

**ORGANISCHE CHEMIE FÜR STUDENTEN IN HOCHSCHULEN AUF
BASIS EINES INTEGRATIVEN ANSATZES KOMPETENZBASIERTER
ANSATZ**

Genzhemuratova Gulkhan Perdebayevna

Kandidat der Fakultät für organische und anorganische Chemie der Korakalpok State
University, außerordentlicher Professor

Kurzfassung: Unter kompetenzbasiertem Bildungsansatz wird eine Trainingsmethode verstanden, die darauf abzielt, Fähigkeiten zur Lösung bestimmter beruflicher Probleme entsprechend den Anforderungen an die persönlichen beruflichen Qualitäten des Schülers zu entwickeln: Fähigkeit zu suchen, zu analysieren, auszuwählen und zu lernen die empfangenen Daten zu verarbeiten, um notwendige Informationen zu übermitteln; Besitz von Interaktionsfähigkeiten mit umgebenden Menschen, Fähigkeit zur Gruppenarbeit; Kenntnis von Mechanismen der Planung, der Analyse, einer kritischen Reflexion, Selbsteinschätzung der eigenen Tätigkeit in ungewöhnlichen Situationen oder unter Bedingungen der Ungewissheit; Besitz heuristischer Methoden und Methoden der Problemlösung. Der kompetenzbasierte Ansatz stellt bestimmte Anforderungen an die Schüler und deren Kenntnisstand in einer Fremdsprache.

Schlüsselwörter: Wissen, Fähigkeiten, Fertigkeiten, die für hohe Qualität erforderlich sind

**ORGANIC CHEMISTRY TO STUDENTS IN HIGHER EDUCATION
INSTITUTIONS BASED ON AN INTEGRATIVE APPROACH
COMPETENCY-BASED APPROACH**

Genzhemuratova Gulkhan Perdebayevna

Candidate of organic and inorganic chemistry faculty of Korakalpok State University,
associate professor

Abstract: Competence-based approach in education is understood as a training method which is aimed at the development of abilities to solve a certain class professional problems according to requirements to personal professional qualities in the student: ability to look for, analyze, select and to process the received data, to transfer necessary information; possession of interaction skills with surrounding people, ability to work in group; knowledge of mechanisms of planning, the analysis, a critical reflection, self-assessment of own activity in unusual situations or in the conditions of uncertainty; possession of heuristic methods and methods of the problems solution. Competence-based approach imposes certain requirements to students and level of proficiency in them of a foreign language.

Keywords: knowledge, abilities, skills, necessary for high- quality

The competence includes set of the interconnected qualities of the personality – knowledge, abilities, skills, modalities of action set in relation to a certain circle of objects and processes and necessary for high- quality productive activity in relation to them. The competence is, first of all, the general ability and readiness of the personality for activity based on knowledge and experience which are gained thanks to training and are focused on independent participation of the personality in educational and informative process and are directed to its successful integration into society. The competence cannot be defined through a certain sum of knowledge and abilities as the significant role in its manifestation belongs to circumstances. The competence at the same time closely connects mobilization of knowledge, abilities and the behavioral relations which is adjusted on conditions of concrete activity. The specifics of the pedagogical purposes on development of the general competences consist that they are formed not in the form of the teacher's actions, and in terms of the student's activity results, in terms of its advance and development effect in the course of certain social experience assimilation.

Research relevance in the article is based on the formation of the chemical and ecological competence of students in chemical education in higher educational

institutions. It should be noted that in the theory and methodology of teaching of future chemists' bachelors, the problems associated with the formation of professional competencies have not been sufficiently studied. Research goals and objectives: to show the experience of implementing the competence-based approach in teaching chemists bachelors on the basis of the developed theoretical model of the chemical-ecological competence formation, to reveal the essence and importance of chemical-ecological competence in the process of university students teaching. Research methods: the study used integration methods, general cultural and general scientific, instrumental (IC, social and personal approaches), a review and analysis of literature sources on the formation of chemical and ecological competence of students in teaching chemistry in the higher educational institutions and universities. Research results: an effective means of integrating knowledge and professional skills is educational practice and solving problems with chemical and environmental content, which contributes to a deeper assimilation of the material. Conclusions: on practical lessons it was found that special attention in teaching students to specific types of activities is the basis of professional competence.

