The innovative technology of learning as an important factor of future teacher training

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Received 14.08.2015; Accepted 18. 09. 2015

Abstract
The article described the features and the content of innovation and innovative technologies, determined the feasibility and necessity of their implementation in practice of training future teachers in the conditions of high school. The author offers a description of some aspects of innovative learning technologies, including case-technology, information technology, determines the feasibility and the specifics of their use, gives their classification, analyzes the stages of implementation. The article particularly focused on the use of information technology during lectures, identified their advantages; the author focuses on the use of new approaches in teaching web- quest and webinar as a kind of computer technologies.

Keywords: *innovation, innovative technologies, case-method, Web quest webinar, information technology*.

1 Introduction

The dynamics of educational reform the necessity of increased attention to the potential use of new innovative technologies in the organization of educational process in high school. The current stage of modernization of education degreeof Ukraine is characterized by increased attention to the individual, directing the efforts of teachers to develop creative potential of the participants in the educational process, a combination of established traditions in the national high school with new ideas related to the entry of Ukraine into the European and world educational space.The Implementation of new vectors of the development of Education requires the use of innovative learning technologies in higher education, creativity of new or improving existing concepts, principles, approaches to education, significant changes in the content, forms and methods of training, education, management of teaching process.

2. Innovation in education

The new paradigm of education led updating professional teacher education. This process is especially important due to cardinal changes in education. The introduction of innovative learning technologies in higher education makes it possible to radically change directly to the learning process and reform of higher education. In today's environment of higher education will largely depend on the impact of the introduction of innovative learning technologies.

Innovation in education is needed: to the solution of educational problems that still handled differently; as "the result of creative search of original, non-standard solutions of various educational problems"; as the systemic tumors arising from various initiatives; as the products of innovative educational activities that characterized the creation, distribution and use of the new product in the field of pedagogical and scientific researches.
At the present stage of development of the state and the society innovation process plays an important and sometimes decisive role as the main products of modern production are information and knowledge. In the modern, post-industrial society have been widely used terms: innovation, innovative activity, innovative product, innovative products. The introduction of this concept gave impetus to its use in educational activities, due to the latest scientific developments, the introduction of information technology, high-tech equipment, scientific and technical means of the new generation.

The word innovation is of Latin origin, it means the renewal, modification, introduction of new. In teaching interpreting educational innovation means innovation that improves the progress and results of the educational process. Innovation can be considered as he process(a large-scale or partial change of the system and relevant activities) and the product (result) of the activities. Thus, innovative educational technology as a process - a "deliberate, systematic and consistent implementation in practice of original, innovative methods, techniques and tools of pedagogical action, covering holistic educational process of defining its objectives to expected results" (Duchkivska 4, p. 339). In define the meaning of product innovation as original, innovative teaching methods and techniques and means of action.

Innovation in education – is the process of creation, implementation and dissemination in educational practice new ideas, tools, educational and management technologies, which resulted in increased performance (level) achievement of structural components of education, the transition to a qualitatively new system state. The word "innovation" has multidimensional importance, because it consists of two forms: the actual idea and the process of its implementation (Enzcyklopediya osvity).

The Law of Ukraine "On innovation activity" defines innovation as newly created (based), and (or) improved competitive technologies, products or services as well as organizational and technical solutions for the industrial, administrative, commercial or otherwise, which significantly improve the structure and quality of production and (or) social services (http://zakon1.rada.gov.ua/laws/show/40-15). Innovative teaching is opposed to supportive, traditional learning. His view of education as a response to the transition of society the highest degree of development, to replace the goals of education.

As the I.M. Dychkivska, innovative training - focused on the dynamic changes in the world of training activities, based on the original method of development of various forms of thought, creativity, high social adaptive capacity of the individual (Duchkivska, p. 339).
Given the advances in modern foreign pedagogy, distinguish two main types of innovative approaches to the educational process in high school. The first researchers attribute-modern innovation that contribute to the modernization of the educational process to achieve guaranteed

results within its traditional reproductive orientations. As a second innovative approach to training teachers consider innovation, transformation, conducive to qualitative transformation of the educational process aimed at ensuring its exploratory, orientation search teaching and learning of (Klarin, p. 9].

