

Educational Paradigm: Implementation of the Competence-Based Approach to the Higher School System

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ABSTRACT

The educational system of Kazakhstan is now characterized by certain gradual changes of an educational paradigm. The educational paradigm is understood as framework of key provisions and the ideas which are acknowledged by the pedagogical public during the concrete time period and are the cornerstone of scientific research. Change of an educational paradigm includes transition from the education aligned on teaching to the education aligned on training. The criterions for the change of this paradigm are: the education which is more aligned on the student; change of teacher's role; the further definition of the main goal; transition from potential to result; change of the training process. The competence-based approach in education also objectively meets both social expectations in education, and interests of participants of educational process. At the same time this approach conflicts too many stereotypes which developed in an education system, the existing criteria for evaluation of students' educational activity, pedagogical activity of teachers, work of administration. Practice of teaching at the higher school showed that the existing crisis in the field of education for a long time is not only overcome, but still is not even fully realized by most of participants of educational process. Explanatory and illustrative didactic approach still remains the leading model in educational process where activity is transferred as the unique content of training. Certainly, it does not meet requirements of time, moreover, contradicts new laws of practice. Now there is an urgent need to train students in the real ways of thinking (the theoretical, dialectic, logical analysis, synthesis, system approach). Developing their creative abilities (ability to apply the acquired knowledge in any situations, including also independent problem definition, and also search of new ways of tasks solution), increasing professional skills of teachers when they can freely carry out pedagogical activity in standard and unusual situations.

KEYWORDS

Paradigm, educational paradigm, modernization of education, higher education, competence-based approach

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Introduction

The educational system of Kazakhstan is now characterized by certain gradual changes of an educational paradigm. Due to update of this paradigm within the system of high school, the main heading of pedagogical science lies in the field of definition of an activity position which will be conducive to the establishment of complete and system view of professional activity, it's system interaction and the competent solution of new problems and tasks (Blaskova, Blasko &

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Kucharcikova, 2014; Zakirova & Purik, 2016). In view of the above description of a problem relevance, in the course of justification of a new educational paradigm for system of higher education becomes up to date a competence-based approach on a row with modern methodological approaches.

Education is intended to have creative and innovative character (Saliceti, 2015). In the world where variability is the feature for not only scientific and technological progress, but also is a lifestyle for the masses, the main goal for schools and universities became not only to transfer to new generations earlier accumulated knowledge, but also to prepare them for the solution of problems which the personality and society have never met before. The person has to "learn to study" in order that studying was included into fabric of his daily activity. Here is brought to the forefront such concept as "educational and informative competence" which is a part of the complete system of unspaced learning and takes on a great relevance. Development of this competence demands the new approaches which will define educational-cognitive activity of trainees.

Change of an educational paradigm includes transition from the education aligned on teaching to the education aligned on training (Andreev, 2005; Gabdrakhmanova, Kalimullina & Ignatovich, 2016). In a former paradigm the main emphasis was placed on acquisition and transfer of knowledge. The criterions for the change of this paradigm are: the education which is more aligned on the student; change of teacher's role; the further definition of the main goal; transition from potential to result; change of the training process. The education aligned on the student means the shift of accents from teaching (the teachers' prevailing role in "delivery" of knowledge) to training (vigorous educational activity of the student). It is not about practice of independent works of students, traditional for the higher school of Kazakhstan, but about basic reorientation of educational process and a role of the student in it. In this regard the teacher is called to provide both saving his status, and higher level of consultation and motivation of students in the field of practical selection of information, its sources, the organization of adequate educational situations, elimination of the revealed problems (Mirzagitova, Mukhametqaliveva & Tiriqulova, 2015).