The expediency of competence-based approach realization in the course of foreign languages training at university is proved in the article.

Authors consider that one of the ways of students' educational activity intensification, level increase of their motivation to the learning of foreign language, development of activity and creativity is competence-based approach when training in a foreign language. The theoretical analysis of psychological and pedagogical researches of competence-based approach is in detail submitted. It is established on the basis of the differences analysis in interpretation of competence structure that the existence of knowledge, support on them and connection of competence with their use are supposed in a basis. Authors give definitions of researchers of competence-based approach and the main ideas of competence-based approach are formulated and also the most effective methods and methods of training in a foreign language from positions of competence-based approach are defined. The importance of the

competence-based approach introduction in process of students' foreign-language training is noted. Competence-based approach, as well as other innovative approaches in training, demands stepped introduction, therefore today the support on the international experience, taking into account necessary adaptation to traditions and needs of our country is necessary for realization of competence-based approach. Competence-based approach imposes certain requirements to students and their reference level of foreign language.

In modern society where knowledge and the level of intellectual development of the person become the main strategic resource and the most important development factor of economy, the social status of education is considerably raised, new requirements to its level and quality are imposed that is emphasized in the state documents. Rapid social and economic progress dictates high requirements to the level of teaching a foreign language in higher educational institutions as each new generation of students has to be lifted to higher level of proficiency in foreign languages. Change of a sociocultural context of a foreign language, new inquiries of students concerning level of proficiency in it cause need of high-quality change of students' vocational training. This circumstance caused need of using so-called «competence-based» approach to formation of the purposes and assessment of educational achievements. Competence-based approach in the course of students' foreign-language training is one of ways of a student's educational activity intensification, increase in level of their motivation to a learning of foreign language and developing activity and creativity, ability of team work.

The concept «competence» comes from the Latin word «compete» which means to approach, correspond, try to obtain. In a general sense it means compliance to the qualifying standards established to criteria and standards in the corresponding spheres of activity and at the solution of a certain type of tasks, possession of necessary active knowledge, ability to surely achieve results and to own a situation.

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problems according to requirements to personal professional qualities in the student: ability to look for, analyze, select and to process the received data, to transfer necessary information; possession of interaction skills with surrounding people, ability to work in group; knowledge of mechanisms of planning, the analysis, a critical reflection, self-assessment of own activity in unusual situations or in the conditions of uncertainty; possession of heuristic methods and methods of the problems solution.

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The competence includes set of the interconnected qualities of the personality – knowledge, abilities, skills, modalities of action set in relation to a certain circle of objects and processes and necessary for high- quality productive activity in relation to them. The competence is, first of all, the general ability and readiness of the personality for activity based on knowledge and experience which are gained thanks to training and are focused on independent participation of the personality in educational and informative process and are directed to its successful integration into society.

Information competence promotes accumulation of experience in work with different information which the student in the course of training faces. It is difficult to overestimate value of this competence since it is the manifestation convincing proof of successful human activity in various spheres of communication. This category assumes the following functions:

- – ability to find the necessary data, using various information sources in different languages;
- – ability to distinguish the main information from minor;
- – ability to define reliability of the received data, using several sources;
- – ability to use the acquired information correctly and effectively.

The relevance of language communicative competence components is caused by the same functions which are performed by key professional competences of each

person's activity: ability formation at the person to studying and self-teaching; providing to graduates as future experts of bigger flexibility in relationship with employers; fixing of the increasing success (stability) in the competitive habitat. The problem of language competences finds more and more extensive discussion and application. Competences in general help the individual with the solution of the tasks facing it, including extremely specific, give the chance to build the life bringing satisfactions and to participate actively further political and cultural development of society and also allow the personality to be constantly demanded in labor market. How successfully competencebased approach in training is implemented, it is possible to judge by as far as students with the level of proficiency in a foreign language are capable in the future to sustain the competition in free labor market and to take the worthy place not only in the society, but also in the international community. In view of the above information, the most effective are represented to carry out training in a foreign language on the basis of competence-based approach at realization of the acmeological principles, such as principles of determinism, development, humanity, subject of activity, activity, potential and relevant, modeling, optimality, feedback. Realization of the listed principles is possible when using certain means, methods, receptions and organizational forms of teaching and educational activity, the organization of the corresponding psychological microclimate in collective, pedagogical relationship that it promotes process of intensive self-improvement of the students' identity.