One of the areas of innovation is the widespread introduction of information technology in the practice of training future teachers. Based on the analysis of studies [4; 5; 8], it should be noted that the introduction of information technology in education is at least three stages. On the first stage the education system is organized, it is carried out their administrative processes and storage the information. On the second stage the computer systems created, actively the Internet is used and is the convergence of information and telecommunication technologies. On the third phase, which is now being implemented in Ukraine, new information technology gradually integrates with educational. At this stage the use of information technology in education characterized by a wide range of distance education technology, various forms of e-learning and introduction of information systems in the management of educational institutions in general.

3. The innovative educational technology

Among the innovative educational technology the professional development of teacher education of future professionals occupies a special place case technology. The most effective case-technologies that enhance the educational process in higher education, in our opinion, include: situational analysis method (the method of analysis of specific situations, situational tasks and exercises, case studies); Method incident; Method situational role-playing games; method of dismantling business correspondence; design method; method of discussion. So, the case-technology - is an interactive technology for short training based on real or imaginary situations aimed not so much at acquiring specific knowledge as n the formation of students' professional qualities and skills.

Let’s analyze the individual aspects of each method. The purpose of the method incidents are searching for information for decision-making directly a student and as a result, his training work with information, report it to organize, analyze (Machинska, p. 312-313). We believe that the use of the method in practice incident of seminars and practical sessions will promote the development of abilities to overcome inertia age and personal behaviors, encourage future teachers to find ways to solve invariate different teaching situations.

The game design process involves the creation or improvement of facilities. This method covers projects of various types, namely research, search, creative, forecasting, analytical. Project-is the most used in the practice of primary school teachers, and therefore deserves special attention. The method of playing roles (staging) is to create as a staging real historical, legal, social, psychological, educational, pedagogical etc. situation and then provide an opportunity to assess the actions and behavior of the game. Group discussion - the exchange of views on certain issues under the more or less defined rules of procedure. The most common method of situational analysis is the traditional analysis of specific situations (AKC) - a deep and detailed study of real or imitation situation. A variety of methods are AKC case studies and situational analysis technique - case studies. Situational exercises usually are associated with the problems of the past, present and even future time. The essence of the case studies is that students become acquainted with the description

of the problems on their own situation analyzes, diagnoses the problem and offers ideas and solutions in discussions with other students (Makovezcka, 306 - 307).

An integral and important part of establishing a new system of teacher education focused on joining the global information and educational space, is the process of computerization of education, accompanied by significant changes in pedagogical theory and practice of educational process, which is associated with making corrections to the content technology training which must be adequate modern technical capabilities and contribute to the harmonious joining people in the information society (Danyluk, 134).

Preparing students for the ability of optimal use of information technology, training of skilled future teachers by means teaching process, extracurricular activities and creating conditions for the effective use of computer technology in different situations.

The emergence of new information technologies related to a wide use of computers. So technically simple task is the implementation of computer programs that enable the effective use of innovative technologies in the learning process. The network technologies designed to telecommunication of students with faculty, colleagues, employees of libraries, laboratories, institutions of education. Telecommunication access to databases worldwide through the Internet. The forms of network communication are:

