

**УДК 378.147.88**

## THE ROLE OF INFORMATIONAL AND COMMUNICATIONAL TECHNOLOGIES IN THE FORMATION OF PROFESSIONAL QUALITIES OF FUTURE ECONOMISTS

*Valeriy MYTSENKO (Kirovohrad)*

*У статті розглянуті проблеми формування професійних якостей засобами інформаційно-комунікаційних технологій майбутнього економіста. Визначається сутність поняття «інформаційно-комунікаційні технології». Наводяться аспекти інформаційно-комунікаційних технологій та цілі, на які вони орієнтуються.*

*В статье рассмотрены проблемы формирования профессиональных качеств средствами информационно-коммуникационных технологий будущего экономиста. Определяется сущность понятия «информационно-коммуникационные технологии». Приводятся аспекты информационно-коммуникационных технологий и цели, на которые они ориентируются.*

**Ключові слова:** *інформаційно-комунікаційні технології, інформаційна компетенція, інформатизація суспільства, аспекти інформаційно-комунікаційних технологій.*

The process of fast development of the Ukrainian education system is taking place nowadays. That includes prompt development of informational and communicational technologies both in education and science. And in its turn, the process demands a detailed evaluation of present approaches towards the education process from the point of its correspondence to modern demands of the XXI century. Informatization of our society gives possibility to get, change and save information, to solve professional, economic and social problems effectively and in the best optimal way for a person. For that one should acquire modern knowledge of informational and communicational environment. Rapidly developing informational and communicational technologies as a part of hardware, software and telecommunication have to be introduced in the process of professional training of future economists. And here arises the question of the necessity of training modern economist which demands, in its turn, the conceptual definition of this pedagogical issue. The key meaning has scientific grounding of theoretical and methodological grounds of the training of future specialists with the help of informational and communicational technologies.

Owing to “National Programme of Informatization of Ukraine” it is supposed to increase considerably the level of computer equipment and technologies in the educational establishments. The experience of using computer technologies in education process, equipment of higher educational establishments with modern technical and multimedia equipment, good knowledge of IT by students create all necessary conditions for the effective training of future economists with the help of informational and communicational technologies.

The analysis of the problem of training future economists shows that the research is being done in different aspects: usage of innovative pedagogical techniques at higher educational establishments – the works of G. G. Aseyev, I. M. Bohdanova, A. F. Gorbatyuk, V. I. Evdokimov, V. G. Pasynok, V. F. Palamarchuk, O. M. Pehota, I. F. Prokopenko and others; introduction of computer technologies into education – works of V. P. Bespalko, Y. I. Mashbyts, O. E. Mescheryakova, E. S. Polat, I. V. Robert, N. F. Talyzina, O. V. Hutorskyy and others.

Modern works of scientists who do research in different directions in informational and communicational technologies have not been completely systemized and this issue demands detailed theoretical and methodological analysis of professional training of future economists with the help of informational and communicational technologies. The absence of corresponding to modern demands scientific basis, leads to the fact that certain successful ways of usage of modern informational and communicational technologies are not introduced into the education process because of the lack of knowledge how the usage of IT will influence other sides and components of training process. In spite of the progress, some researchers accept the usage of computer technologies in the process of education very carefully and in most cases underline problems but not advantages. But the advantages are very important not only in the process of creation of telecommunication educational and pedagogical generalization and distance learning but also in the way of inter-discipline scientific research, as it is demanded by Bologna Agreement adopted by Ukraine. Informational and communicational technologies serve the basic part for other very noticeable functions and tasks of the education sphere – provision of cultural assistance to the process of moral convergence and integration of people and societies.

The objective of the article is to disclose the influence of the realization of approaches of informational and communicational technologies on the efficiency of professional training of future economists.

So informational and communicational technologies is a computer technology which is based on the usage of certain formal model of content that is presented in pedagogical programme applications saved in the computer memory that enables telecommunication network activity [2, p.364].

