywords:** intellectualism, personality formation, pedagogical education, innovative development, fundamental knowledge.

### 1 Introduction

It is necessary to develop and create more and more civilized conditions for the development of the invaluable mental capital inherited from the former education system. Given these external and internal challenges, the education system is going through a period of deep and phased strategic modernization. Moreover, since the core and the basis of the educational process is the formative and training process, its restructuring always plays a key role.

Modernization should affect all levels of the educational process and especially primary and higher ones. The period of youth should be the subject of special state responsibility because the foundation of the future is laid in the present. Regardless of internal and external circumstances, global crises, climate change, displacement of magnetic poles, growth of anthropogenic impact on the environment, etc., the absolute priority is to ensure the synchronous development of the intellectual, physical and social components of the young generation for the formation of harmoniously developed personalities, builders of the future of humanity. In a broad sense, the history of the civilized development of humanity is a continuous process of expanding consciousness, which was provided by the developing contours of the educational system based on the continuous growth of the level of cultural and technological development of human society.

In general, as the history of human development shows, all its education systems have always been aimed at the formation of a harmoniously developed personality for their epochs, in accordance with the tasks of development and the challenges of time. As the level of scientific, technical and cultural development of humanity increases, there is a steady increase in time spent on the educational process. In the early stages of the Industrial Age, the time spent on human education was a necessary condition for the formation of a harmoniously developed personality. In addition to basic fundamental

knowledge, it is also necessary to form intellectual, physical and social competences, which takes about 27 years (from the age of 3 to 30 years) or almost half of the active human life. Such is the "life fee" for the formation of a person fitted to the conditions of competitive functioning in the new environment. The development of new technological paradigms implies the need to modernize constantly the system of pedagogy by expanding the use of new educational technologies. The education system in the period of global development will certainly require the application of knowledge and experience of the whole of Humanity in the pedagogical activity through a wide exchange between scientists, teachers, schoolchildren, and students, borrowing new curricula and advanced learning technologies and practices. A graduate of the national education system must have all the knowledge and skills similar to those adopted in advanced educational systems of developed countries of the world, and only then he/she will be able to compete on equal terms in the global economy of the 21st century.

The most important condition for the successful implementation of the trajectory of education is the correct choice of the type of strategy for building an education system, which should go one step ahead in relation to the type of economic development. Often in world practice, people are trying to achieve accelerated development or a modernization breakthrough in the development of the national economy, while continuing to maintain the inertial type of development of the education system. In this state, the existing education system cannot adequately contribute to economic growth and turns into a deterrent to the current and further development of the national economy. It is known that during transitional periods and periods of growth and modernization, a significant change in the structure of the economy takes place: new technologies are created, new goods and services are produced, new markets are developed and information communications are intensively formed, which in total radically changes the requirements for the level of training and retraining. (1-2) Under these conditions, the level of development of the education system should be ahead of the level of economic development; this should be the norm for future success in economic development since a lag in education always leads only to the restraining of the development of any type of society.

Today, when Kazakhstan and other countries enter a new stage of their development, complex studies in various areas of social development are particularly relevant. One of these topical issues is the problem of the formation and development of an intellectual nation, the support of a state, the basis for the further development and prosperity. This problem is multifaceted; it covers many areas, such as the formation of intellectual society, the multiplication of the people's intellectual potential, and the strengthening of the media information policy for forming the richest intellectual nation.

In the modern world, human capital is one of the most effective factors of socio-economic and political development. It has become the main instrument for the formation and development of the innovation economy and the knowledge economy as the highest stage in the development of the world economic system today. The basic development methodology of the United States and leading European countries is based precisely on human capital, which accounts for more than 70-80% of their national wealth. (3)

It can be stated for sure that concern for the development of human capital is one of the foundations of building a new society. (4-5) The three basic aspects of the formation of an intellectual nation are a breakthrough in the development of the education system, the development of science and the increase of the country's scientific potential, and the development of an innovation system. (6-7) These areas should constitute the main vectors of scientific-pedagogical research in Kazakhstan and other countries. The strategic task of any complex research related to the development of intellectualism is to trace the

patterns of development and improvement of social processes taking place at a given time in society.

