Improving the Professional Competence of a Specialist in Poland by Implementing Multimedia Technologies

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Summary
The article emphasizes the features of the modern education system in Poland, reveals the peculiarities of improving the professional competence of a specialist in Poland through the implementation of multimedia technologies. Various forms of innovations implemented in improving the professional competence of a specialist are listed: improvement (rationalization), modernization, innovation. The forms of professional improvement through the introduction of computer technologies in general and multimedia technologies, in particular, primarily include various professional courses, qualification, preparatory, methodological conferences, seminars, postgraduate studies, foreign and state internships. At the same time, the main direction is self-education. The subject of professional improvement in the application of computer technologies by specialists is the updating of existing knowledge, exchange of professional experience, planning, as well as discussion of innovative works in which specialists participate. Professional growth of specialists can occur both during work and in higher education institutions during their studies. Modernization of computer technologies, especially multimedia ones, is a necessary condition for the functioning of specialists in modern society, since specialists are at the center of the educational process, during the improvement of professional competence. The main functions of the educational process necessary for improving the professional competence of specialists through the implementation of multimedia technologies are revealed. These functions not only contribute to the professional improvement of specialists, but also affect their solutions and optimize the maintenance of contacts between specialists. The importance of creating conditions that are consistent with the modern needs of innovative education is emphasized.

Keywords:
multimedia technologies, improvement of professional competence, Poland, modern society, innovative education, modernization of computer technologies, professional growth.

1. Introduction

One of the features of the modern education system in Poland is the coexistence of two strategies for organizing education – traditional and innovative. Among scientists, discussions continue about the unwillingness of many specialists to introduce multimedia technologies both in the educational process and in self-educational professional improvement during life, which is due to certain reasons. The desire of scientists to ensure maximum compliance of the educational process with the requirements of the educational system provided for by implementing multimedia technologies leads to the fact that the individual appears as a means of activity. Under such conditions, the development of participants in the educational process occurs mainly as objectively limited by the subject-professional requirements of technology or methodology.

Traditional education is based on borrowing ideas, which is an extremely complex problem that is associated with the ability to perceive the latest ideas and spread them in educational practice, the ability to move from the formal, theoretical level of scientific knowledge to the level of the latest multimedia technologies.

The relationship between professional experience and innovation is not linear, but has a complex, multifaceted

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character. Innovation must "grow" in the soil of experience. The low innovation capacity of educational systems is due to attempts to understand the completeness of real innovation implementation mainly by working out detailed descriptions, rethinking generalized professional experience, and visiting higher education institutions that introduce the latest technologies and techniques.

Innovative educational systems are a dynamic movement of a complex set of coordinated local conditions that must change. The significance of the conditions that ensure the productivity of the stage of practical application of educational innovations, which are based on the latest ideas for implementing multimedia technologies, is justified. Success is achieved when reform is driven by a well-understood local need, becomes a local product of development, is initiated by a wide range of people and has adequate funding. Innovations in education reflect a complex and lengthy process involving a number of factors that affect it. Team members who need to perceive and implement innovations play the leading role. The success and effectiveness of innovative educational projects depend on their readiness for innovation through the implementation of multimedia technologies and their attitude to these innovations [10].

The solution of the problem of multimedia support for the introduction of educational innovations in professional development involves the development and application of a specially organized system, which, in our opinion, is designed to provide a single structural representation of all information elements of the process of introducing educational innovations and its content [7].

The purpose of the article: to reveal the features of improving the professional competence of a specialist in Poland by implementing multimedia technologies.

2. Analysis of recent research and publications

B. Cheredretska (B. Czeredecka) explores the possibilities of professional competence of a modern specialist who should learn innovation through the implementation of multimedia technologies and the effectiveness of using the acquired knowledge in work [3].

R. Schulz combines various definitions of innovation, reveals their content [28].

D. Rusakovska (D. Rusakowska) differentiates external and internal innovations [26].

M. Kazhimerovich (M. Kazimierowicz) justifies ways to improve the professional competence of a specialist; deduces the main goal of educational innovations implemented in improving the professional competence of a specialist; presents innovative solutions in various forms [9].

As noted by J. Savinski (J. Sawiński), educational innovations can have a different purpose and scope, relate to the whole life of a specialist [27].

M. Kirik reveals the content of innovative educational systems as a dynamic movement of a complex set of coordinated local conditions that should change [10].