The new educational paradigm implements its principles by setting forward the process of increasing the time for independent and practical work of students which allows to be active at seminars and laboratories, to participate in discussions, to seize design techniques (Berulava & Berulava, 2012). In general, experience of creative activity will develop necessary abilities to observe, classify, use symbols, to carry out the reasonable choice, to define and measure. Practical use of knowledge will lead to development of such skills to mark out a problem, to explain its main point, to reveal cause-and-effect relations, to plan ways of solution, to carry out experimental inspection, to model, to analyze and choose the correct decision. Along with it communicative abilities to cooperate with others, to plan and develop an experiment, to draw valid conclusions and to adequately estimate the received results will develop (Tomozi & Topala, 2014).

Background

Modern educational process is characterized by change of an educational paradigm. A paradigm is what unites members of scientific community, a

framework of the basic assumptions, ways of thinking that are commonly typical of members of this community. Therefore, the educational paradigm is understood as framework of key provisions and the ideas which are acknowledged by the pedagogical public during the concrete time period and are the cornerstone of scientific research. Formation of educational paradigms takes place during the mankind masters various ways of interaction to the world (Bondarevskaya & Kulnevich, 2004). Each of paradigms conforms to one or another perception of the world and pedagogical objects.

The main mission of education on each historical stage changed depending on the system of values accepted by human community together with ideas of under what laws the development of the personality by means of education is carried out. It determined the content, forms and methods of training and education, pedagogical thinking, a position of teachers and students, way of life of educational institutions, formed the essence of one or another educational paradigm.

Educational paradigms vary in:

- 1) The education system's aims;
- 2) The ways of achievement of goals;
- 3) Understanding of functions which the education system in society has to carry out;
- 4) Idea of the trainee's place in educational process;
- 5) Nature of pedagogical interaction.

The term "paradigm" became of high-usage in the second half of the XX century. As result happened some "blurring" of initial sense and in many researches "paradigm" was meant as new training approaches and sometimes just new training methods (Gerasimov, 2010). This "blurring" of concepts lead to the establishment of great variety of paradigms in educational system: technocratic, behavioristic, cultural, rationalistic, etc. However, to our opinion, all of them are education models which can be included in the dominating paradigm. In general understanding of the term "paradigm" during the educational system development at a boundary of XX – the beginnings of the XXI century can be allocated two paradigms: classical and innovative.

The classical educational paradigm began to develop in the XVII century as an answer to requirements of the capitalist industrial production development demanding more and more wide circulation of literacy among the population. A problem of knowledge relevance and training of people capable to operate the extending production was brought to the forefront (Demeshko & Ostashev, 2011). From this point and up to the middle of the XX century the main goal of education was to transfer to the student practical knowledge, abilities, skills and to prepare him for future work.

Within the classical educational paradigm which placed emphasis on explanatory and illustrative training was saved up the richest material on didactics and developed interesting techniques of training. The traditional educational paradigm was a peculiar reflection of early industrial production labor organization for which maintenance all people also have to get an education, first of all as performers.

Post-industrial society claimed the values of identity, self-development of the personality, provided ample opportunities of creative activity that demanded need of transition from classical to a new educational paradigm. An idea that the function of education should not come down to the knowledge transfer has strengthened itself in modern society. In system of a classical pedagogical paradigm knowledge was understood, in most cases, as fundamentals of sciences. Many pedagogical theories were guided not by the development of the student as subject of education but only on his achievement of a certain level of knowledge set by the accepted standards.

According to the above-mentioned reasons of classical educational paradigm crisis in the text "About the strategic development of education until year 2020" (Decree of the President of Kazakhstan Republic dated 01.02.2010 № 922, 2010), is brought up the question connected to the need of practical implementation of competence-based approach in higher education of Kazakhstan. In the work "Education of adults: competence-based approach" V. Isaev (2005) in detail considers advantages of the new education paradigm based on competence-based approach among which from our point of view the most important are:

1. Ability to get, build personal knowledge on the basis of diverse, versatile information;
2. Ability to independently set tasks, to integrate the ideas, plans, projects;
3. Ability to acquire the way of thinking leading to discovery of new knowledge;
4. Ability to put, ask questions, to ask for the help the teacher;
5. Ability to use proof methods for the solution of new tasks;
6. Ability to work with information, making its classification and others.