The need to understand and comprehend social change is acutely felt by all social scientists and educators. The results of large-scale empirical research will certainly become the basis for building the concepts of the transformation of society and pragmatic technologies for the regulation of the modern historical process including the development of intellectualism of future school teachers.

## 2 Materials and Methods

At the present stage of development of society, it is necessary to abandon the economic paradigm of education. The most important paradigm of science should be the original, unique personality with an individual system of values, personal meanings, and attitudes. Therefore, the basis of the learning process should be technology that can ensure the development of personal potential: the inclinations and abilities of a growing person.

In that light, science needs to rethink theoretical positions, adapting them to the practical application in the pedagogical process. R.A. Gilmanov (8) notes that pedagogical science is still largely at the level of empirical phenomenological research. The quest for quantitative certainty of qualitative pedagogical patterns is a vital necessity. Without scientifically based measurements, an objective analysis of the pedagogical process is impossible. (8) Hence, the task of translating pedagogy from the level of an empirical description of observed phenomena at the phenomenological level, their qualitative explanation and verbal description to the level of modeling the essence of phenomena with quantitative methods for describing and applying models is put forward. In science studies, modeling the essence of phenomena with quantitative methods of description is the third step in the formation of scientific knowledge. The fourth step is the design of technology that in practice can provide the detection or tracking of functioning or the implementation of pedagogical patterns. The peculiarity of pedagogical processes is the impossibility of their absolute reproduction in all the details of research.

One of the first attempts to give a theoretical understanding of developmental education based on a peculiar understanding of the nature of humans, society, and education was undertaken by the ancient Chinese philosopher Confucius. In Confucianism, education is understood as the development of human qualities given by nature. He considered these qualities as a natural material for educating a perfect person. Confucius anticipated the idea of the need to find a good quality in every child and try to maximize it. Human essence must be developed in every person. Human is the most perfect being on earth, who has the right to unhindered development of all his powers and talents. Learning and development appear as a system of dialectically interconnected aspects of one process. Education is the leading driving force of mental development and of the formation of the totality of personality traits.

The process of personal development, i.e. the assimilation of experience of previous generations, has its own laws in terms of the sequence of its deployment; it has its stages, due to the age characteristics and logic of the material being mastered. At the same time, personal development is one of the main functions of the activity. The development of the subject himself/herself is a product of activity. P.Y. Galperin (9) noted that any activity can be called learning, "since, as a result, the performer of the activity acquires new knowledge and skills or previous knowledge and skills acquire new qualities."

Not all activities are suitable for the formation of positive qualities. Therefore, a significant role in the modern concept of education is played by a principle concerning the leading type of activity that provides the necessary conditions for the successful development and formation of personality. Learning combined with other activities provides such conditions for a wide age range.

The development of self-awareness is studied as part of the development of the intellectual aspect of personality since the concept of "personality" as a cultural and social education is equal to self-consciousness, and what is commonly called personality is nothing other than the self-consciousness of a person. At the same time, in the process of developing self-awareness, the control of one's own psyche and one's own behavior occurs, the dependence on external factors decreases. Therefore, among the most important elements of personal development, the development of will is distinguished, which allows one to act under the influence of one's own worldview. The fundamental unit of a personality being formed is the law of construction and development of higher mental functions. L.S. Vygotsky (10) insisted on the fact that personality does not come down to individual functions and protested the view of the combination of these functions as "a bundle of cut branches put in one vase." L.S. Vygotsky (10) defined the system underlying the personality formation as not branches but shoots of a growing tree having their own developmental logic different from the mechanisms of "implanting cultural forms of behavior" from the outside to the inside. Thus, development should be understood as a process where any subsequent change is associated with the previous one and the present, in which the previously broken personality traits manifest themselves, that is, "every new development step is directly determined by the previous step, by all that is already broken and originated in development at the previous stage." (11)

In the theory of developmental learning, the basic concepts are learning and development. It is generally accepted to define learning as a joint activity that ensures the assimilation of knowledge and the mastery of ways of acquiring knowledge. Relations in the learning process are indeed a joint activity. The essence of such relations in the traditional system of education is that "the teacher leads the students to the intended goal (and the more firmly and confidently he/she does it, the better), while the students follow the teacher (and the more precisely they follow his/her instructions, the higher their chances of success are)." (11) In the system of developmental education, the essence of the relations between teachers and students is to help determine the next goal and find the best path to it. In the course of the educational process, it is necessary to organize the educational search activity, analyzing the real course of training and building a forecast of its deployment.