Kotiash, I., Shevchuk, I., Borysonok, M., Matviienko, I., Popov, M., Terekhov, V., Kuchai O. discoveries that the practice of multimedia technologies in the educational process of higher education institutions lets to move from a passive to an active way of implementing educational activities, in which the student becomes the main participant in the learning process. [12].

Shunkov, V., Shevtsova, O., Koval, V., Grygorenko, T., Yefymenko, L., Smolianko, Y., Kuchai, O. exposes the pedagogical aims of multimedia learning technologies: rise of all levels of the educational process, improving its efficiency and quality; implementation of the social order caused by the informatization of modern society (training of specialists in the field of informatics and computer technology; training of the user of multimedia technologies); construction of an open education system that optimizes the dynamics of the trajectory of self-education; systematic integration of subject areas of knowledge; development of creative potential of the student, his ability to communicative actions; formation of skills in organizing and conducting experimental research activities; culture of educational work; development and formation of information culture of students [29].

Kuchai, O., Skyba, K., Demchenko, A., Savchenko, N, Necheporuk, Y., & Rezvan, O. study the part of multimedia education in the development of the information society. The information sphere is skilled both as a separate sector of the economy and as a factor in the innovation of education [15].

3. Research methods

Research methods: general scientific-bibliographic and retrospective analysis, comparison and generalization to clarify the specifics of improving the professional competence of a specialist in Poland through the implementation of multimedia technologies; historical-system – processing of authentic sources, official documents for scientific reflection of the formation and development of professional competence of a specialist; comparative-pedagogical – for comparative analysis of Polish and Ukrainian approaches to improving the professional competence of a specialist through the implementation of multimedia technologies.

4. Results and discussion

Changes in the field of education and improving the professional competence of a specialist in Poland are of varying importance and scale, but not every change deserves to be called an innovation. These changes occupy a special place in the realization of creative ingenuity, intelligence of specialists and commitment to their development and implementation.

Innovations in education and improving the professional competence of a specialist cover several areas and have a different character [4]. The development of education activates the need to improve innovations, the basis for which is the model of education of the future as an organization for the development of learning technology. Educational innovations are now becoming the norm for the effective functioning of educational institutions. Modern educational institutions are moving from a conservative to an innovative type of education.

Educational innovations – necessary assistance in the professional activities of specialists. They are aimed at the specific needs of the specialist, form a type of support for his comprehensive development [21]. As B. Cheredretska rightly notes (B. Czeredecka), a modern specialist should be trained in innovation, effectively use the acquired knowledge in their work [3].

According to the interpretation of V. Okon, innovations determine the structure of the educational system, its parts for achieving improvements in learning. They cover specialists, as well as programs, textbooks, equipment of educational institutions, mass media, and the educational environment in general [19].

R. Schulz characterizes innovation by combining different definitions:

- innovation – every thought or everything that is new is qualitatively different from the existing forms;
- innovation – creative selection and organization, as well as utilization of human and material reserves in a new and unique way, the highest level of achievement of the outlined goals;
- innovation – a conscious change, original, peculiar, which gives grounds to talk about the effectiveness in achieving the goals of the system;
- pedagogical innovation – an integral process designed to create a new form of educational practice through its experimental verification in the laboratory;
- pedagogical innovation – a conscious attempt to improve existing practices, taking into account certain desired goals.

Scientific sources identify three types of innovations that are used in education in general, and in the improvement of professional competence, in particular:

- innovations proven by experience, designed through other specialists (diffusion and assimilation of innovations through the system of a particular organization), this method is considered the easiest to use;
- educational discoveries that take place in practice; this is a complex task, although it is beneficial for the development of pedagogical theory and practice and for improving the professional competence of a specialist;
- independent introduction of innovations by a specialist using their professional experience; it is a valuable way, because it develops the creative capabilities of the individual, but balances between two poles: original discoveries that enrich theory and practice, as well as subjectively new discoveries (new for a particular specialist), objectively make up a repeat of what was previously used in the educational system to improve professional competence [28].

The concept of "innovation" requires a broader interpretive context describing the dynamics of the modern educational system. Innovations in education should be perceived through the prism of identification and problem-solving processes adapted at different levels of learning. The basis of innovation is the creativity of a specialist, which consists in enriching the experience with new values. Creativity is also a manifestation of professional and personal self-realization of specialists [30].