- E-mail (is for the exchange of information between the subjects of communication, exercise counseling, distance education); An important feature of email, attractive for education is the possibility of implementing asynchronous information exchange; Information Technology intensify teacher professional activities i, accelerate the process of implementation of tasks students and increase the efficiency of professional readiness of the future expert (Pshenychn, p. 594);
- Teleconference (allows all who are at a considerable distance from each other, organize joint training, to discuss educational issues, participate in business games, workshops, etc. in terms of so-called virtual classroom); the important form of interaction between teacher and students is also advice that is not necessarily carried out at eye meetings; Teachers implementation in synchronous mode, you can perform through technology Skype, IRC. Skype and IRC technology, providing the opportunity to participate in dialogue not only two interlocutors (teachers and students), but the whole group. This software allows konferentscalls (up to 25 voice customers, including the call initiator), video (videoconferencing to 10 subscribers simultaneously), and provides information transfer (IM) and file transfer. There is an opportunity instead of an image from a webcam to transmit images from the screen.The transfer of audio data is due Skype-codec (reduction of information algorithms) SILK (8-24 kHz), G.729 (8 kHz) G.711 and at sufficiently high speed Internet connection (> 10 kbit / s). In most cases the sound quality meets the sound quality of mobile communication (http://www.faro.in.ua/focus3d.html).

Innovative activity is specific and quite complex, requiring special knowledge, skills and abilities reported to axiological dimensions in the educational process (Eşi, 2011). Innovating impossible without the teacher-researcher who has systemic thinking, developed creativity, formed and conscious willingness to innovate. Innovative Educators call this type of innovative educators direction, they clear motivation inherent in innovation and innovative vykrystalizuvana position, the ability to not only be included in the innovation process, but also be initiated them.

A significant impetus to the development of innovation is the use of information technology (IT) for lectures, which involves the use of multimedia presentations to accompany the presentation of theoretical material and electronic lectures. The experience shows, that a lecture can intensify using presentation materials. Presentation Slides supplementing verbal information, increase the volume of material by submitting it in a structured way (charts, graphs, tables, illustrations, supporting notes, etc.), illustrating the process or phenomenon, showing the sequence of actions. The support of lectures by presentation materials makes them more visible, focuses listeners through visual presentation of the material, it stimulates memory, increases the amount of presentation of educational information.The ability to save the lectures provides the use of electronic lectures, which are given in the form of web-document. These resources have a comfortable structure, navigation and search capabilities information system characterized by logical presentation of theoretical material highlighting the main terms and conditions differ accessibility for understanding them in the existing material. Electronic lectures allow to transfer the study simple (but very important) theoretical material in the plane of self-learning. The essence of the positive effects of IT during the lectures is to implement the principle of visibility, increase assimilated material promoting conscious assimilation of the essence of phenomena and processes of concentration due to the visual variety, save time, improve the quality of presentation of theoretical information. The use of the electronic lecture and multimedia presentation materials simultaneously intensifying the job of teaching since developed materials quickly updated, supplemented and improved (Pshenychna, pp. 592-593).

It should be noted that the use of IT for various types of lessons brings the following benefits to the educational process, saving time for the presentation of educational materials, the appearance of the possibility of solving more problemsavailability of materials at any time convenient for the student, the transfer of some issues to independent study, realization of individual learning paths. IT in the implementation of these organizational forms significantly extend the professional activity of teachers, the classroom is not spent too much time on building schemes and write formulas, graphics best corresponds to reality; teacher in the methodical work constantly updates the content of the course through the creation and use of new components. Another of the pedagogical innovation is the introduction of technology training in the form of webinars. Webinar – is an online conference at which one or more presenters conduct seminars, trainings, courses presentation or group from a few to several thousand participants. It's convenient: You do not come to classes full-time and full-time employment comes to you! It's simple: it is rather to be the user of the PC to receive training mode webinar, expertise and do not require. You will not only present at the session, but also get access to the webinar recording. Computer technology vary modern information culture of teachers, helping them to grow creatively, enable to use solely for the widest range of information, provide efficiency enrich of educational material of new information. Development of e-books is one of the leading areas of all schools (Sysoeva; Osadchyi; Osadcha).

It is also advisable to note an innovative web-quest (web-quest) - is a problematic task with elements of role-playing games, for which the Internet resources are used. I.M.Sokol considers quest as technologywhich has clear set didactic objectives, the game plan, is sure to have the head (coach), clear rules and is implemented to enhance the students' knowledge and skills of the XXI century (Sokol, pp. 28-32).