The formation of informational and communicational competence begins at secondary school and continues at higher educational establishment in the process of learning computer-based subjects. Moreover, a considerable degree of informational and communicational competence should be given to graduates of economic faculties. It is explained by the specific activity of economists which is connected with processing quickly changing economic information, huge volumes of economic

data, complex methods of intellectual activity, for example, with construction of different economic models and algorithms, analysis and synthesis of economic information and with other operations which cannot be carried out without in-depth knowledge of informational and communicational technologies.

While analysing professional training of economists we single out most meaningful cultural and professional competences for the formation of which it is necessary to owe informational and communicational competences, for example, the knowledge of basic methods, ways and means of getting, keeping and processing information, skills to work at computer as the instrument of information management, ability to work with the information in global world networks; ability to choose practical ways to process economic data according to the required task, to analyse the results of calculations and to ground received outcomes; ability to use national and international resources of information, gather necessary data, to analyse them and to prepare informational review and analytical reports; ability to use modern technical means and informational technologies to solve analytical and research tasks; ability to use modern technical means and informational technologies to solve communicational tasks.

Besides main, above-mentioned competences, an important role is given to informational and communicational competence of a student while formation of other cultural and professional competences, for example, understanding the essence and meaning of information in the development of modern society and future profession; ability to make organizational and managerial decisions and take responsibility for that; ability to self-development, increasing one's own qualification and proficiency; ability to find, analyse and process data which is necessary to carry out calculations of economic and social-economic indicators that characterise the activity of subjects of economical activity and presentation of the results of the work in certain form; ability to work out standard theoretical and econometric models on the basis of economic processes and phenomena; to analyse and interpret the received results, financial, bookkeeping and other information which is the integral part of any forms of reporting at an enterprise.

The study of the characteristics of professional activity of bachelors and corresponding competences gave possibility to hold operational analysis of professional knowledge of an economist, that can be solved with the help of informational and communicational technologies and to single out basic computer skills and abilities that are to be formed while teaching Information Technology (IT) and on their basis to determine main informational and communicational competences which are necessary for the formation of professional and cultural competences of bachelors of economic specialties which include:

1. The knowledge of present situation and prospects of development of informational and communicational technologies in the professional activity, degrees of professional tasks that are solved by using informational and communicational technologies.

2. The knowledge of means of search and selection of professionally important information, search and reference systems in the Internet.

3. The knowledge of system and official software for work, organisation and provision of safety in computer and network environment.

4. The knowledge of multipurpose and professionally-oriented informational and communicational technologies for the construction of models, data analysis, calculations, data processing, analysis of calculation outcomes, design of reports and support of decision making.

5. The knowledge of communication means, network communication and team working in network.

6. The knowledge of informational and communicational technologies means for the organisation of the process of teaching and self-education. Ability to learn any new software independently.

Besides the accented main computer skills and abilities while teaching IT to students it is necessary to pay special attention to the development of the qualities of a person which are necessary for the formation of informational and communicational competences of a graduate: high level of motivation, self-organisation, self-control, striving for self-development and self-education, ability to evaluate the results of the finished work adequately, the formation of professional type of thinking and communication skills including the skills in using software.

It goes without saying that all subjects of informational and professional cycle should make their input into the formation of informational and communicational competences of graduates, but the basics of the formation should be laid down in the process of teaching IT to first-year students. At that stage the readiness of the students for the usage of informational and communicational technologies is formed in the process of learning the foundations of future professional activity.

The formation of informational and communicational competences, in its sense, is possible in the conditions of activity realisation which is very close to the real situation. But the organisation of real informational activity in the conditions of present lecture-seminar system is scarcely possible. The possible way to solve this problem is the usage of informational and communicational technologies in education process as a tool of the formation of informational and communicational competences. The education process should give way to model real informational activity, especially the activity of an economist.