D. Rusakovska (D. Rusakowska) differentiates external innovations (have a different distance character and scope, most often initiated through education), as well as internal (improvement, concerning the repetition of actions, improvement of efficiency, modernization, innovation (a kind of the most complex innovation activity of a specialist, based on his initiative and creativity)) [25].

M. Kazhimerovich (M. Kazimierowicz) notes that educational innovation is innovative program solutions, organizational, methodological work of an educational institution aimed at improving the professional competence of a specialist, which, according to the degree of manifestation, can cover all or selected academic subjects, an entire branch of education, department or group. The main goal of educational innovations implemented in improving the professional competence of a specialist is to improve the work of the specialist himself. The specialist embodies innovative solutions in various forms, including:

- improvement (rationalization) - the simplest form of innovation; as for increasing readiness and efficiency in the field of work organization, methods and techniques of professional action;
- modernization, which involves various forms, the main one of which is the modernization of the material and organizational educational sphere through the implementation of multimedia technologies;
- innovation – a type of the most complex innovation activity of a specialist concerning his initiative and creativity; consists in the independent development of a change project by a specialist and its implementation [9].

J. Petraszynski (Z. Pietrasiński) names three types of specialist work that a person resorts to before applying an innovation:

1. Conservative (negative) type, which is characterized by a reluctant attitude to innovation, suspicious skepticism about change, and a desire to act in the direction of difficult initiatives related to innovation; the main source of this position is the fear of learning new, unknown and difficult things;

2. Positive attitude to change and a desire to adopt the developed innovations;

3. Independent search or initiation of new, original solutions, creation of non-applicable projects [24].

M. Kaminska-Yutskevich (M. Kamińska-Juckiewicz) believes that the work aimed at improving the professional competence of a specialist in the use of innovations can be positive, negative and neutral. Positive or negative positions may have stereotypes that are resistant to change, which are directly related to maintaining a clear situation for the specialist during education [8].

Nowadays in Poland, there are a number of forms of innovative approaches to professional improvement of specialists. Some of them are easily accessible and free of charge, for example, participation in open classes, studying pedagogical, psychological, innovative literature, viewing publications of colleagues on the internet forum, being acquainted with the charter of the institution, as well as constant contact with a psychologist and speech therapist, sharing information and experience with other employees, participation in meetings. Others require time and financial costs in return. Both forms are equally important, regardless of their availability and cost.

Special attention in the education system in order to improve the professional competence of a specialist is focused on self-education during the performance of professional duties [14]. Recently, scientists have focused on the use of interactive learning technologies in the education system in general and the system of improving the professional competence of a specialist, in particular. This special educational movement always contains elements of creative interpretation. Working in an innovative mode requires a specialist to build an educational space based on attention to constantly changing interests, educational needs of society, as well as the implementation of an individual approach to each participant in the educational process [18].

We believe that any profession is associated with lifelong improvement and education. professional improvement of specialists' professional competence consists in improving and deepening professional qualifications, makes it possible to attract them to professional skills, as well as the highest social and professional status. This is especially important now, when computerization of education in general and the use of multimedia technologies in particular are relevant.

The forms of professional improvement of computer technologies in general and multimedia technologies, in particular, primarily include various professional courses, qualification, preparatory, methodological conferences, seminars, postgraduate studies, foreign and state internships. At the same time, the main direction is self-education. The subject of professional improvement in the application of computer technologies by specialists is the updating of existing knowledge, exchange of professional experience, planning, as well as discussion of innovative works in which specialists participate. Professional growth of specialists can occur both during work and in higher education institutions during their studies.

Modernization of computer technologies, especially multimedia ones, is a necessary condition for the functioning of specialists in modern society, since specialists are at the center of the educational process, during the improvement of professional competence. Any profession is impossible without constant training; it requires continuous investment in professional development. The basis of professional development of a specialist is the process of continuous improvement [13].

Professional development is an organic component of teacher training, which provides for improving professional competence, universal personal development, and optimizing the ability to apply multimedia technologies [23].

Professional improvement is important for adjusting the quality of work of specialists and their organizations or educational institutions. Improvement is a form of investment in the personal and professional development of specialists, which requires an appropriate choice of forms, content and ways of further work on yourself, which is associated with professional growth [22].

Multimedia technologies are confidently included in all areas of pedagogical activity, including the system of postgraduate teacher education. The problem of informatization has become the core around which the entire system of work of an educational institution of postgraduate education is built.

