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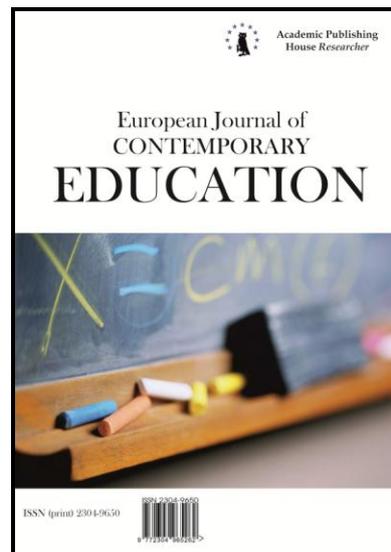
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Stages in the Making of the Competence Approach and Its Significance to Teaching Medical Disciplines at Institutions of Higher Medical Learning

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Abstract. This article examines the preconditions and origins of the competence approach and various approaches to apprehending the essence of competencies: personal, functional, and cognitive. The authors cover the major stages in the making of the competence approach at institutions of higher medical learning.

Keywords: competencies; competence; competence approach; higher professional education.

Introduction.

Streamlining technology for teaching therapeutic disciplines at institutions of higher medical learning is an objective of utmost significance to the professional preparation of practicing physicians. The coming into force of the Federal State Educational Standard for Higher Professional Education (FSES HPE (Russian FGOS VPO)) on the “general medicine” specialty has defined criteria for the preparation of physicians. The end objective is to enable medical college graduates to begin their practical activity right after getting a specialist diploma. The Federal Law of the RF No. 323 dated 21.11.2011 “On the Fundamentals of Protection of the Health of Citizens in the RF” augments the physician’s responsibility before the patient and society. A medical college graduate ought to be ready for independent decision-making and fulfilling one’s professional duties to the fullest and be ready for teamwork [1].

This is in agreement with concepts deemed topical by classics of medicine. Thus, for instance, academician V.K. Vasilenko wrote: “In books, textbooks we often reiterate what one needs to do – for instance, he who diagnoses well treats well; to do something well is a virtuous wish. For a practical physician it is especially important to not only know and do something but learn to work, that is master the technique and methodology of medical practice” [2].

The above augments the responsibility of medical college instructors for the preparation of human resources. An important aspect of the pedagogical process is forming the competence approach with students.

Materials and methods.

This article’s material comes from monographs, textbooks, and publications reflecting the theoretical and practical aspects of the competence approach in higher professional education and, above all, medical education. The authors employ the methods of the systemic approach and analytical review.

Results and their discussion.

Competence theory has been developed actively for the last decades. Back in 1954, famous American scientist John Flanagan, when analyzing the procedures for selecting men for the US Air Force aircrew, came to the conclusion that when hiring someone it is important to take into account not so much one’s IQ and education level but the content of their behavioral reactions in so-called critically important situations within the frame of a particular profession [3].

The founder of competence theory is known to be David McClelland, who in 1973 published an article called “Testing for Competence rather Than Intelligence” [4]. In it, he shared the results of studies that sought to prove that traditional academic tests for one’s abilities and tests for one’s

knowledge of the subject, as well as school certificates and university diplomas, did not guarantee effective work performance or success in life; McClelland advocated for testing competencies, which he construed as basic, leading personal characteristics governing the attainment of “superior” performance of one’s professional duties.

In comparing people who were clearly successful in work with less successful, D. McClelland defined characteristics associated with attaining considerable results in one’s professional activity. According to D. McClelland, a “competency” can incorporate a person’s motives, peculiarities, skills, vision of oneself, and social role, as well as knowledge.

Another American scientist, R. Boyatzis, identified so-called threshold and differentiating competencies. He construed threshold competencies as characteristics that are significant to work but do not lead to efficiency and differentiating competencies as characteristics governing the possessor’s efficient performance. As a result of his study, R. Boyatzis made up a list of 19 most general competencies of a manager, which in 1982 were included in the publication “The Competent Manager”. Of the 19, 12 were defined as differentiating and 7 as threshold competencies [5, 6].

Competence-oriented education (or competence-based education – CBE) had been formed in the United States in the 70s within the general context of the term “competence” proposed by N. Chomsky in 1965 (Massachusetts University) in relation to language theory [7]. At the same time, in R. White’s “Motivation Reconsidered: The Concept of Competence” (1959) the competence category gets substantively filled with peculiarly personal components, including motivation [8].