It is impossible to train an economist for his/her future professional activity without modern means of informational and communicational technologies. So, we can state that a computer is a decisive constituent of informational and communicational technologies. On the whole, informational and communicational technologies increase the efficiency of educational, scientific and mentoring process of professional training. A computer becomes the instrument for searching, selection, saving and access to the resources of authentic foreign information, the way of analysis, evaluation, classification of this information and, most importantly, a computer becomes central component of education system of professional training of future economist, which influences the objective, content and forms of training of students. The usage of a computer in the training of economists facilitates the creation of conditions of free access to huge volumes of educative, scientific and other useful information, including electronic textbooks, reference books, dictionaries, encyclopaedias, databases and archives [5; 7].

Wide usage of new technologies preconditions the necessity of definition of technology of education by means of informational and communicational

technologies. Present-day education by means of informational and communicational technologies means “scientific approaches towards the organisation of education and mentoring process with the purpose to optimise it and increase its efficiency. It also presupposes the renovation of material and technical basis of schools and universities according to the latest achievements of science and technology” [3,p.46].

Modern research shows that it is impossible to put new pedagogical technologies and informational and communicational technologies apart, as only complete introduction of new pedagogical technologies will allow graduate changing of higher education paradigm, and informational and communicational technologies allow realising these possibilities more effectively, as it is the fundamentals of pedagogical technologies. The analysis of technical and pedagogical approaches towards the creation of means of informational and communicational technologies allows scientists make the conclusion that the optimum is their harmonic usage.

To our mind, the convergence of hardware and software of IT, unlimited potential of a computer and telecommunications gradually lead to the expansion of the term “informational and communicational technologies”. The introduction of informational and communicational technologies into the process of training of economists opens new opportunities for the professional education, intensification of personal, communicative, problematic, searching and creative forms of education. Keeping to this terminology, the essence of “informational and communicational technologies” means a complex system of psychological and pedagogical procedures of selection and generalisation of didactic forms, functions, methods, ways, conditions and software means of a computer and telecommunications and ways of their functioning which are realised for the effective professional training of a future economist [3].

The traditional system of professional training of economists is at a certain degree ineffective because it is based on the old motivational, organisational and evaluative system of education. During the period of training of students by means of new technologies on the traditional basis it is impossible to have structural changes in the process of teaching except content component. Motivation and evaluation stay in the same form without changes. Pedagogical and didactic possibilities to introduce informational and communicational technologies allow improving the effectiveness of training in traditional system only according to some criteria (for example computer testing or material presentation with the help of a computer). But in order to solve the contradictions between the effectiveness of traditional training with the elements of informational and communicational technologies and real possibilities and strong potential of innovative training by means of informational and communicational technologies with the increase of the level of professional training on the whole, it is necessary to create, ground and realise the concept of training. Traditional training considers only reformation of separate contents component of the process of professional training of economists as didactic factor but not the reformation and gradual transition to the problem of mass, wide, systematic professional training of economists by means of informational and communicational technologies. Besides, during the last years the training of

specialists was considerably influenced by social and economic, financial and worldview factors which interfere its positive development.

These are:

- insufficient budget financing of educational establishments for purchasing computer equipment and licensed software;
- physical and moral aging of most of the part of material and technical means of teaching and its limited renewal.

So, a new conceptual approach to the problem of professional training of economists by means of informational and communicational technologies should be considered as a complex of problems that reflect methodological, didactic, legal, financial and economic, social and worldview aspects of the above-mentioned problem [6].

*Methodological aspect* is conditioned by the necessity of conceptual grounding of new technologies in the process of professional training of an economist and they are not widespread. Another important issue is methodological grounding of the used means as we speak about the systematic organisation of pedagogical, psychological and social knowledge, skills, abilities, realisation of different methods and approaches in professional training by means of informational and communicational technologies.

*Didactic aspect* reflects pedagogical basics of economist training by means of informational and communicational technologies. The usage of informational and communicational technologies definitely reflects fast qualitative pedagogical changes in the process of training of future specialists. The newest means of teaching make possible to carry out individual and differential approach in training process and in future it makes it possible for students independently choose the major subjects to study, taking into account personal interests and professional career plans.

