

Литература

1. Красота В.Ф., Джапаридзе Т.Г. Разведение сельскохозяйственных животных: учебник для вузов. – М.: ВНИИплем, 1999. – 386 с.
2. Ермаков Айдар. Мясной марш [Электрон. ресурс]. – 2013. – 11 февраля. – URL: <http://mk-kz.kz/article/2013/02/11/810619-myasnoy-marsh.html>
3. Нестеров Андрей. Ветеринарная безопасность превыше всего [Электрон. ресурс] // Аграрный сектор. – № 2 (12). – URL: <http://www.agrosector.kz/zhurnal-onlajn/6-12-zhurnal-a-agrarnyjsektor/item/veterinarnaya-bezopasnost-prevyshe-vsego.html>
4. Анализ отрасли животноводства РК [Электрон. ресурс]. – 2011. – URL: <http://www.rfcaratings.kz/ru/node/45>
5. Теоретические основы кормления сельскохозяйственных животных [Электрон. ресурс]. – 2010. – URL: <http://agrokias.narod.ru/index/0-34>
6. Брагин Юрий. Что мешает развитию отгонного животноводства в Казахстане? [Электрон. ресурс]. – URL: <http://www.kazagrotv.kz/ru/животноводство/item/3785-что-мешает-развитию-отгонного-животноводства-в-Казахстане>.
7. Кочиш И.И., Калюжный Н.С., Волчкова Л.А., Нестеров В.В. Зоогигиена: учебник. – СПб.: Лань, 2008. – 464 с.
8. Султанов А.А. Ветеринарные вопросы развития мясного скотоводства Казахстана [Электрон. ресурс] // Аграрный сектор. – № 1 (11). – URL: <http://www.agrosector.kz/agrarnaya-nauka / stati-uchenykh/item/2012-04-02-15-49-15.html>
9. Даутов Арман. Казахстан претендует на мировое лидерство на мясном рынке [Электрон.ресурс]. – 2011. – URL: <http://www.customsunion.kz/infoprint/4713.html>
10. Жанбуршинов З.А., Мусин Т.И. Казахские бренды: Аулиекольская мясная порода КРС [Электрон. ресурс]. – URL: <http://www.agroalem.kz/article/animal-husbandry/545-kazahskiebrendy-auliekolskaya-myasnaya-poroda-krs.html>
11. Ельдесов Дастан. «Коровье бешенство» Минсельхоза [Электрон. ресурс]. – URL: <http://www.altynorda.kz/news/kazaxstanskije-novosti/korove-beshenstvo-minselxoza/>
12. Елемесов Копмахамбет. Казахстан: Как развивать отечественное животноводство, не наращивая импорт товаров и скота [Электрон. ресурс]. – URL: http://www.kazakh-zerno.kz/index.php?option=com_content&view=article&id=28842:2010-12-24-05-03-24&catid=18
13. Сергеев Фёдор. Казахстан. Утвержден и опубликован Комплексный план проекта «Развитие экспортного потенциала мяса КРС» [Электрон. ресурс]. – URL: http://www.kazakh-zerno.kz/index.php?option=com_content&view=article&id=46563:r&catid=49:popular
14. Поголовье скота и птицы [Электрон. ресурс] // Агентство Республики Казахстан по статистике. – URL : http://www.stat.kz/digital/selskoe_hoz/Pages/default.aspx (дата обращения: 05.2013 г.)
15. Байгожа Айнур. По линии «Казагрофинанс» за пять лет планируется завезти 60 тыс. голов импортного скота [Электрон. ресурс]. – URL: http://kazakh-zerno.kz/index.php?option=com_content&view=article&id=72431&fromfeed=1

THE COMPETENCE APPROACH IN MODERN HIGHER EDUCATION

Stamgaliyeva N.K.

(*Aktau, Kazakstan*)

Аннотация: *Целью статьи является постановка вопроса о компетентностном подходе в рамках образовательного процесса, а также изучение ряда важных проблем, поставленных перед казахстанским образованием в связи с его включением в Болонский процесс. Данная работа представляет собой анализ как отечественных, так и зарубежных источников, характеризующих место и роль компетентностного подхода в современном образовании. Вклад автора заключается в анализе ряда научных источников с целью выявления актуальности данной тематики в рамках философии образования.*

Ключевые слова: *Болонская декларация, компетентностный подход, компетентность, образование, знания, умения, навыки, структура компетенций, функции компетенций.*

Annotation: *The aim of the paper is to pose the question about the competence approach in the educational process, as well as to study the important problems set before Kazakhstan education in connection with its entering the Bologna process. The paper presents an analysis of both native and foreign sources characterizing the position and role of the competence approach in modern Kazakhstan education. The author analyzes a number of scientific sources to identify the relevance of this topic in the philosophy of education.*

Key words: *Bologna Declaration, the competence approach, competence, education, knowledge, skills, structure of competencies, functions of competencies*

The article reports on the theoretical aspects of realizing competence approach concerning specialist training in the higher school. It describes the main reasons of the competence approach appearing as a new category; accounts objective tendencies as causes of the competence approach development; grounds the necessity of changes in the educational conception and content of the specialist training in higher education according to the competence approach.

