N. V. Solodyuk, SE "Dnipropetrovsk Medical Academy of Health Ministry of Ukraine"

# FORMATION OF RESEARCH COMPETENCE OF MEDICAL STUDENTS

Solodyuk N. V.

Formation of Research Competence of Medical Students

The article examines the essence of "research competency" concept, analyzes the ways of its formation for future doctors and defines the content and the features of university students' research activity. It considers the approaches to define the terms "competence" and "competency" in modern linguodidactics. To understand the essence of "research competency" concept, the article defines research activity as an integral part of students' research activity. That is why research competency can be considered as readiness and ability for research activity. The paper proposes stages which provide systemacity, integrality and desire of future experts to improve their creative skills, develop the independence of thought, aiming at logic research and approbation of own scientific statements. Also it characterizes the main components of research competency: intellectual and creative, operational, motivationally personal and cognitive.

Key words: competence, competency, competent research, research.

The objective of accelerating scientific and technological and social progress, economic crisis, environmental, demographic, political and other phenomena that have emerged in the modern world, will inevitably affect the system of professional education. Traditional education pedagogical rules, content and organization of the educational process is increasingly fail. Educator's important to be prepared for the unusual decision — making, active participation in the innovation processes to generate creativity of students. For the modern specialist not only have the information necessary to be able to operate it properly and form new knowledge. It is important in studying at university in the form of future specialist research expertise — the willingness and ability to research.

Modern scientists (L. Golub, N. Demeshkant, I. Zymnya, W. Lugovyi, A. Lukashevych, S. Markov, N. Mordovtseva, W. Nagaev, Z. Oblitsova, O. Pometun, A. Khutorskoi, I. Chechel, N. Shestak etc.) highlight methodological, theoretical and applied aspects of research students and research skills formation.

Purpose of the article: to define the basic principles of the research competence of doctors.

For achieving of this goal you need to solve the following research and teaching objectives: 1) to analyze the professional literature on the issue; 2) to highlight the theoretical aspects of the research competence of the students.

In Ukrainian pedagogy there is a difference between the concept of "competence" and "competency". For explanatory dictionaries – Competence is defined as a property to the value of the competent. Competent – is 1) having sufficient knowledge in any field; 2) which has certain powers, full, sovereign. Competence – 1) familiarity with anything, and 2) the terms of reference of any organization, institution or person. These definitions show that competence – a broader term that covers a specific industry knowledge and competence – knowledge in one area of activity [10].

A clear distinction between the aforementioned concepts have seen in scientific studies of I. Zymnya, W. Krajewski, A. Khutorsky. In the vision of scientists competence – a range of issues in which the person is familiar and has the knowledge and experience [2].

Competence – generic alienated advance given the social requirement to student education and training required for its efficient and productive activity in a particular area. Competence – possession, disciple of competent jurisdiction, his personal attitude to her subject matter and work. Competence – formed quality of the individual (set of properties) student and a minimum experience in a given field of activity [2].

O. Pometun outlines the key features of core competencies, including multifunctional as the ability of the individual to solve a variety of problems in his personal and public life; interdisciplinary breadth of functionality as competence (professional, social, domestic sphere, etc.); multidimensionality as a reflection of the knowledge, thought processes, intellectual skills, strategies, techniques, emotions, estimates, creative achievements, ensuring personal development: logical, creative, reflective thinking personality, her self, self-etc. [6].

We attempt to define the essence of research competence turn to the definition of research in general, any model developed by O. Leontiev. It refers to the activity as a system of interconnected components: needs – motivation – goals, actions – real – conditions. General model more specifically in relation to research. Note that at the heart of research is the most important need for new knowledge and the results of this activity. This need – an essential component of personality (S. Rubinstein).

The research activities – cultural mechanism of Sciences (M.Kagan). It creates valuable emotional and relationship to the world of their own activities, has needs and motivations (S. Oblitsova, A. Pentin). We believe provisions (M.Kagan, N. Shestak) that science as part of culture has its own values and norms of principles: truth, novelty, repeatability, universality, unity, freedom of criticism.

It is generally considered that the research activity is an activity which is characterized by focus on new knowledge. It serves as a way to actively search for, construction of knowledge, development of new experiences. Research activities are differentiated for research and educational research: research and development is characterized by novelty objective knowledge, training and research activities organized by the teacher, the novelty of knowledge is subjective (A. Leontovich).

For the purpose of the activity approach, modern scholars (I. Zymnya, V. Krajewski, A. Khutorskoi) approach to its integration with the competency approach. That is why the competence approach is more aimed at designing of over subject content, formation activities, including research, and less — on the subject of learning. The essence of this integration concept by Leontiev: Individual Practice — competence.

Today, there are different approaches to define the essence of research competence. Scientists consider research competence as a result of well – planned

research activities (writing research, production and analysis of experimental results, etc.).

As noted in the work of O. Ushakov that research expertise – an integral feature of personality, which manifests itself in readiness and capacity for independent work of solving research problems and the creative transformation of reality based on a set of personality conscious knowledge, skills, attitudes, values [11].