The organization of educational activities has a significant impact on the development of personality. There is a principle of holistic learning activities and their impact on development. The formation of learning activities according to this approach implies the independent formulation of learning tasks, comparing different ways of learning actions and choosing the most appropriate one, as well as owning all types of self-control and self-assessment. The most significant factor for intellectual development is not individual aspects of learning activities but holistic activities including the motivational understanding of the learning task, operational (strictly learning) and the regulatory component (control and self-control). Learning performed in the form of a holistic cognitive activity is itself a characteristic of intellectual development.

The educational and cognitive process reoriented to intellectual development is based on the following basic principles: if there is a learning cognitive process, then there is a process of its development. At the same time, knowledge and motives act as conditions for the psyche's development of personality. Levels of intellectual development are defined as the zone of current development and the zone of proximal development.

## 3 Results

In order to solve the tasks, set in the research, it is necessary to strengthen scientific training of personnel, as well as awareness of the significance and role of the humanities, i.e. recognition of a person as the most important social value and the respect for his/her personality. The educational system should provide a high level of training for graduates, in particular, within the

framework of the system of higher professional pedagogical education. To improve the quality of training and the level of integration of the educational services market in services in demand on the labor market, it is important to choose an innovation-oriented way of development of the educational system. (12-13)

The transformation and modernization of the educational space in Kazakhstan and other countries are quite active, and these processes affect both the structures and functions of the educational system as such, the technology of education, and the informative characteristics of the educational process as a whole. However, these processes are not without contradictions, internal and external problems, and this confirms the need for research the development and functioning of all educational systems including continuous ones, networks of educational institutions and, of course, individual institutions.

When paying attention, for example, to the level of humanities knowledge of graduates of secondary and higher education, the inconsistency of the educational system with the requirements dictated by the modern development of society can be noticed. The following disappointing conclusions are obvious, such as poor knowledge of foreign languages, low level of knowledge of the literary normative language, low ability to express logically their thoughts, insufficient knowledge of the world and national history, cultural history and its values, as well as legal, economic and political illiteracy. Given these internal and external challenges, the education system must undergo a deep phased strategic modernization. The formative process is the basis of the educational process, so its modernization always plays a major role.

First of all, modernization affects secondary education, which is characterized by the following areas:

- development of actual literacy of students (for example, in Kazakhstan, for the first time in the territory of the former USSR, a National Action Plan was made up to develop functional literacy for 2012-2016, which provided for the development and reinforcement of pupils' competences, the ability to effectively apply their knowledge in real life situations);
- pilot implementation of e-learning (by the beginning of 2020, a relevant project should cover 90% of schools, digital educational resources such as e-books, libraries, and constant access to the world's best educational resources will be the new attributes of the school education system);
- transition to 12-year education;
- learning English at all levels from elementary school to university. From September 1, 2013, the study of English from 1st year of school is implemented in all Kazakh schools;
- educational work within the framework of the National Plan aimed at forming in general education schools a spiritually, physically and intellectually developed members of society, capable of creative thinking, able to choose the right professional way and ready to develop throughout life;

Practice shows that at present, many institutions of the educational sector, when forming their management system including that related to innovation, use expert-empirical approaches based more on the experience of their own (or competitors'), as well as on the intuition of decision-makers. (14-15) At the same time, it is necessary to develop certain systems of principles and/or concepts that could be used by any higher educational institution in determining their own development trajectory in the external environment, more and more resembling a competitive one, on both the research and educational markets.