In 1984, in his book “Competence in Modern Society” J. Raven conducted an exploration of views, expectations, and types of competence needed in work and everyday life and classified specific qualities people need to cultivate in the following way:

1. *Human resources; types of competence associated with the system of values*, such as: initiative, leadership, inclination to analyze the work of organizations and society as a whole, and ability to employ one’s conclusions in choosing a strategy for one’s own behavior.

2. Perceptions and expectations associated in people’s minds with ways of society’s functioning and one’s own role in that structure: one’s perception of oneself, one’s way of analyzing the work of organizations, one’s own role and the role of others, having an adequate idea of the organizational climate, which facilitates innovation, responsibility, and development and does not lead to stagnation, and ability to manage one’s conduct in accordance with one’s beliefs and guidelines.

3. *Adequate understanding of the meaning of a whole range of terms describing relations between people within organizations*, such as leadership, decision making, democracy, equality, responsibility, accountability, and delegating responsibility. Lack of adequate understanding of these terms leads to increase in restrictions and stagnation [9].

J. Raven also conducted an analysis of types of competence crucial to effective teaching. Efficient instructors possess an ability to reflect on the personal qualities of their students and look after their development, take notice of, foresee, and take account of the reaction of one’s students, demonstrate in deed one’s own preferences and systems of values and deeply personal ways of thinking and feeling, which lead to the attainment of goals set, and possess an ability to apprehend and successfully act on social factors external to school, which usually limit working capacity.

In his work, J. Raven also adduces data from research by Schneider, Klemp, and Kastendiek (1981), who also studied qualities teachers need for efficient work. These authors discovered that the key factor that sets efficient teachers apart from less efficient ones is the ability to combine centeredness – responsiveness to the needs, interests, and avocations of students – with directiveness, i.e. the ability to impart meaning and purposefulness to learning.

In his study, J. Raven proves that competent conduct depends on:

- 1) motivation and the ability to engage in high-level activity – for instance, display initiative, take responsibility, and analyze the work of one’s line;

- 2) readiness to engage in subjectively significant actions – for instance, aspire to make an impact on what is going on in one’s line of duty;

- 3) readiness and the ability to facilitate fostering a climate of supporting and rewarding those trying to come up with novelties and seeking out new ways to work efficiently;

4) having an adequate idea of a number of terms relating to managing organizations, such as risk, effectiveness, leadership, responsibility, accountability, communication, equality, and participation [9].

The next stage in the study of competence begins in 1990 and is characterized by said term becoming a scientific category in Russia in relation to education. The stage is also characterized by the appearance of international documents. UNESCO materials and Council of Europe recommendations mark off a range of key competencies which should be viewed by everyone as the desired learning outcomes; the term “key competencies” is introduced, which should match the new requirements of the labor market and economic transformations.

The concept of competencies and skills proposed in the European project “Tuning Educational Structures in Europe” includes knowing and understanding (theoretical knowledge of an academic field, the capacity to know and understand), knowing how to act (practical and operational application of knowledge to certain situations), and knowing how to be (values as an integral element of the way of perceiving and living with others and in a social context). The project identifies the major dimensions of modern approaches to learning:

- defining sets of general and special competencies for first and second learning cycle (level) graduates – bachelors and masters; shaping them is a priority dimension of joint efforts by the Bologna Process member states;
- harmonizing curricula in terms of structure, programs, and learning methods proper;
- working out an all-European consensus in defining degrees in terms of what the graduate ought to be able to do upon finishing school;
- working out a competence approach capable of preserving flexibility and autonomy in the structure of curricula.

We believe that currently we have already entered a new stage in the development of a competence approach associated with a new understanding of competence and its link with the personal and professional development of the learner.

The *Framework for Qualifications of The European Higher Education Area* (FQ-EHEA) defines competencies for specialists as a confirmed capacity to employ knowledge, aptitudes, and personal, social, and methodological skills in work or academic situations in professional and personal development.

Thus, having taken a general brief historical tour of the development of the competence approach in education, we now move on to the most important issue – the issue of how well we apprehend this approach, its diversity, today. There are three traditional approaches to apprehending the substance of competencies: personal, functional, and cognitive.

The *personal* approach is aimed at identifying the behavioral characteristics of competencies. The major question to seek an answer to in terms of this approach is: Which personal traits define successful actions?