Traditional approach focuses on preservation of an extensive way of development: the more knowledge the student acquired, the higher the level of his education. But in modern conditions from positions of competence-based approach it is defined not by the volume of knowledge, their width, but by the ability to solve problems of varying complexity on the basis of the available knowledge (Lyz, 2005). It is important to notice that competence-based approach does not deny the value of knowledge, but focuses attention to abilities to use them. At such approach the purposes of education are described in the terms reflecting new opportunities of students, growth of their personal potential.

The traditional approach to definition of the purposes recognizes that personal results can be achieved due to acquisition of necessary knowledge. Competence-based approach as the main way considers receiving experience of the independent solution of problems. In the first case the solution of problems is treated as a way of fixing of knowledge, in the second – as sense of educational activity.

Competence-based approach nominates to the first place not knowledge, but the ability to resolve the problems arising in the following situations:

- 1) In learning and explanation of the phenomena of reality;
- 2) At mastering the modern technics and technology;
- 3) In relationships with people, in ethical standards, at assessment of own acts;

- 4) In practical life when performing social roles of the citizen, family member, buyer, client, citizen, voter;
- 5) In legal and administrative structures, in consumer and esthetic estimates;
- 6) At choice of profession and assessment of the readiness for training in professional educational institution when it is necessary to be guided in labor market;
- 7) If necessary to resolve own problems: vital self-determination, choice of style and conduct of life, ways of resolution of conflicts (Zimnyaya, 2006).

Methodological Framework

Theoretic-methodological framework is based on innovative educational strategies, paradigms and concepts: theories of pedagogical planning на (Kozyreva, Rodionova & Tryapitsyna, 2006; Lebedev, 2004), active and personal active approach to education (Saliceti, 2015; Wjinia, 2016; Shepel, 1999), modern concept of competence-based approach (Andreev, 2005; Raven, 2002; Zimnyaya, 2006; Kozyreva, Rodionova & Tryapitsyna, 2006), concept of personal oriented education (Mirzagitova, Mukhametqalibeva & Tiriqulova, 2015; Kartashova, 2015), concept of competent approach to education (Zimnyaya, 2003; Khutorskiy, 2003; Demeshko & Ostashev, 2011), concepts of humanization of professional education (Tomozii & Topala, 2014; Berulava & Berulava, 2012), modelling of professional activity (Frolov & Makhotin; 2004; Isaev, 2002).

Method

Theoretical methods: study and analysis of professional literature and research on the problem of quality of education and competency-based approach; classification, comparison, generalization.

Results

The analysis of literature on history of competence-based approach formation shows all complexity, multidimensionality and ambiguity as of the concepts "ability" and "competence" themselves as well of the approach to process and result of education based on them.

One of the weakest spots of competence-based approach in the higher education is formulation of professional competences. The fact of lack of the general universal formulations creates a situation of destruction of uniform competence-based space of Kazakhstan.

So the problem of competences identification was formed which is difficult for solving without allocation of component structure of this personal new growth. The emphasis on activity essence of competences, on its motivational, ethical, social parties, its bond with personal qualities and dependence on them, existence of a segment of extra substantial aspects of their formation, integrated character of this concept in relation to "knowledge and skills" allow to correlate a concept of "competences" with a concept of "readiness". Most of authors distinguish in structure of long-term readiness (as personal category) such components as motivational, emotional and strong-willed, adjusted behavioral and evaluative (Selevko, 2004). Along with cognitive and behavioral aspects the same components are a part of competence (Raven, 2002). Therefore, it can be concluded that long-term readiness belongs to the competence as the integrative

personal formation (including motivational, emotional and strong-willed, adjusted behavioral and evaluative components) along with cognitive and behavioral aspects, i.e. knowledge, skills.

It follows that competences are better to form in the terms of "readiness and ability" where "readiness" correlates with long-term readiness as integrative personal formation, which includes motivational, emotional, strong-willed, adjusted behavioral and evaluative components, and "ability" correlates with cognitive and behavioral aspects (knowledge about the maintenance of the ability, experience of demonstration of the ability in various situations).

