DIAGNOSTICS OF THE FORMATION OF STUDENTS' COMPETENCIES AT THE UNIVERSITY

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ABSTRACT

In modern conditions, there is an acute problem of developing control and evaluation, measuring, monitoring tools that allow diagnosing the level of formation of students' competencies at a university. The traditional assessment system cannot diagnose a student's competencies, reflecting only their knowledge component. The authors presented a methodology for diagnosing competencies based on the performance of students in the course of professional training at the university. The presented methodology, based on the competence-based paradigm, uses a qualimetric approach to assessing the professional and general cultural competencies of a student throughout the entire period of study. The article describes a cumulative system for assessing competencies, criteria, levels of formation and methods for their assessment, which allow diagnosing educational activities. This article is intended for teachers of higher education, heads of departments of the university, methodological departments, researchers involved in the diagnostics of educational activities.

KEYWORDS: *Higher Education, Competencies, Levels Of Competencies Formation, Diagnostics, Professional Profile*

INTRODUCTION

The main goal of modern higher education is to prepare a qualified specialist (bachelor, master, postgraduate student) who is ready for work and professional growth, has social and professional mobility, and is able to adapt to changing external conditions. Competence characterizes the specifics of professional activity and the quality of professional training of a modern university graduate. A significant element of competence is experience - the integration into a single whole of individual actions achieved by a person, methods and techniques for solving problems. The expression of professional competencies involves the constant updating and growth of professional knowledge, the development of new information for the successful solution of professional problems for university students. For the first time in education, the question of the continuity of the development of competencies by stages of education is raised, it is required to take into account specific competencies for each area of professional training [3].

In the current conditions of the competence-based paradigm, the forms of education are significantly changing, there is a shift towards the use of active and problem-based learning methods, where the student can fully demonstrate his abilities, that is, the task of evaluating the

active characteristics of learning and the student's personal qualities comes to the fore. Accordingly, there is a need for such an assessment system that could integrate all methods, methods, forms of assessment and be cumulative throughout the entire period of study [8]. It is required to change the system for monitoring students' knowledge at the university, to develop such an assessment system that would adequately reflect the process of forming professional and general cultural competencies as a result of higher education, determined by the ability and readiness of the graduate to perform professional and social actions in the chosen subject area.

Despite a significant number of pedagogical studies in the field of the formation of professional competencies [1, 2, 4, 5] and in the field of standardization and quality assessment of education based on the competency-based approach [7], the qualification requirements for a modern specialist on the part of employers are still at the stage of formation, while the learning process is already built on the formation of professional and general cultural competencies established by the educational standard. In addition, there are currently no developments on a universal assessment system for the professional and general cultural competencies of a student at the university.

Competences, which describe learning outcomes, are a set of knowledge, skills, abilities, and personal qualities that a graduate will be able to demonstrate by obtaining a bachelor's or master's degree. The general concept of professional competence is considered from the point of view of the competitiveness of a specialist in the labor market, the response to the employer's requests, and the readiness to perform certain actions in a quality manner.

The peculiarity of competence, as a result of education, is that it: is an integrated result of learning, manifests itself and exists in the form of activity, and not information about it; associated with a significant number of objects of action, is built up together with other competencies, forming professional competence; competence, as an action, does not appear automatically, but consciously and repeatedly manifested, forms a professional experience. The competence-based approach is more aimed at achieving the quality of training that meets the economic and social social needs, creating a balance between the demand in the labor market and the interests and professional realization of the individual.

To assess professional and general cultural competencies, we propose to use a qualimetric approach that provides measurements in numerical form or in conditional indicators; including a combination of research methods aimed at obtaining versatile information about the object, tracking the dynamics of changes in its indicators and analyzing possible deviations and providing a transition from a qualitative, one-sided description of phenomena to objective, accurate methods of checking and generalizing the results of students' learning.

The authors have developed an algorithm for diagnosing the professional and general cultural competencies of students in the higher education system, which includes:

1 step. Definition of professional and general cultural competencies and their structure in the field of study;

2 step. Determination of methods for the formation of professional and general cultural competencies for each academic discipline;

3 step. Formation of a base of control and evaluation tools for diagnosing professional and general cultural competencies for each academic discipline;

4 step. Formation of a professional profile of a university student, including an integrated assessment of all professional and general cultural competencies.

5 step. Analysis of the results of diagnostics of professional and general cultural competencies from the standpoint of a student, teacher, university administration, and employer.

This algorithm implements a structuring function (taking into account the requirements of the standard, employer, university administration) to the goals and content of training, a control function (development of control evaluation tools, their information support and continuous monitoring) and a control function (based on adjusting the process of mastering the educational material of the discipline based on the results competency diagnostics).

A measure of competence is the practical application of knowledge, skills, abilities in a time limit, supplemented by personal qualities - motivation, discipline, organization, purposefulness, etc.

At the initial stage of developing diagnostic tools, it is necessary to analyze the Federal State Educational Standards for each area of study and identify the types of activities and a set of professional and general cultural competencies necessary for their development. We offer as a structural component of professional competencies: cognitive (completeness and generalization of professional knowledge), activity (development and formation of professional skills), communicative (ability to work in a team, make managerial decisions), axiological (moral and value positions) components, which can be formed at three evaluation levels - low (reproductive activity), medium (independent productive activity), high (independent creative activity) [6].