In this regard, competencies are a foundational behavioral aspect or a characteristic that can be manifested in effective and/or successful actions and depends on the context of actions, organizational factors, and factors of the environment, as well as professional activity characteristics [10, 11]. In terms of the personal approach to the study of professional competence, researchers assess one’s knowledge and aptitudes, the motivation component, as well as one’s professionally significant personal qualities. Research methods include observations and diagnosis of the specialist’s professionally significant personal qualities.

The *functional* (activity) approach is aimed at identifying the major elements of activity that need to be fulfilled for the outcome to be considered attained and meeting set requirements [9, 12].

In the Russian educational tradition, in effecting the educational process the college instructor has been accustomed to appealing to the category of knowledge. In the competence approach, within the frame of the cognitive dimension, of principal importance is apprehending special types of knowledge organization. According to M.A. Kholodnaya, knowledge of this kind meets the following requirements:

- variety (a multitude of various knowledge on various things);
- articulatedness (the elements of knowledge are clearly marked off, while forming certain interrelationships between each other);

flexibility (both the content of particular elements and associations between them can change quickly under the influence of certain objective factors, including under the variant when knowledge turns into lack of knowledge);

the quickness of being put in practice on the spot when needed (the promptness and easy accessibility of knowledge);

the possibility of being applied in a broad range of situations (including the ability to transfer knowledge into a new situation);

the identifiedness of key elements (in a multitude of knowledge relating to a given field, particular facts, concepts, and definitions are perceived as the most significant, decisive to comprehending it);

the categorical nature (the defining role of a type of knowledge represented in the form of general principles, general approaches, and general ideas);

possessing not just declarative knowledge (knowledge of “what”) but procedural knowledge (knowledge of “how”) [13].

In underlining the significance of the intellectual component of competence, M.A. Kholodnaya defines intellectual competence as “a special type of knowledge organization, which enables one to make effective decisions in a particular field (including in extreme conditions)” [10, 13].

In terms of the *cognitive* approach, competence has also been researched by M.A. Choshanov [12]. In his studies, he points out that:

the term “competence” expresses in one word the meaning of the “knowledge, aptitudes, and skills” triad and serves as the link between its components;

the term “competence” is the most expedient in describing the specialist’s real preparation level;

a competent specialist is distinguished by the ability to choose from a multitude of decisions the most optimum and disprove false decisions in a well-reasoned manner, i.e. possess critical thinking skills;

a competent specialist is characterized by a constant update of knowledge and wielding the latest information to be able to successfully solve professional problems right there and then, i.e. the capacity to perform one’s duties actually;

the term “competence” incorporates the content (knowledge) and processual (aptitudes) components: a competent person should not only comprehend the gist of the problem but be able to solve it in practice, i.e. wield a solution method (knowledge + aptitudes) [11, 13].

In essence, the competence approach was employed in teaching medical disciplines earlier as well. The groundwork for the operation of the clinic as the school of medical practice was laid by the luminaries of national medical science; in 1867, S.P Botkin wrote: “... the clinician-instructor sets himself a goal to pass along to his students a method guided by which young practitioners would be able to apply on their own their theoretical medical information to sick individuals they will encounter in the course of their practical activity”. G.A. Zakharyin maintained that “He who has mastered the method and skill of individualizing will make it in any other situation that is new to him ...” [cit. on 2]. At the clinic, students or young physicians (interns, resident physicians) are engaged in medical work under the direct guidance of qualified physicians, mastering the techniques of look-over, examination, analysis of data obtained, diagnosis establishment, and prescribing adequate treatment [14]. “At the clinic, there occurs the passing along of medical experience, that is the clinical thinking skill, to the student – the ability to apply one’s aptitude and knowledge to a specific patient through personal contact with the patient under the instructor’s supervision” [2].

Conclusion.

Thus, the fundamentals of teaching medicine laid down by eminent internists of the past are in agreement with the requirements of the present day. The term “competence” as a combination of the content (knowledge) and processual (aptitudes) components is the basis for the preparation of qualified medical human resources and meets the requirements of the Federal State Educational Standard for Higher Professional Education on the “general medicine” specialty, whose coming into force has defined criteria for the preparation of physicians.

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Этапы становления компетентностного подхода и его значение в преподавании медицинских дисциплин в высшей школе

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Аннотация. В статье рассматриваются предпосылки и истоки компетентностного подхода, различные подходы к пониманию сущности компетенций: личностный, функциональный, когнитивный. Освещаются основные этапы становления компетентностного подхода в высшей медицинской школе.

Ключевые слова: компетенции; компетентность; компетентностный подход; высшее профессиональное образование.