As evidenced in his work E. Feskova, research competence is perceived willingness to move in their own learning and the construction of new knowledge, experiencing acts of understanding [4]. The author identifies three main components of research competence: motivation, personal, intellectual, creative, cognitive and action–operational. Motivational component is characterized by personal motivation and cognitive activity, the ability to overcome cognitive difficulties; autonomy in the process of learning, decision – making and evaluation, emotional attitude to learning research. Intellectual and creative component aims at the development of cognitive processes and learning skills (and the overall dynamics of) intelligence, experimental thinking, reflective ability, overall creativity, expression of creativity in problem situations. The creative component – the essence of knowledge and technology basic research methods. Action– operational component is characterized by vision problems, asking questions, hypothesizing, skills acquisition experiments, ability to structure material, etc. [12].

The development of research competence of students in vocational training is focused on the research and implementation of their own potential, readiness for becoming active creative profession.

Research competence is not only a product of education, but also the consequence of self-development of the student, his personal growth.

The overall aim of the research competence of future specialists – to form the ability to solve various types of professional research tasks.

The work of S. Osipova draws attention to the transformational nature of research competence and presents its integrated personal quality that is reflected in

the willingness and ability to independently assimilate and acquire new knowledge as a result of the transfer of the semantic context of existing knowledge, skills and means of action [9, p. 130]. Scientists identifies three basic elements of research competence, expressed in the following capabilities:

- The allocation of the objectives of;
- Definition of the subject, the means, the implementation of set actions;
- Reflection, analysis of performance (correlation of achieved results with the intended purpose) [9, p. 130].

As noted by N. Demeshkant that the development of research skills allows the student to not only reproduce the content of the material studied, but also to reason on their own, realizing logical patterns and relationships studied material [4, p. 24].

The authors have different definitions space research competence in the various classifications of key competencies. I. Zymnya takes the following classification research competence as "competence related to human activities". The classification A. Barannikov research competence play an independent role along with academic, social, personal, communicative, student – adaptive, and competence in the field of organizational activities and cooperation. Research competence by A. Khutorskoi is seen as an integral part of cognitive competence, which includes "items methodological over subject, logical operations, methods of goal setting, planning, analysis and reflection". It also serves as a component of personal self-competence, aimed at the development of methods of intellectual and spiritual self-development [12].

Research competence also considered as the degree of mastery of research competence, personal characteristics of the person. Shares the view of V. Krajewski, A. farmhouse that consider each jurisdiction, including research, as a unity of three components: cognitive, or content, technological or procedural, and personal. According to the authors, under the competence of the research knowledge should be understood as the result of human cognitive activity in certain areas of science, methods, research methodology, which he must learn to carry out research activities, as well as the motivation and the position of the researcher, his value orientation.

The research competence of the doctor – the ability to put into practice its capacity (knowledge, skills, experience, personal qualities) for productive activity in successful professional and social sphere, to realize its social significance and personal responsibility for the results of these activities and the need for its continuous improvement .

Thus, we see that the effective formation of research competence, we must first teach students to work independently, to acquire knowledge from different sources. Research expertise is in human form as one of the essential components in the course of teaching and learning activities.

#### References

- 1. **Hordiienko H.** Kompetentnisnyi pidhid do navchannia maibutnikh dokumentoznavtsiv [Competency-Based Approach to Future Document Specialist Training]. Kyiv. *Ukrainska mova i literatura v shkoli*. 2010. No. 4. Pp. 5 10. (ukr)
- 2. **Guzeev V.** Metody i organizatsionnye formy obucheniya [Methods and Organizational Forms of Education]. Moscow, *Narodnoe Obrazovanie*. 2001. 127 p. (rus)
- 3. **Demeshkant** N. Rozvytok doslidnytskykh umin iak osnova formuvannia naukovoho svitohliadu studentiv vyshchykh navchalnykh zakladiv [Development of Research Skills as the Base for Scientific Worldview of Students of Higher Educational Establishments]. Kyiv. *Novi tekhnolohii navchannia*. Naukovometodychnyi zbirnyk. 2007. Vol. 47. Pp. 23 25. (ukr)
- 4. **Zimnyaya I. A.** Klyuchevye kompetentsii novayaparadigma rezultata obrazovaniya [Key Competence New Paradigm of Education Result]. Moscow. *Vysshee obrazovanie segodnya*. 2003. No.5. Pp. 34-42. (rus)
- 5. **Pometun O. I.** Teoriia ta praktika poslidovnoi realizatsii kompetentnisnoho pidhodu v dosvidi zarubizhnykh krain [Theory and Practice of Consistent Implementation of Competency Approach from the Experience of Foreign Countries]. Kyiv. Kompetentnisnyi pidhid usuchasnii osviti: svitovyi dosvid ta ukrainski perspektyvy: Kolektyvna monohrafiia. 2004. Pp. 15–24. (ukr)