The survival and success of a higher education institution is largely related to the selection and organization of three integrated processes in the management system (16):

- quality control;
- innovation management;

- intangible asset management (obtained as a result of research activities).

The latter means the transition of the leading universities in Kazakhstan and other countries to the research university format implying significant changes in the educational process. In developed countries, universities are in fact the powerhouses of basic research. Although applied research is conducted there, it does not seem to be the face of academic science as such. As a rule, research departments of large companies and scientific research institutes carry out applied research.

Fundamental and applied types of research are two completely different types of activities. (17) Fundamental research deals exclusively with the increment of new knowledge, while applied research deals only with the application of proven knowledge. Gaining new knowledge is the vanguard of science, which tests new knowledge, i.e. it is the substantiation and verification of knowledge once obtained, the transformation of current research into the "hard core" of science. A practical application is an activity of applying "hard-core knowledge" to real-life problems. (18) As a rule, the "hard core" of science is displayed in textbooks, teaching aids, teaching materials and all sorts of manuals.

One of the main signs of fundamental knowledge is its intellectualism. As a rule, it has the status of scientific discovery and is a priority in its field. In other words, it is considered to be exemplary and model. (18)

One of the most important problems of higher education is the optimization of the correlation of the fundamental and applied types of research, the transition of education to a holistic picture of life and, above all, to the world of human, culture and the formation of the systemic thinking of an individual. Theoretical and fundamental knowledge can ensure the future existence of humanity in the world. The solution to this problem lies, firstly, in the need to strengthen scientific training. Secondly, it lies in recognizing the significance and role of the humanities, i.e. the recognition of a person as the most important social value, respect for his/her personality, the creation of opportunities for the discovery of abilities. (19)

Taking into account the current state and trends in the development of higher education in the context of the evolution of socio-economic relations, it should be noted that the interpenetration of innovative progress with the processes of training highly qualified scientific and technical specialists has become intensive and dynamical. The market orientation of universities is a determining factor in the designation of their scientific and technical potential. Higher education is the center of science and culture from the standpoint of socio-economic development. The system of professional higher education is characterized by fundamental and multidisciplinary training of students, which will make it possible to continue studying at a university at all subsequent levels. Independent work and individual forms of education share a significant proportion of the academic workload of universities. Taking into account the dictates of time, the shift of emphasis from educational activities to the scientific aspect can allow to solve most of the problems of training and retraining of personnel in accordance with modern realities.

The system of higher education training activities is based on the integration of the innovative potential united in the system of higher education institutions. Accordingly, both strategic and tactical orientations of higher educational institutions are based on a scientific and innovative foundation. (20) Science should be the main activity of the university; therefore, the modernization of the higher professional education system should be oriented towards this. Innovations in this area are an indispensable element for obtaining a high level of specialist training and improving the financial and economic position of a higher education institution.

It is equally important to take into account the opinion of experts about possible priority measures that would increase the

competence of specialists in descending order of importance. In particular, these measures include ensuring a stable and sufficient funding, raising teachers' salaries, providing a modern information environment, modernizing logistics capacity, creating conditions for financial and economic growth in the real manufacturing sector, developing research work in higher education institutions, an appropriate provision with textbooks and teaching aids, refresher training of teachers, renewal of educational standards and programs, toughening qualification requirements for teachers and students, and strengthening the competitive selection of applicants and students. (21) It is easy to see that the first four measures require a significant increase in funding for higher education, and the implementation of the full range of measures (and not only those mentioned above) requires significant institutional changes in the higher education system. The problems of higher education in such countries like Kazakhstan are due to the difficulties related to their transition to a new social system. At the same time, they are not unique in their nature and should be considered in the global context of transforming the foundations of the education system in an information society, taking into account the globalization of politics and economics.

Higher education in its essence is both science, education through science, and science as the goal and result of innovative development. The development of each specific institution of higher education requires the formation of strategies and tactics based on its own innovative potential. Such a potential will strengthen their competitive advantages, will maintain their niche at all stages of innovation development, will predict needs for the forms and volumes of educational services, as well as will develop, rank and replicate products of innovation activities on the market.