In recent years, the active discussion takes place apropos theoretical grounding of the content filling of the category competence approach. Let's try to join this process also. In the researches of this problem one single idea according to the essence of this notion hasn't formed yet.

First of all, we need to define the reason why this new category - competence approach - appeared. Nowadays, as never before, the world changes fast. General civilization tendencies influence all the spheres of a person's life and society. To these tendencies V.G.Kremen attributes globalization and humanity transition from industrial to scientific and informational technologies, in the context of which competitiveness, contest and country rivalry take global, all-planet character, and the personality development becomes an index of the progress level of every country.

Transformational processes, in the educational sphere in particular (fast progress, disintegration of states and changes in the geopolitical world map, scientific inventions and introducing them in life) influence the requirements, which were set before education. Now education must form skills to operate new technologies and knowledge among youngsters, be ready to change and get used to new labour market necessities, operate and rule information, to act actively, to pass decisions fast, and get knowledge during the whole life. These processes cannot pass Kazakhstan.

Education priorities are defined in the international conventions and documents and become strategical guidelines of the international community. The signing of the Bologna declaration in 1999 set the beginning of one of the greatest reforms in higher education, which in many cases determines one of the directions of the higher educational development in Kazakhstan. Bologna declaration formed the conception of educational international recognition and issued a demand to academic copartnership to work out mutually corresponding, comprehensible to all criteria of such recognition.

In time of Bologna process different versions of similar criteria began to actively work out, and this new methodology got a name of the competence approach.

The wish to take part in the Bologna process obliges Kazakhstan' educational system to speak in a language, adequate to educational system languages of other countries participants, requires western educational terminology adoption. If for western European notional system the category of the competence approach is natural, which appeared evolutionally in the latest four decades, for the domestic educational tradition, which uses another system of notions for the description of scholarship, professionalism, including the famous categorical triad "knowledge, skills, abilities", the usage of the competence approach sets a problem of a peculiar reconsideration of this categorical system in pedagogics, defining

the place of new categories and their interaction with those categories, which became traditional.

As it's known, terminology, except scientific, has a political meaning to a great extent. Inaccurate term in content makes an incorrect understanding of it, leads to mistaken assessment of the factual essence. That's why it's so important to come to common language between "academicals circles", employers and graduates of the higher educational establishments concerning the quality of the study results, the level of knowledge, skills and abilities.

So, transition to competence approach needs working out a new theoretical basis, identification of the notional fund of European pedagogical terminology, understandable to all participants of the educational process [12, 48].

Competence approach has a wide range of expressions as to its profit, and to its non-acceptance.

Thus, some researches consider that the appearance of such a category as "competence approach" is somewhat artificial, directed to conceal old problems under new ones. The other mention contradiction from the very beginning of the practical orientation of the competence approach and current subjective (including metasubjective) orientation of the pedagogical practice. A.V. Nesterov draws attention to the ambiguity of the conceptual and innovative potential of the competence approach, vagueness of the principal difference of the latter with historical, psychological and pedagogical conception of the functioning and developing direction in particular [8].

However, overwhelming majority of researches considers that competence approach in all senses and aspects reflects mostly modernization processes that nowadays take place in all the European countries:

- Competence approach guarantees the high level and effectiveness of the specialist training (G.V. Lezhnina) [7];
- Competence approach facilitates renewal of the pedagogical education content (V.M. Antipova, K.Yu. Kolesina, G.A. Pakhomova, I.D. Frumin) [2, 57-62];
- Competence approach intensifies practical orientation of the education, having gone beyond knowledge-skills-abilities restrictions of the educational world [A.L. Andreev] [1, 19-27];
- Competence approach provides abilities of the school leavers to correspond to new requirements of the market, have corresponding potential for practical solving the vital problems, searching one's own 'I' in the process, in the social structure (V.I. Baydenko) [3; 6; 23];
- Competence approach directs to the construction of the educational process according to expected and desired educational result (what student will know after graduating) (I.Zumnya) [13] etc.

We find the analysis of the views of the Kazakhstan and foreign scholars concerning the notion "competence approach" in some works.