Taking into account new achievements and trends in the development of multimedia technologies, the possibility of connecting to the global computer network of the Internet, the main functional tasks of structural divisions of educational institutions are changing, and their advisory function is strengthening. The widespread use of information and multimedia technologies in the system of postgraduate education based on end-to-end computer training of students increases their competitiveness in the labor market. Therefore, special courses are recommended for students, the study of which increases their information culture, contributes to the improvement of professional competence. Postgraduate students are introduced to the benefits of using the Internet. The possibility of access to the latest sources of information and research results is

being clarified. Thanks to the Internet, the introduction of distance learning has become a reality. The possibility of intensive communication between the student and the teacher, individualization of training takes this form to a qualitatively new level in the education system. One of the main components of distance learning information technologies is the virtual learning environment as a system-organized set of means of transmitting and processing information, information resources, hardware, software and organizational and methodological support, which is focused on meeting the educational needs of specialists. Such an environment provides wide access to educational materials from various courses, support for communication between participants in the distance education process.

According to our research, the use of modern information technologies can increase the awareness of specialists, their professionalism, quality and depth of intersubjective relations, improve the content of postgraduate education, methods and forms of the educational process leads to the improvement of professional competence.

For institutions of postgraduate education, the social order of the information society should be considered to provide an appropriate level of information culture of teachers, necessary for professional activities, which we define as the ability to purposefully work with information, use computer information and multimedia technologies, modern technical means and methods for its receipt, processing, storage, transmission.

The integral components of professional competence are understanding the essence of concepts, the ability to work with reference, scientific, methodological, abstract literature and periodicals; knowledge of information and multimedia technologies; using the capabilities of the Internet, in particular the database of cloud technologies [16].

It should be noted that the improvement of the qualification of specialists in Poland at the beginning of the XXI century cannot be characterized either as excessive practicality or as a vivid one-sidedness. Especially relevant at such an important time for education is improving the professional competence of specialists in the field of culture and preparing individuals to respond to the challenges of society associated with the use of multimedia technologies. The foundation of new thinking in modern Poland is to combine the erudition and individuality of specialists, their training with the use of multimedia technologies.

Polish scientists have substantiated the modern theory of improving the professional competence of a specialist through the implementation of multimedia technologies, which is implemented in the process of democratizing society and the beginning of the transition from traditional to continuing education. This theory provides for both personal and professional development of specialists, and the transformation of the education system into general social progress, which determines the priority of public attention to employees, activates the self-education of a professional to improve competence through the implementation of multimedia technologies [31].

In Poland, demographic processes, as well as changes in the socio-political system, affect the improvement of professional competence of a specialist, the implementation of the tasks of the education system, and the deepening of knowledge on the use of multimedia technologies. To modernize the professional improvement of employees, new positions with new functions have been introduced: guardian, intern (mentor), who should acquaint the young specialist with the profession; the leader of the block (subject) association of specialists, who should organize the work of the association of specialists, manage and provide them with methodological assistance; the leader of the association of specialists, who organizes the work of young people, directs them, helps, coordinates educational activities; the leader of professional development, whose task is to coordinate the improvement of professional skills, research of needs related to professional development, organization of certain forms of improvement by implementing multimedia technologies.

In the structure of training, it is important to ensure that the requests and development needs of individuals and associations are conveyed "up" and broad initiatives in the field of education development are directed "down", as well as appropriate responses to identified needs [11; 17]. Changes in professional improvement and obtaining specialist competence through the implementation of multimedia technologies are the result of the transformation-taking place in the education system. The education reform poses new challenges for specialists, the implementation of which depends on whether specialists will have the desire to enrich their knowledge and skills. Specialists are primarily responsible for expanding and complementing their psychological and pedagogical knowledge [6; 13; 20].

Professional improvement of specialists V. Okon (W. Okoń) calls an important component of the education system, which consists in:

- providing assistance to novice specialists during the period of adaptation to the profession;
- updating and deepening of subject and pedagogical knowledge, familiarization with the progress of Science, in particular Multimedia Science, assistance in expanding or changing specialization (during the period of professional independence);
- organization of various forms of individual self-education of specialists;
- assistance in independent research work [19].

When improving the professional competence of specialists by implementing multimedia technologies,

according to H. Dybek, the main functions of the educational process are implemented:

- an adaptive function that partially limits the needs of a specialist who has just started working;
- advanced training function related to additional training (due to the constant development of multimedia technologies) to neutralize the gaps between the obtained qualifications and new requirements for a specialist this function (especially important from the point of view of scientific and technological progress);
- an expanding, improving function that makes it possible to obtain additional qualifications, especially after several years of training in advanced training courses for specialists an innovative function that is of great importance for improving the skills of specialists (a necessary link between pedagogical theory and educational practice, between the planned reforms and their implementation).