The information and research environment form the creative activity of higher educational institutions. (22) The integration of higher education in the scientific and technical space should be organized and stimulated through the formation of innovative policies in the development of a set of measures for the higher education system. These integration processes should serve as the basis for the formation of tactics and strategies for the innovative development of the education system.

#### 4 Discussion

We can say the emotionality of Sudeykin is a special nature, it's not open but it's directed to the viewer. The choreography is unique art of its kind in many respects. The empathy and co-creation play a significant role in the ballet. The artist encourages viewers' activity, realizing this he outlines only basic contours of the psychological state of the characters but otherwise, he relies on the viewer's imagination.

Duo or a group of dancers usually are placed in the foreground of S. Sudeykin's compositions who divides into separate pieces gradually shaded by the sidelined. The duo who comes into the picture, doesn't include "plug-divertissement" and it constitutes its atmosphere, it superimposed on its background exactly. There are no formal protagonists in the pictures. The group is their hero but also the life of this group doesn't exhaust the content of the work. Allegorical figures of animals, cupids, and angels are so

beautiful and significant for Sudeykin, they wove into the character and melody of their dance quite organically, full of the cloth fine narrative because Sudeykin's ballet is a ballet-tale, a ballet joke, a ballet-irony. The dancers know the value of silence, introspection, dive into some state unknown for us.

The topic of the landscape arises in collaboration with the characters. The environment nature in Sudeykin's works is an essential part of that helps him to discover his own original method of understanding and interpretation of ballet story. The picture of the "Ballet" (1910, GRM) is particularly revealing in this regard. Nature and dance are probably the main theme of this work. Its meaning is dissolution state mind of the hero in the environment. The life of nature and the life of the soul, the nature of mood and the mood of dance are equal to each other.

These traits become central here manifested before in other works, their vague contours coagulated, symbolism acquired some kind of poetic visibility. We must not forget that we are talking about sentimentalism in the poetics of which a landscape inspires the soul, calms passions, harmonizes the world. An equal cool color of the "Ballet", giving a symbolist to feel a credo, is an aroma of flower fairy "Blue Rose", it differs from a live color smear "Ballet pastoral" or "Ballet apotheosis". Dancers in white and purple glare looked like hallucinations as they are woven from the water, mist, and fog. They are gently modeled by the artist, lose real contours, dissolve in feathered contours of blue landscape engaging with each other in pictorial and spatial harmony.

"Russian Ballet" (1931, OAM), "Russian Ballet. La Sylphide" (1930, OAM) of K. Somov - these works, as well as works of S. Sudeykin are interesting not so much for the foreshortening theme as expressed in it the artistic view of life is formed by the distance, which the preterit set. That is why the theme of these works isn't the ballet and rather emotional memories of it. A dreamy illumined image of Sylphide returns us to the engravings of the 19th century, to the images of M. Taloni and A. Istomina, the then romantic direction in the ballet. But the fundamental difference between the

works of Somov consists in other, it consists in an effort to see the ballet plot ambiguous, not straight forward and in the unity of the diverse qualities.

#### 5 Conclusion

Psychological and pedagogical knowledge is a specific methodological principle of analyzing practical situations and criteria for evaluating the effectiveness of actions performed by a teacher. It is possible to express real changes in the levels of knowledge and personality formation of students only in psychological terms. Such changes occur in practice and are the psychological result of interaction in the educational environment. Theoretical knowledge determines the level of professional competence of a teacher, which is manifested in his/her ability to navigate in socio-pedagogical situations that are constantly changing, and to solve pedagogical problems quickly and correctly. (23-24)

Cognitive skills are based on developed perceptions, attention, thought, imagination, and memory. These skills form the intellectual basis of a future teacher's professional work. Cognitive skills imply the ability of an individual to perform logical thinking operations (analysis, synthesis, comparison, classification, selection of the main thing, etc.) effectively in the process of mastering the system of psychological and pedagogical knowledge, and problem solving in the process of professional activity. (25) Communication skills help a teacher to communicate with colleagues, students, and their parents, to exchange information and thus to establish pedagogically expedient relations with them.