- 6. **Luhovyi V. I.** Yevropeiska kontseptsiia kompetentnisnoho pidhodu u vyshchii shkoli ta problemy ii realizatsii v Ukraini [European Concept of Competence Approach at Higher School and Problems of its Implementation in Ukraine]. Kyiv. *Pedahohika i psikholohiia: VisnykAPN*. 2009. No. 2. Pp. 14–27. (ukr)
- 7. **Nahaiev V. M.**Metodykavykladanniauvyshchiishkoli: navchalnyiposibnyk [Training Methods at High School: Study Guide]. Kyiv. 2007. 232 p. (ukr)
- 8. **Osipova S. I.** Razvitie issledovatelskoykompetentnosti odarennykh detey [Development of Research Competency of Skilled Children]. Electronic resource. Mode of access: www.fkgpu.ru/conf/17.doc. (rus)
- 9. **Slovnyk-dovidnyk** z ukrainskoi linhvodydaktyky: Navchalnyi posibnyk. [Ukrainian Linguodidactics Reference Book: Study Guide]. Kyiv, *Lenvit*. 2003.149 p. (ukr)
- 10. **UshakovA. A.** Razvitie issledovatelskoy kompetentnosti uchashchikhsya profilnoy shkoly kak lichnostno-osmyslennogo opyta osushstvleniya uchebno-issledovatelskoy deyatelnosti [Development of Research Competency of Profession-Oriented School Pupils as Personal Experience of Research Activity]. Maikop. *Vesnik Adygeyskogo gosudarstvennogo universiteta*. 2008. Pp. 123 126. (rus)
- 11. **Feskova Ye. V.** Sostavlyaushchie elementy issledovatelskoy kompetentnosti [Components of Research Competency]. Electronic resource. Mode of access: http://gdt.k26.ru/gnpk/index.php?option=com\_content. (rus)
- 12. **Hutorskoy A. V.** Klyuchevye kompetentsii kak komponent lichnostnoorientirovannoy paradigmy obrazovaniya [Key Competence as a Component of Personal-Oriented Paradigm of Education]. Moscow, *Narodnoe Obrazovanie*. 2003. No. 2. Pp. 55 61. (rus).

# Солодюк Н. В.

Формування дослідницької компетентності студентів-медиків

У статті науково обгрунтована сутність поняття ,,дослідницька компетентність", проаналізовано шляхи її формування у майбутніх лікарів, визначено зміст та особливості науково-дослідницької діяльності студентів вищого навчального закладу. Розглядаються питання підходу до визначення

дефініцій "компетенція" і "компетентність" у сучасній лінгводидактиці. Для розуміння суті дослідницької компетентності визначено сутність поняття дослідницької діяльності як невід'ємної складової навчально-пізнавальної активності студента. Тому дослідницьку компетентність можна розуміти як готовність і здатність до дослідницької діяльності. Пропонуються етапи, які забезпечать системність, цілісність та потребу майбутніх фахівців у розширенні творчих здібностей, розвитку самостійного мислення та здатності до логічного пошуку й апробації власних наукових положень. Також звернено увагу на характеристику основних компонентів дослідницької компетенції: інтелектуально-творчий, діяльнісно-операційний, мотиваційно-особистісний і когнітивний.

*Ключові слова:* компетенція, компетентність, дослідницька компетентність, дослідницька діяльність.

## Солодюк Н. В.

Формирования исследовательской компетентности студентов-медиков

В статье научно обоснована сущность понятия, "исследовательская компетентность", проанализированы пути ее формирования у будущих врачей, определено содержание и особенности научно-исследовательской деятельности студентов вуза. Рассматриваются вопросы подхода к определению дефиниций "компетенция" и "компетентность" в современной лингводидактике. Для понимания сути исследовательской компетентности определена суть понятия исследовательской деятельности как неотъемлемой составляющей учебнопознавательной активности студентов. Поэтому, исследовательскую способность понимать как готовность компетентность ОНЖОМ исследовательской деятельности. Предлагаются этапы, которые обеспечат системность, целостность и желание будущих специалистов расширить свои творческие способности, развить самостоятельность мышления, стремление к логическому исследованию и апробации собственных научных положений. обращено внимание на характеристику основных исследовательской компетенции: интеллектуально-творческий, деятельностнооперационный, мотивационно-личностный и когнитивный.

*Ключевые слова:* компетенция, компетентность, исследовательская компетентность, исследовательская деятельность.

### Information about the author

Nataliia Volodymyrivna Solodiuk – Candidate of Pedagogical Sciences, Docent, lecturer at the Department of Language Training of SE "Dnipropetrovsk Medical Academy of Health Ministry of Ukraine". The main research interests focus on the problems of modern Ukrainian linguodidactics, language training methods at

schools and higher educational establishments and studying the features of formation of student and pupil's language personality.

The article was received by the Editorial Office on 14.10.2015

The article was put into print on 27.11.2015

Peer review: T. V. Filat, Doctor of Philological Sciences, Professor