Competence-based approach is considered as some kind of strengthening instrument of social dialogue of the higher school with a professional life, deepening means of their cooperation and interaction. In such system of the specialists' training accurate focus on requirements of labor market is expressed. University graduates have to own competences which will allow them to be successful in the corresponding professional fields of activity.

Thus, competence-based approach is focused on the differentiated system development of concepts for the description and assessment of what in the training

course is subject to formation and development, i.e. within competence-based approach training is focused on competences, by methods of their diagnostics and assessment. Development of competences happens as when studying separate subject matters, cycles, modules, and those didactic units which are integrated into all-professional and special disciplines. The generalized integrated nature of this concept in relation to «knowledge», «abilities», «skills» is emphasized. Competences are divided into two groups: those which concern the general (universal, key) and those which it is possible to call subject and specialized (professional). In the conditions of the accelerating changes and increase of the uncertainty characteristic of modern labor markets, the general competences are especially important.

The essence of competence-based approach consists that the purposes of training are formulated in the form of a triangle – «ability to work», «ability to be» and «ability to live».

The main ideas of competence-based approach are formulated in as follows:

- – the competence unites in itself an intellectual and skilled component of education;
- – the concept of competence includes not only cognitive and operational and technological components, but also motivational, ethical, social and behavioral; it includes results of training (knowledge and abilities), a system valuable orientations, habits, etc.;
- – the competence means ability to mobilize the gained knowledge, abilities, experience and ways of behavior in the conditions of a concrete situation, concrete activity;
- – competence-based approach includes identification of basic skills;
- – the competence is formed in the course of training not only at school, but also under environmental impact, that is within formal, informal and extra formal education.

The essence of the new abilities formed in the course of training is reflected today in the form of key competences to which formation of the modern education system has to be directed.

It is accepted to distinguish key (the most general, universal, «super subject») and special, subject competences. Key competences perform three functions. First, they help students to study, secondly, allow employees to become more flexible, to correspond to inquiry of employers, thirdly, help to be more successful in further life. If to consider formation of key competences as the most important educational result, then they have to «penetrate» the maintenance of all subject matters (both general education, and special) and to pass through all education levels. In other words, they have to become one of the most important factors of continuity realization of separate educational steps.

The competence can be considered as key if it has the following characteristic signs:

- – has integrated character and includes a number of uniform abilities and knowledge, the modalities of action connected with wide areas of culture and activity (production, information, public, etc.);
- – it is multifunctional, mastering by it allows to solve successfully various problems in situations of everyday life;
- – the super subject and cross disciplinary, that is applicable in various fields of activity;
- – relies on rather high level of intellectual development;
- – multifold and multidimensional as it comprises various intellectual processes and intellectual abilities, personal qualities;
- – can be considered as one of integrated characteristics of educational preparation quality.

Considering various key competences as ability, readiness for a certain activity can be marked out their invariant components or aspects. It is possible to carry to their number:

- – readiness for goal-setting;

- – readiness for assessment;
- – readiness for action;
- – readiness for a reflection.

It is known that key, most universal competences are result not only the general, but also all types of professional education and in this sense can be considered as result of educational experience of the person in general. At such understanding of their essence they begin to have integrative, backbone character for all system of continuous education. In this case the role of key competences as invariant component of the purposes, contents and results of training of all links of education, including school and high school, becomes obvious.

As practice shows assimilation and assessment of competences are inseparable from concrete situations in which they are shown. Therefore, competences cannot be isolated from specific conditions of their realization. Present forms and methods of training and at school, in higher education institution not always allow to create similar conditions and situations. Forms of educational activity within ideology of «competence-based approach» can be in a conflict with the settled traditional forms of the educational process organization, especially at school. This contradiction will initiate search of new forms and methods of training, in many respects uniform for school and higher education institution and by that to promote rapprochement of these links of education.

Thus, competence-based approach reflects objective requirements in all stages of continuous education for attention strengthening to the personal and significant and demanded in practice training results as generally, and in the course of foreign-language students' training in the system of continuous education. Therefore this approach can play a considerable role in integration of the purposes, contents, educational process of higher education institution, to become an essential development factor of their continuity.

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