The development of pedagogical thinking at the preparatory stage in higher pedagogical educational institutions implies, on the one hand, the assimilation of the system of theoretical knowledge and practical skills by future teachers. On the other hand, it implies mastering the logic of pedagogical thinking, which eliminates the spontaneity of learning methods and techniques of pedagogical activity and determines the logic of learning. (26-27) Consequently, the transition to competence-based education actualizes the importance of such a component of the future teacher's professional competence as pedagogical thinking - an integrative characteristic that is based on fundamental knowledge about the features of pedagogical activity, provides a generalized and indirect reflection of professional reality, adequate promotion, and solution of professional tasks. (28-29) This integration implies singling out four interrelated components in the structure of pedagogical thinking:

- cognitive component (professionalism of methodological, psychological, pedagogical, methodical, and technological knowledge, the cognitive orientation of thinking);
- motivational component (professional and pedagogical attitudes, interests, needs, orientation to the manifestation of pedagogical thinking, its development, and improvement as an important value);
- operational component (possession of the cognitive, communicative, organizing, and design skills in the process of implementation of pedagogical thinking and presentation of its results);
- reflexive component (awareness, critical analysis, determination of ways to improve pedagogical thinking and relevant professional pedagogical activity).

The teacher is not only a profession, the essence of which is to transmit knowledge and experience to the younger generation, but a high mission of creating a personality. Given the leadership role of teachers in this activity, society always places high demands on them. These requirements are objective. They include requirements for the teacher's personality and erudition, for the qualities that determine his/her attitude towards children and pedagogical activity in accordance with the moral norms of modern society:

- high civic responsibility and social activity;
- love for children, need and ability to give them the heart;
- genuine intellectualism, spiritual culture, the desire and ability to work together with others;
- high professionalism, innovative style of scientific and pedagogical thinking, readiness to create new values and make creative decisions;
- need for constant self-education and readiness for it;
- physical and mental health, professional performance. (30-31)

Building up such competencies is a long and complex process, which includes the need to adapt, for these purposes, not just individual areas of social and economic policies (primarily, education policy) but also the public environment as a whole. It implies the formation of a "climate" in society, providing freedom of creativity and self-expression, encouraging and rewarding people for their competences and their success achieved through their use.

Modernization of pedagogical education is an integral part of the process of modernization of general education since both processes are based on strategic guidelines for the development of the education system, as well as on planned and implemented innovative projects. The analysis of the conducted research of general and pedagogical education allows to highlight the general results that characterize the essential changes in the education system that occurred during the previous stage of modernization. These results are the following ones:

- 1) Characterization of the modern educational paradigm, new values of the renewing education, namely: understanding of a teacher as an intermediary between students and the culture; understanding of education as a process, the driving forces of which are the search for personal meanings, dialogue and cooperation of its participants; understanding of the educational process as a process of cultural identification of students in the multicultural space of the dialogue of cultures; the formation and development of the cultural identity of an individual; various forms of expression of human individuality.
- 2) Justification of the legality and inevitability of building a general and pedagogical education on the ideas of the competence approach as the current stage of the research on the activity basis of education.
- 3) Characterization of key competencies that are formed in school as the basis for the formation of general professional and special professional competencies of a future teacher at a university.
- 4) Identification of new professional functions and tasks of a teacher in a modern school as the basis for constructing the content of future teacher training.

- 5) Substantiation of the new architecture of the educational process in schools and universities on the basis of a study of the diversity of individual educational routes and the non-linearity of the educational process.
- 6) Identification of the factors that have the greatest influence on the educational achievements of students related to their and teachers' personalities, and to the organization of the educational environment.

The development of the results obtained in the context of the tasks of sociocultural modernization determines the choice of an appropriate methodological basis. This research makes a significant contribution to the development of existing ideas about the continuity of education, the impact of education on the formation of a person, which will allow to discover new development orientations of general and pedagogical education.

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**Primary Paper Section: A**

**Secondary Paper Section: AM**