The experience suggests using the web quest has six components. First, the teacher sets the theme and creates a problematic situation. Second, the teacher verbalizes specific task within a selected

theme, which is understandable, interesting and a possibility. Thirdly, the teacher selects and offers to students a list of links to Internet resources. The fourth stage - students begin the process of finding relevant information online, making use of the procedure for the work that each student must perform during the independent task (stages); Students must prepare a presentation found and processed information that can be implemented in any form (slides, Web pages and so on. p.). At the fifth stage the teacher can draw up a guide to action (how to organize and present selected information) that can be represented as a steering issues to organize training activities. The final, sixth part of your quest, is to assess the work done by students. Evaluation criteria can be different (eg, time presentation, originality, innovation, etc.). The base of the web quests are project methods that focused on independent activity of students - individual, pair, group, which is done for a certain period of time. This method is combined with an organic approach to the study group (cooperativelearning). Project activities are most effective if it is unable to associate with program material, greatly expanding and deepening students' knowledge in the course of the project. Project-always involves solving problems. Solving the problem of significant ensures that students unable to attract attention from a form of expression in its content (Gurevych, p. 34).

The essence of innovation in education is, first, the problem of the study, synthesis and dissemination of good teaching experience, and, secondly, the problem of the introduction of psycho-pedagogical science in practice. These problems should be solved integrated. However, the problem of educational innovation is underway. This contributes to the exacerbation of contradictions between fundamental scientific knowledge and the complexity of their practical use, between the phase of creating a new pedagogical knowledge and its implementation as an experiental innovative. However, there are different approaches to scientific innovation. M.V. Klarin said: "In its primary meaning of" innovation "belongs to not only the creation and dissemination of innovations, but also to changes in ways of life, style of speech that are related. Considering the innovative model of learning in this way, we appeal to the new didactic approaches that form the unconventional idea of the organization of educational process (Klarin, p.55]. At the same time, a number of contradictions between traditional approaches to learning in higher education and new social and economic demands of society; between limited in terms of time learning and growing amount of scientific information. The differentiation of scientific knowledge, its doubling always lead to the need to expand the content of education. An important factor in educational technology is the position of the student in the educational process, the attitude of teachers. Here the priority attribute of personality-oriented, which is the center of the educational system of higher education places the student, provides him with a comfortable and safe conditions for the development, the implementation of natural features of future specialists. In this technology, the identity - the main subject, aim, not a means to the achievement of this goal.

In the scientific literature it was found the general laws of occurrence of the innovation process: the law of irreversible destabilization of innovative educational environment; final act of the innovation process; the law of stereotyping; the law of cyclic recurrence (Ysufbekova, pp. 27-32). The formation of a new system of teacher education, oriented on entry into the world educational space for innovation requires changes direction in preparing future professionals in any industry. The leading factor in the implementation of innovative education is a fundamental change of function of the teacher who ceases to be the translator of knowledge, hard organizer of the content and direction of educational activity of students. To organize innovative training optimal, according L.V.Kozak seems the way of design and organization of educational process in which: focuses on the

organization of types of cognitive activity of the learner; teacher acts as manager and teacher-directed learning; student acts as an activity together with the teacher, and his personal development has as one of the main educational goals (Kozak, p.101). Thus, one of the most important strategic tasks at this stage of modernization of education degree of Ukraine is to provide quality training to international standards. Solving this problem is possible if the change ofpedagogical methods and implementation of innovative learning technologies in the educational process of higher education. That is why information technologies are beginning to penetrate into the sphere of national education. They have all the signs of social and technical innovation, and require all participants in the educational process of adaptive efforts of character.

4. Conclusions

Given that there is a direct link between level of education and her professional rights and economic prosperity, innovative learning technologies in educational process of higher education is a key issue. Resolving this issue requiresthe consolidation consciousness, joint efforts mobility around the idea of building innovative, humanistic, democratic oriented educational environment that will provide conditions for comprehensive and harmonious development of personality and competitiveness of the future expert. To solve this problem in higher education requires speedy introduction of new technologies and improvement of logistics systems of teacher

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