*Legal aspect* reflects the necessity of adequate legal support of means of informational and communicational technologies in the process of national system of training of economists. We consider that training by means of informational and communicational technologies should be considered not only as addition to the present traditional training but it should have a corresponding role and status in pedagogical environment. Informational and communicational technologies are naturally framed into educational pedagogical structure and infrastructure, becoming an integral constituent in training not only students but also the instrument for re-training of teachers, getting second higher education, distance learning for people with special needs.

*Social aspect* of training an economist reflects the demand in mass education in modern society. The training of economists by means of informational and communicational technologies at higher educational establishments leads to liquidation of the gap in IT which Ukraine has comparably with developed countries.

*Worldview aspect* is connected with the necessity of liquidation of the formed stereotypes, changing the views on the training of economists as constant and unchangeable system. It is often claimed to reconsider radically the present scientific

paradigms in education. The complete change of the paradigm in the system of education is quite a difficult process. The formation and development of personal worldviews by means of informational and communicational technologies should be carried out in all the spheres of human life. Modern higher school goes through the process of individualisation and differentiation in training, which reflects real needs of students in different means of education. It may be stated that training of economists by means of informational and communicational technologies is taken place in the process of development of these ideas.

The main objective of training of future economists by means of informational and communicational technologies is defined by the problem of professional training of students by means of new pedagogical technologies. The realisation of the objective will guarantee competitiveness of future economists on modern market including the reformation of the system of professional training of students, wide mass, accessible and effective training of economists at higher educational establishments by means of informational and communicational technologies.

So, we may come to conclusion that means of informational and communicational technologies in the process of professional training of economists allow carrying out the training of specialists more effectively, forming highly professional skills. The necessary reformation of traditional system of professional training by means of informational and communicational technologies, gradual transition to innovative system of training, the functioning of new model of professional training taking into account necessary pedagogical conditions are the main steps to be taken nowadays. Solving this problem allows reaching the objective, consider not only modern national research and experience but also foreign experience. That will allow avoiding formal transition of foreign experience to the national situation. This way of solving the problem seems to be most optimal.

So, all above-state possibilities of informational and communicational technologies in education as well as in science have their own didactic and methodological character and are undoubtedly important. Computer studying at higher educational establishments is very effective and stimulates the realisation of well-known didactic principles of the organisation of education process. IT fills the activity of a teacher with absolutely new content allowing him/her concentrate on the main educational, pedagogical and developing functions.

#### BIBLIOGRAPHY

1. Андрухив Л.В. Формирование у будущих экономистов умения работать с информацией. Текст.: автореф. дис. канд. пед.наук / Андрухив Л.В.. – Астрахань, 2008. – 22 с.
2. Енциклопедія освіти. – К.: Юрінком Інтер, 2008. – 1038 с.
3. Извозчиков В. А. Новые информационные технологии обучения / В. А. Извозчиков. – СПб: РГПУ, 1991. – 120 с.
4. Костікова І. І. Теоретико-методичні засади професійної підготовки майбутніх учителів іноземних мов засобами інформаційно-комунікаційних технологій: дис. ... док. пед. наук / І. І. Костікова. – Х., 2008. – 469 с.
5. Костікова І. І. Вплив комп'ютерних технологій на сучасну освіту / І. І. Костікова // Культура, свідомість, мова в інформаційному суспільстві: матеріали Всеукр. наук.-практич. конференції. Серія: Наука. – Х.: НФаУ, 2007. – С. 309.
6. Костікова І. І. Концептуальні засади підготовки вчителів засобами інформаційно-комунікаційних технологій / Костікова І. І. // Науковий вісник Миколаївського державного

університету: Збірник наукових праць. – Випуск 20: Педагогічні науки. – Том 2. – Миколаїв: МДУ, 2008. – С. 255–263

7. Шампанер Г. Обучающие компьютерные системы / Г. Шампанер // Высшее образование в России. – 1998.– № 3. – С. 95–96.].

#### INFORMATION ABOUT THE AUTHOR

**Mytsenko Valeriy Ivanovych** – candidate of pedagogical sciences, Dozent, Head of Foreign Languages Department of Kirovohrad National Technical University

*The circle of scientific interests:* Problems of formation of professional qualities of future economists.