These functions not only contribute to the professional improvement of specialists, but also affect their solutions, optimize the maintenance of contacts between specialists [5].

The recent reform of Education in Poland has not been accompanied by equally profound changes in the system of training specialists. Of course, new tasks related to program reform have appeared in training programs for training specialists: the use of multimedia technologies, integrated training, and block training. At the same time, the basic structure of training, which was based on training specialists to study individual subjects, was not changed. In this situation, the specific content was given to improving the skills of specialists, which made it possible to prepare them for solving new tasks related to the reform of the education system.

The Polish Ministry of public education has introduced a new system of financing courses designed to improve the skills of specialists. In addition to the usual proposal developed by professional development centers and higher education institutions, the Ministry announced a competition for an additional course of study that would meet the most urgent needs associated with the reform. The competition was aimed at state institutions of higher education, public institutions of advanced training of specialists, non-state institutions of higher education and non-state institutions of advanced training of specialists.

A peculiar paradox is the fact that courses related to the reform should also cover specialists who have recently graduated from higher education institutions. In order to encourage specialists to participate in advanced training programs and at the same time motivate those who have improved their skills by completing courses, the Ministry of public education has prepared amendments to the specialist Charter, which regulates the conditions for enrollment and work standards for specialists.

Encouraging specialists to improve their professional competence was only one of the reasons for updating the Charter. The Ministry of public education motivated the need to make changes to it by the presence of shortcomings in the then rationing:

- the salary of specialists was associated only with nominal education and work experience, and not with the actual qualifications and results obtained;
- a specialist received the highest level of salary only after thirty years of work;
– the salary system was inflexible and complex (in addition to the main salary, the specialist received several allowances);
– the level of salaries of young specialists was in accordance with the level of qualifications required from specialists and therefore was fundamentally low compared to the average salary [1; 2].

Conclusions

Improving the skills of specialists during the reform of the educational system is an urgent task of our time. It is impossible to talk about the prospects for development, implementation of the program of modernization of Education, introduction into the practice of specialized training, new forms and methods of organizing the educational process without systematic work on training personnel for the use of multimedia technologies, which should be carried out both at the level of the region, municipality, and start at the school level. The urgency of the problem of training a highly qualified, free-thinking, active specialist is obvious. A trained, highly qualified specialist determines how interesting, rich and productive their professional process will be. A modern specialist is a person who is able to successfully implement a competence-based approach to learning throughout life. The main concept for the competence approach is the concept of "competence" – a person's readiness to mobilize knowledge, skills and external resources for effective activity in a particular situation. While improving their skills, specialists must master the entire system of competencies that ensure a successful learning process throughout their lives.

Therefore, there is a great demand for the search for such forms of improving professional competence and their combination, which will contribute as much as possible to the formation of key competencies of specialists, that is, mastering:

- principles of creative activity (individual competence);
- basic abilities in self-projection, self-realization and reflection (self-organizational competence);
- communicative activities for self - and mutual assistance in public life (communicative competence);
- skills of research activity (search and research competence);

- methods of drawing up projects and programs (design and program competence);
- knowledge of multimedia technologies, etc.

Deep transformations in society that would meet its modern requirements are possible thanks to multimedia technologies. These transformations should be carried out in order to spread the creative activity of specialists. It is important to create conditions that are consistent with the current needs of innovative education:

- proper system of training and retraining of specialists for the qualified use of multimedia technologies;
- necessary equipment that meets the new methodological materials;
- improving the educational information system;
- creative freedom;
- financial incentives for specialists (for example, bonuses, prizes, reducing the length of the working week), effective motivation for innovation;
- the need for assistance from research institutes of the appropriate profile.

A significant factor in stimulating innovation activity, which plays the most important role in the development of creative relationships between specialists in the process of professional training, is the preparation of specialists for innovation, which is the main condition for the success of any changes. In this regard, drastic changes should take place in the training of specialists in institutions of higher education and advanced training. First of all, we need to familiarize specialists with innovative research in more depth and help them implement multimedia technologies. The more a specialist improves his innovation activity and professional competence, the more widely he introduces innovations in professional work.

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