The analysis of approaches to interpretation of concepts ability/competence, definition of component structure of professional competence and its formulation allowed defining concept "competence" in two ways:

- 1) Circle of powers of any establishment or person;
- 2) A circle of subjects in which this person has knowledge and experience.

The concept "competence" includes not only cognitive and operational – technological components, but also motivational, ethical, social and behavioral functions of the trainee. Such broad definition of conceptual maintenance of competence significantly complicates its measurement and assessment as result of training. For example, V. Shepel (1999) in his definition of competence includes knowledge, abilities, experience, theoretical and applied readiness to use the knowledge. V. Bezrukova (1999) understands under competence the possession of knowledge and abilities that allow to express professionally competent judgments, assessments and opinions. E. Zeer, A. Pavlova & E. Symanyuk (2005) mean by professional competence a complex of professional knowledge and abilities, and also ways of performance of professional activity.

We interpret professional competence as:

- Certain mastery, skills, the life experience that allow to judge something, to do or solve something;
- The complex personal resource providing an opportunity for effective interaction with the world in one or another area and depending on competences necessary for this purpose;
- The individual internal motivation to high-quality implementation of the professional activity, the attitude to the profession as to value;
- The adequate education level for the independent solution of the arising cognitive problems and definition of a personal position;
- Compliance to qualifying standards and the established criteria in specific fields of professional activity, the highest degree of readiness;
- Psychosocial quality which means an opportunity to work actively and self-confidence;
- Possession of certain knowledge, professionalism.

Hereby, competence is not the simple sum of knowledge and skills, but a concept of a bit different semantic row. It is real and peculiar to the specific personality and depends on efforts of the person. It can be concluded that in the most general view competence itself integrates cognitive (knowledge), operational (ways of activity and readiness for activity implementation) and axiological (presence of certain values) aspects. Competence is the personal

characteristic, complex of knowledge, abilities, skills and flexible thinking, and abilities are some distant, preset requirements to educational training of the graduate, educational program that build the 'anatomy' of the competence (Kozyreva, Rodionova & Tryapitsina, 2006).

Hereby, if in the most generalized view we define ability as a property (quality), then competence can be considered as the possession of this property which is shown in professional activity. Going off the walls of high school the graduate has to have certain abilities – professional and relevant qualities which will be actualized in professional activity and confirm his competence. It will be logical to use the term "competence" for the characteristic of the expert in his professional activity, and "ability" will be used for designation of basic quality which makes the expert "potentially" competent. Therefore, in our opinion, it is not absolutely correct to speak about mastering competence as it is shown in some researches. It is possible to become competent by mastering some certain professional and relevant abilities and realizing them in experience of specific professional activity.

There is no general consensus in modern science concerning the structure of competence. So, I. Zimnyaya (2003) represents the following competence structure of the expert which pulls together a concept of professional competence with a concept of professional readiness according to its substantial characteristics:

- 1) Readiness for competence demonstration, i.e. its motivational component (it is considered as manifestation of subject forces of the expert);
- 2) Mastery of competence subject-matter – a cognitive component of competence;
- 3) Experience of demonstration of competence in various standard and unusual situations, i.e. its behavioral aspect;
- 4) The relevance to the subject-matter of competence and the subject of its application – the value-semantic aspect of competence acting in the context of motivational;
- 5) Emotional and strong-willed regulation of process and result of competence demonstration (Zimnyaya, 2003).

A. Bermus believes that the most optimal form of representation of professional competence models of the expert is the three-level model which includes following components (Bolotov & Serikov, 2003):

1. The basic competence level that answers the general orientation of the graduate in his future activity and the awareness of the main standards and requirements.
2. The intermediate competence level that answers the correct actions in some standard professional situations;
3. The professional competence that answers the moral and psychological (motivational), intellectual and communicative readiness for professional activity.