The second stage of the competency diagnostics algorithm is to determine the content of training in each discipline and the totality of pedagogical forms, methods and technologies that contribute to the formation of professional and general cultural competencies. The graduate's competencies should allow him to work successfully in his chosen professional field, acquire social, personal and general cultural qualities that contribute to his social mobility and stability in the labor market. In the preparation of modern graduates, the leading forms are active teaching methods that recreate not only the subject, but also the social content of future professional activity. During the training, the student must necessarily perform precise actions in a quasi-professional environment, similar to those that will take place in his professional activity. The use of active methods as pedagogical technologies, from our point of view, can be especially successful after internships, where students receive specific knowledge on the state of enterprises, territories of the region, have the opportunity to work with regulatory documentation, master jobs.

Of course, the level of competence formation in traditional education (lectures, practice, laboratory work, seminars), personal development of the student, external factors, etc., also contribute to this assessment. However, empirical observations of students in the course of professional training demonstrate an increase in interest and professional orientation, mastery of professional terms, ways of communication and interaction, namely within the framework of active learning methods.

For each type of training developed within the framework of the curriculum and the program of the discipline, the formed set of pedagogical technologies, it is necessary to determine the method of assessing competencies.

Competences, as such, have a cognitive (knowledge and understanding of professionally significant information), activity (knowledge of how to act) and personal (knowledge of how to be) basis. Achievements of bachelors are quantitative and qualitative indicators of the development of imitative professional activity and reflect the development process and movement towards the goal of professional training - a high level of competencies. Therefore, the results of the formation of professional and general cultural competencies should include mastered competencies, value relations, and formed personal qualities.

The cognitive and partly activity basis of competencies formed in the framework of lectures, practical and laboratory classes can be checked using traditional assessment tools: oral and written surveys, independent and control work, a system of test items for input, current and final types of control, taking into account the goals of diagnostics . Test tasks are built taking into account the taxonomy of goals using problematic and situational tasks.

As part of active teaching methods (business games, project methods, etc.), we recommend using an expert assessment of professional and general cultural competencies as a way to diagnose students' actions (manifestations of competence). Each competence shown by a student is associated with an action or event recorded by an expert, in addition, the final result of the task is also evaluated (the goal of the active method is a developed project or an achieved level, a solved problem). Accordingly, each student’s action should be recorded in a special competency map, which takes into account, in addition to the level shown (low, medium high), also a personal contribution, that is, whether this competency is manifested in independent or group activities.

To determine the level of professional and general cultural competencies in the course of active learning methods, an average of 5 precedents are needed to make a diagnosis. The overall result of the theoretical and practical mastering of the discipline is accumulated in a specially organized automated database, which makes it possible to analyze learning gaps for their timely correction (for both the student and the teacher).

We propose to build a student's professional profile for each area of training on the basis of professional and general cultural competencies established by the standard. The ideal state is the achievement of a high level (independent creative activity) for all components of the identified competencies to be considered as a professional profile, for example, if professional the profile can be represented as a 100% match.

Correspondence of the level of professional and general cultural competencies of the student to the profile of the profession for the student

Based on the results of mastering each discipline, after each control procedure, the database is filled. The cumulative assessment of a student is an additive assessment of all his actions within the same discipline. Each discipline and its control stages have a certain specific weight (percentage of participation) in the formation of certain professional and general cultural competencies. The total result for all disciplines during the entire training is accumulated in the student's personal database, where, based on the results of the semester, the student's compliance with the profession profile is determined.

At the final stage of the proposed algorithm for diagnosing professional and general cultural competencies, an analysis of the effectiveness of training is carried out at the level of each student, student group, discipline studied during the selected time periods (a week of study, a

semester, an academic year, the entire period of study) for an objective analysis and possible adjustment of the learning process .

Experimental implementation of the proposed diagnostic tools in the teaching practice of the Bukhara State University has demonstrated its effectiveness, determined by:

- updating the content of disciplines, in accordance with the requirements of the State Educational Standards and employers in modern conditions, which enhances the professional orientation of education;

- selection of productive pedagogical technologies using active and interactive teaching methods for the formation of selected professional competencies;

- improvement of the control evaluation tools of the discipline;

- automation of the system for collecting, storing and analyzing information;

– transparency of the educational process for the university administration;

– an increase in motivation and an increase in the academic performance of students participating in the experiment, by an average of 28%.

Using this scoring system allows you to:

- getanassessmentoftheachievementofcompetenciesindividuallybyeachstudentineachdiscipline, topicandtypeofclasses;

- to determine the individual qualities of each student, their professional suitability, personal qualities, such as: work in a group, behavior and ability to work in a team, leadership qualities, etc.;

- to diagnose gaps in the assimilation of knowledge, skills, abilities by students during traditional education and competencies in the course of active teaching methods and carry out their timely correction;

- get complete information about the professional skills of the student administration of the university and potential employers.

Modern conditions of educational activity suggest that its result will not be the amount of knowledge gained by the student, but his ability and willingness to work in the chosen professional field, competitiveness in the labor market.

Determining the methodology for diagnosing the competencies of a university graduate, the necessary criteria and characteristics using automated information tools allows the teacher to monitor their own activities and the activities of the student, determining the aspects necessary for correction.

For a student in the course of diagnosing professional competencies, the process of modeling their own professional activity takes place, and a strategy for professional training at the university is developed depending on the chosen profile of future activity. And also in the course of diagnostics, students form a system of values that characterizes the integrity of the individual, perseverance in achieving their goals, attitude towards themselves, towards knowledge, towards their future profession.

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