Different approaches to the perception interpretation of the notion "competence approach", evidently connected with peculiarities of socio-economic development of every country, national traditions, the peculiarities of forming and developing educational system are proper to each nation. Such researches as A.N. Andreev, O.S. Zabolotska, T., A.F. Prysyzhna regard that competence approach means gradual reorientation of the prevailing educational paradigm with predominating knowledge transmission to creating conditions for mastering complex of key, general sectoral and subject competences, i.e. in displacement of the final educational aim from knowledge to competence [1, 19-27]. Thus, as it's known, competence provides not only existence of knowledge in a particular sphere, and the existence of the particular qualification, and what is more important - possibility and right, power to perform some particular kind of work.

Foreign scholars Cl. Beelisle, M. Linard, B. Rey, L. Turkal, N. Guignon, M. Joras etc. connect the content of the competence approach in education with the forming abilities or readiness of the personality to mobilize all the resources (systematically organized knowledge and skills, habits, abilities and mental qualities), which are necessary for performing such a task in a high level, and also adequate specific situations, i.e. according to the aim and conditions of the course of the specific actions [14, 34].

In our opinion, the most understandable and grounded conception of the competence approach is the ones of Kazakhstan scholars (S.S. Kunanbayeva, T.D. Kuznezova, N.A. Ahmetova etc.) in the course of working out the international project “Foreign language teacher in the context of informatization of foreign language education” (Kazakh Ablai Khan University of International Relations & World Languages). The authors of the project distinctly differentiate between notions “capacity” and “competence approach”, which cast light and specificity concerning explanation of these notions.

Under the term “capacity” the authors of the project mean first of all the circle of power of any organization, establishment and person. Within limits of the capacity a person may be competent or incompetent in some questions, that is to have/acquire competence in a particular sphere of activity.

Concerning the notion “competence approach” especially important to our research is grounding this notion by one of the project author S.S. Kunanbayeva. Under the notion “competence approach” she understands the direction of the educational process to the forming and development of the key (basic, main) and subject competences of the person, the result of which will be forming general competence of a person, which is a complex of key competences, integrated personal characteristics. Such a characteristic must be formed in the process of learning and have knowledge, skills, attitude, experience of the activity and behavior models of the person [10].

After signing the Bologna declaration new programs, initiatives appeared, which contributed to the aim realization of forming general European area of the higher school, these programs are supranational, national and institutional. The most famous and effective programs have multilevel character, for example, common initiatives of the European Commission, European Association of the Universities, in which the universities of all the countries participants of the Bologna process take part.

100 universities from 16 countries-participants of the Bologna declaration take part in working out the projects. The task of these projects was working out the general understanding of the classification according to the levels in the terms of the competence and results of training. Under results the complex of competences is meant, which include knowledge, understanding and skills of a student, which are defined for every module of the program, and at the same time for the program in general.

In the process of project implementation there was the aim to come to the general European consensus in determining what the graduates of the higher educational establishments must know, that is working out the state standards of the new generation, in the basis of which the competence approach lies [12, 78].

Within the limits of the above-mentioned projects there was an attempt to define the complex of competences common for all the higher educational establishments. At first the list of 85 most important competences for the higher educational establishments was made out. They were divided in 3 categories according to the primary classification: instrumental, interpersonal and systematic.

However, it was not a final classification of the key competences. For example, European Council defines five groups of the key competences, which the youth should master in the process of studies:

1. Political and social competences.

2. Competences, which define the ability to live in a multicultural and multinational society.

3. Competences, which define the proficiency of oral and written communication, including at foreign languages.

4. Competences, which are combined with the appearance of the informational society: knowing new technologies, abilities to use them.

5. Competences, which realize the ability and desire of the continuous education, during the whole life [10, 23-24].

The Eurocommission suggested eight key competences, which every European must be able to use:

- competence in the sphere of native language;
- competence in the sphere of foreign languages;
- mathematical and fundamental competences in natural sciences and technical competences;
- computer competence;
- training competence;
- interpersonal, intercultural and social competences, and also civic competences;
- competence of entrepreneurship;
- cultural competence.

There are also other classifications of competences, worked out by some countries according to their needs, traditions, peculiarities and their educational aims. For example, Austria defined such competences as: subject, personal, social and methodological; Belgium - social, positive attitude, ability to act and think independently, motivational, mental mobility, functionality; Finland - cognitive, ability to operate under the conditions of changes and motivation, social, personal, creative, pedagogical and communicative, administrative, ability to act parallel in different directions; Germany - intellectual, with practical knowledge, teaching (instrumental), valuably oriented. In this case it's meant general, key competences, which is the main complex of the most general notions, which should be detailed in the complex of knowledge, skills, abilities, values and relations concerning educational spheres and everyday spheres of a young person [4, 11].