In his turn A. Khutorskoy (2003) allocates four general elements as a part of competence:

- The available knowledge of the world and ways of activity;

— Practical experience of implementation of the certain ways of activity, embodied skills of the personality who acquired this experience;

— The experience of creative research activity which is expressed in readiness to solve new tasks that the personality faces;

— Experience of evolving requirements, motivations that cause the subject's attitude to the world and his system of values (Khutorskoy, 2003).

At the same time the researcher specifies the designated general components in aspect of competence information structure of the expert and allocates:

1) The cognitive component which reflects the system of the acquired knowledge necessary for the creative solution of professional tasks;

2) The action-creative component which promotes the formation and development of the various ways of activity necessary for self-realization in professional activity;

3) The personal component which is shown in personal qualities of the subject, in his requirements, motives, his personal orientation;

4) The axiological component which is implemented by providing the conditions that ensure that the personality enters the world of values, which helps to make a choice of the most significant value orientations.

According to A. Khutorskoy (2002), is the personal component is a core element of the specified key abilities.

Speaking about potential use of competence-based approach as a methodological basis of higher education, it is necessary to consider the principle of paradigm plurality. In terms of scientific and standard requirements of this principle, it is appropriate to use competence-based approach in education in a complex with other approaches which are close to it according to their semantic contents and can amplify with it in the means of methodology.

In particular, I. Zimnyaya (2006) proves the need of multiple approaches during the research of the education problems in the context of a four-level methodological analysis concept. It is known that within this concept were allocated following four levels of the specified analysis: philosophical, general scientific, specifically scientific and methodical level itself. According to I. Zimnyaya, there are systems, genetic, evolutionary approaches at the philosophical level. At the general scientific level can be cross-disciplinary, complex, synergetic and functional approaches. To the level of concrete science or a galaxy of sciences, for example, of psychology and pedagogical sciences, can be carried cultural-historical, culturological, personal, activity approaches. At this level can be also allocated those approaches which belong to education, for example, axiological, contextual, hermeneutical, personal and activity. Here can be also referred the competence-based approach as one that defines a resulting targeted orientation of education.

In any hierarchical structure the lower level is characterized by what the upper levels are defined. Therefore, competence-based approach is by definition a cross-disciplinary system. It is characterized by personal and activity aspects, i.e. it has also a practical, pragmatic and humanistic focus. In other words, competence-based approach increases practical orientation of education itself, its pragmatic and subject professional aspect, and in the field of methodology can be

integrated into the system of other methodological approaches (Kolesnikova, 2001).

Competence-based approach is focused on abilities to use the gained knowledge. With such approach the education purposes change and reflect new opportunities of trainees, growth of their personal potential, for example:

— To teach to study, i.e. to teach to solve problems in the field of educational activity, including: to define the purposes of cognitive activity, to choose necessary sources of information, to find the best way of achieving a goal, to evaluate the received results, to organize the activity, to cooperate with other students.

— To teach to explain the reality phenomena, their essence, the reasons, interrelations, using the relevant scientific device, i.e. to solve informative problems.

— To teach to orientate in key problems of modern life – ecological, political, cross-cultural interaction and others, i.e. to solve analytical problems.

— To teach to orientate in the world of the cultural values reflecting different cultures and world views i.e. to solve axiological problems.

— To teach to solve the problems connected with realization of certain social roles (the voter, the citizen, the consumer, the patient, the organizer, the family member, etc.).

— To teach to solve problems which are general for different types of professional and other activities (communicative, search and the analysis of information, decision-making, the organization of joint activity, etc.).

— To teach to solve problems of the professional choice, including preparation for further training in educational institutions of system of professional education.

Such increase of education level also means achievement of new education quality what the program of its modernization is directed to. New education quality consists of new opportunities of high school graduates, in their ability to solve problems which the previous generations of graduates did not solve.

The research of training experience of specialists in modern high schools allowed to allocate the following positions which are implemented in the course of practical realization of the ideas of a new educational paradigm:

— Use of the faculty personal potential in order to update the motivational sphere of students, to develop the professional reflection of the personality;

— Taking into account the priority of students interests and their subject experience during the development of training techniques, formation of educational programs contents, creative projects of an educational and social orientation;

— Mutual respect of teachers and students, creation of relationship on a joint basis of adherents;

— Congruent orientation of thoughts, feelings and aspirations of teachers and students, unconditional positive acceptance of each student;

— Ensuring psychology and pedagogical support of intellectual development and personal maturity of each student;

— Cooperation ensurance in the course of mastering innovative technologies, in joint cognitive activity, in the organization of joint projects, decision-making between all participants of teaching and educational process (Wjinia, 2016);

— Formation of students' responsibility for their attitude to study, for their own contribution to the training process, development of critical evaluation skills;

— Development of "I-professional" in future experts on the basis of their achievements in different types of activity in high school (educational, research, socially important).

Thereby it is possible to mark out new organization principles of the educational process at the higher school taking into account provisions of a new paradigm:

1. Parity, shown in a subject-subject interaction of teachers and students and which acts as the regulating and operating factor defining the directions in professional and personal development of future experts;

2. Multiculturalism, co-authorship of teachers and students;

3. Independence, shown in providing conditions for free work of future experts;

4. Conscious perspective, aimed to form in students the vision of new prospects of their own development (both personal, and professional);

5. Co-adaptations, shown in transformation of the paradigm ideas according to the educational practice in one specific high school.

Discussion and Conclusion

Competence-based (activity) paradigm is the deepest and most developed system of theoretical, methodological, technological and methodical installations at this historical stage of development of paradigms in education.

The competence-based paradigm and the competence-based approach caused by it became the strategic direction of higher education development at the present stage not incidentally. Great technical, technological, manufacturing achievements and at the same time world crisis – economic, social, demographic, captured all spheres of human activity, including also society. They settle a new historical development state which is compared to boundary changes of stage development. Of course the old educational system is not able to work in new conditions. It is not because it is bad but because it does not suit to the present (Kartashova, 2015). Objectively arises rigid need to create a qualitative new system where essentially new purposes, tasks, problems are put and which had not been solved earlier.

The need and timeliness of competence-based approach in education system is now actively discussed (Slastenin, 2004). In their works authors select some essential provisions of competence-based approach in education:

1. The sense of education lies in development of students ability to solve problems in various spheres and kinds of activity on the basis of their social experience which is also the element of their own experience (Lebedev, 2004);

2. Content of education does not come down to a knowledge orientated component, but assumes complete experience of the solution of vital problems,

performance of key (i.e. belonging to many social spheres) functions, social roles, abilities;

3. The sense of the organization of the training process consists in creating conditions for formation in students of experience of the independent solution of cognitive, communicative, organizational and moral problems;

4. Control over educational results is based on the analysis of the education level reached by students at a certain grade level (Frolov & Makhotin, 2004).

Hereby, the competence-based approach in education also objectively meets both social expectations in education, and interests of participants of educational process. At the same time this approach conflicts too many stereotypes which developed in an education system, the existing criteria for evaluation of students educational activity, pedagogical activity of teachers, work of administration. Practice of teaching at the higher school showed that the existing crisis in the field of education for a long time is not only overcome, but still is not even fully realized by most of participants of educational process. Explanatory and illustrative didactic approach still remains the leading model in educational process where activity is transferred as the unique content of training. Certainly, it does not meet requirements of time, moreover, contradicts new laws of practice. Now there is an urgent need to train students in the real ways of thinking (the theoretical, dialectic, logical analysis, synthesis, system approach). Developing their creative abilities (ability to apply the acquired knowledge in any situations, including also independent problem definition, and also search of new ways of tasks solution), increasing professional skills of teachers when they can freely carry out pedagogical activity in standard and unusual situations.

In general everything told allows to note that development of competence-based approach as one of methodological bases of modernization of domestic education (including the highest professional) is timely and perspective without doubt.

At this stage of modernization of higher education competence-based approach needs to be introduced through skilled and experimental work and theoretical and methodical retraining of personnel in order to fulfill the requirements of competence-based approach in system of pedagogical education.

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