Why is such a variety in classification of the key competences observed? According to N.A. Ahmetova, key competences should be perceptive for all the members of the society that is to be corresponding to everyone irrespective of sex, class, race, culture, marital status and language. Besides, key competences should be coordinated not only with ethnical, economic and cultural values and conventions of the particular society, but also correspond to priorities and aims of education and have a character directed to a personality [9, 13].

Kazakhstan put competence approach as a base of working out the state standards of the higher school, defining such priority competences: social-personal, generally scientific, instrumental, professional (generally professional, specifically professional).

The UNESCO report runs: "Entrepreneurs need more often not qualification, which from their points of view is too often associated with skills to perform some operations of the material character, but competence, which is regarded as a so called cocktail of skills and abilities peculiar to each individual, in which qualification in the direct meaning of this word... social behavior, ability to work in a group, initiative and a liking for risks are combined" [4, 35].

So, according to the above-mentioned information, we think that a theoretical grounding of a competence approach in the higher school is not completely formed yet.

Actually we exist in the situation of a historical indeterminacy, the development of which is difficult to predict in detail. That is why it is not simple to fix a normative complex

of competences corresponding to “modern requirements” and distinguish definitely the key ones and we have to be in a constant searching a competence paradigm in a higher school.

The problems of the modern higher school in the context of a competence approach prompt us to creating new educational standards, to forming and realizing our own historical project of the Kazakhstan higher school modernization.

References

1. Andreev A.L. Competence paradigm in education: experience of the philosophical and pedagogical analysis // Pedagogics. – 2005. - № 4. - p. 19-27.
2. A.L. Competence paradigm in education: experience of the philosophical and pedagogical analysis // Pedagogics. - 2005. - № 4. - p. 19-27
3. Antipova V.M., Kolesina K.Yu., Pakhomova G.R. Competence approach in the organization of additional pedagogical education at the university // Pedagogics. - 2006. - №8. - p. 57-62.
4. Baydenko V.I. Bologna process: problems, experience, decisions. - M., 2006. - 111 p.
5. Report of the international commission of education by UNESCO “Education: hidden treasure”. - M.: UNESCO, 1997. - 65 p.
6. Zeer E., Symanyuk E. Competence approach to modernization of the professional education // Higher education in Russia. - 2005. - №4. - p. 24-28.
7. Competence approach // Reference newsletter of Russian state humanitarian university. - M., 2005. - 27 p.
8. Lezhnina G.V. Competence approach: theoretical analysis of a notion // <http://www.eduhmao.ru/info/1/3760/83683/>.
9. Nesterov A.V. The control and assessment of knowledge of students in management system of quality of education. - Author’s abstract by Candidate in pedagogical sciences. - SPb., 2004. - 21 p.
10. Ahmetova N.A. The competence approach development: strategical orientation of international society // Competence approach in modern education: world experience and Kazakhstan perspectives - Almaty, 2013. - 111 p.
11. Kunanbayeva S.S. The discussion of Kazakhstan pedagogues about questions concerning introducing competence approach in Kazakhstan education // Foreign language teacher in the context of informatization of foreign language education / Material of the Republic scientific-practical conference- Almaty, 2012. - pp. 3-5
12. Selevko G. Competences and their classifications // National education. - 2004. - №4. - p. 138-143.
13. Forming general European area of higher education. Tasks for Russian higher education. - M., 2004. - 356 p.
14. Onoprienko O.V. Conceptual aspects of the competence approach in modern education // The ways of education. - 2007. - №4. - p. 32-37.

OPTIMIZATION OF THE PROCESSES OF DISAGGREGATION OF PIGMENTS AND FILLERS USING THE METHODS OF PROBABILISTIC DETERMINISTIC MODELING

A. Dyuryagina

(Candidate of Chemistry, associate professor of the NKSU named after M. Kozybaev)

A. Lutsenko

(Graduate student of the Department of Chemistry and Chemical Technology of the NKSU named after M. Kozybaev)

A. Surleva

(Analytical Chemistry dep., University of Chemical technology and Metallurgy, 8 Kl. Ohridskibld., 1756 Sofia, Bulgaria)

surleva@uctm.edu

An important technological characteristic of paintwork materials, which determine the coverage and protective properties of their coatings, is the degree of disaggregation of pigments and fillers. In freshly prepared suspensions of paintwork materials the development of aggregation and disaggregation processes depends both on the surface properties of the