THE ESSENCE AND DEFINITION OF THE CONCEPT "PEDAGOGICAL TECHNOLOGY"

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The article considered the theoretical aspects of technological approach to vocational education. On the base of the analysis of researches of leading scientists concretely the essence, highlights the main features of pedagogical technology, the proposed definition of the investigated phenomenon.

Statement of the problem. Innovative development of our society, the increased demand for personnel training in Ukraine require a significant modernisation of higher education system and, above of all, the educational process. At the of time certification of graduates of higher educational institutions, in particular agricultural, according to the requirements of the competence-based approach, where future professionals will be estimated according to the criteria declared in the National qualifications of framework. In turn, practice was oriented competence of the concept should significantly change and the organization of educational process on the requirements of technological. It is a guaranteed results of training that are achieved with the use of educational technology (technologies of training, educational technologies, didactic technologies, etc.). But despite the fact that aspects of technological training is already a decades in sight of scientists, the theory of pedagogical technologies are still not sufficiently developed: in scientific apparatus of didactics of higher education there are over 300 definitions of this concept.

Analysis of recent researches and publications. The study of technological of training foreign scientists were connected with the names of J. Bruner, T. Sakamoto, D. Carnegie, N. Vulman, G.Grace. B. Skinner, M. Clark, P. Mitchell, P. Thomas, P. Utsiaviche etc. In Russia the theoretical and practical aspects of the use of pedagogical technology is reflected in the writings of V. Bespalko, V. Slastenina, M. Clarina, V. Monahova, T. Ilina, G. Selevka, A. Hutorskyi and other. On the territory of Ukrainian pedagogical science a significant contribution to the training of the problem of technological learning has made such famous scientists as A. Aleksuk, S. Goncharenko, V. Evdokymov, A. Nisimchuk, O. Padalka, O. Pehota, I. Prokopenko, S. Bondar, and others.

Statement of the problem. On the base of the searching of the features of the technological approach in training to concretize the essence and to clarify the definition of the concept "pedagogical technology".

The keyword terms "pedagogical technology" and "technology training" is the technology. In the large dictionary definition of modern Ukrainian language [1, p. 1245] technology is interpreted as a complex of knowledge, information about the sequence of individual productive operations in the production process or as a set of ways of processing materials, various industrial operations. The essence of this concept is understandable even to those who are not deeply known with the

production process. For example, agrarians experts know that the *technology* of growing winter wheat provides a sequence of operations (*application of organic fertilizers - plowing – presowing cultivation – sowing – retention of snow on fields – feeding fertilizers – herbicide* ...). If you keep to the agrotechnical requirements for the implementation of each technological operation, it is possible to achieve the purpose of planned productivity of wheat.

Therefore, in this example the technology is the consistent implementation of beforehand design technological operations with purpose to guarantee receipt of specific products.

Scientists convince [2; 8] that was the first time of the idea of technologizing educational process, gave the founder of the class-lesson system of Y. Komensky, who sought to find such a ”order” of training which would make the school on ”... printing establishment, where for one day is never printed the whole book, and every day print one page... “ [5, C. 53]. However, it's a real attempt to technologyservice the process of mastering knowledge was programmed training.

In our country the elements of programmed training began to be applied from the 20-ies of the last century, when the scientists of the Central Institute of labor tested the scientific method of labour pedagogy, which was based on special programs. For these programs the entire amount of work was partitioned into specific operations indicated the time length of execution, and anticipated continuous control – continuous feedback [11]. The “peak”of distribution of the programmed training falls in the 60 years, when it was as a new pedagogical phenomenon, is able on the basis of a control cognitive activity of students to solve complex didactic problems. In particular, the programmed training scientists see in the next [11, p. 46]:

- the educational material is supplied to students (students) small parts;
- each part (portion) of educational material accompanied by instructions or tasks to perform certain actions aimed at it is mastering;
- the mastering of each portion of training material is checked by special control tasks;
- after each control task, the student immediately learns, right or wrong, he was answered (feedback);
- depending fro the pupils answer is determined by the possibility of further advancement;
- each student works independently and takes the teaching material in the understandable for him pece;
- the results of all control tasks are fixed, they become known as the most students and teacher;
- the teacher organizes of training, help and advice during the difficulties of the students, has provides an individual approach;
- the education process includes specific means – programming tutorials, simulators, computers, and so on.

Without resorting to detailed characteristics of this pedagogical technologies, the pioneer note that due to the small steps and operational examination of learned and well ready, and not ready, students must understand the course material. Let's add one more important point: this technology was ambushed theoretical basis for the development of the methodology of process approach in education.

But despite the fact that ”the Modern theory of pedagogical technology ... is located on the third partially-systematic stage of it is development“ [7, p. 10]. The debate on it is essence, structure, principles and implementation does not subside until now. In particular, there is no unity of opinions of scientists concerning the Genesis and definition of ”pedagogical technology“. In table. 1 was the interpretation of the term some well-known scientists (random sample). Even a superficial analysis of the following definitions of the phenomenon that ”the theory of modern pedagogical technologies“ to speak, I think, still early.

Some researchers understand the technology as a pedagogical system, pedagogical process, others see it as a special way of organized pedagogical activity, and others are believed, it is the science about the development, education, training, and education of the individual. A separate group of scientists are link educational technology (technology training) using modern technical means of education. [3, p. 906]. What's more, there are also teachers who do not distinguish between the concept “training method” and ”pedagogical technology“ or (”technology of education”), to see the substitution of concepts, passion for fashion terms.

Mind you that any science-based technology has certain characteristic features, in particular [6, p.10]:

- the separation of process on interconnected stages;
- coordinated and phased implementation of actions aimed at achieving this goal and get respective results;
-un ambiguity of execution included in the technology procedures and operations, which is crucial to achieve results;
- a repeatable and repeatability of the process to obtain the product.

Note, that the mentioned features of the technology and was led to the appearance of the idea to liken training to production and technological process.
Focusing on these features of technology in general and programming education in particular, will try to give their own definition of the notion ”pedagogical technology“. Recall that the definition of a logical operation allows to reveal the content of the notion, to distinguish the object, reflected by the concept of the similar objects, set the value of each term.

Table 1

The scientists interpretation of the terms ”pedagogical technology” and ”technology of training“

№ p/p	the Author	Interpretation of the terms of ”pedagogical technology”, ”technology of training“
1	S. Bondar	Educational technology is integrative model of educational process with clearly defined objectives, diagnosis of current and final results, the distribution of the educational process on the individual components... It is involves a clear and steady execution of specific educational actions in the conditions of operational feedback..

2	V. Haluznjak M.Smetanskyj V. Shakhov	Education technology is one of the leading directions of the modern didactics handle in the development of didactic reproducible processes and means. It could be likened to training in a kind of production process with a guaranteed result
3	A. Nisimchuk	Educational Technology is law of corresponding pedagogical activity, which implements the scientifically grounded project of the didactic process. It is with a higher degree of efficiency, validity and guarantee than it do now for traditional teaching methods.
4	A.Nisimchuk, A. Padalka, A. Shpak	Pedagogical technology is the science of development, education, training, and education of the individual student on the basis of positive human qualities and achievements of pedagogical thought as well as the basics of computer science.
5	I. Prokopenko, V. Jevdokimov	Under the educational technology should understand the research, development and systematic use of principles of organization of educational process on the basis of the latest achievements of science and technology.
6	G.Selevko	Pedagogical (educational) technology is a system all of the components of the pedagogical process, based on scientific foundations, programmed-resistance in time and space and leads to the intended results.
7	V. Chajka	Educational Technology is ordered group and sequence of the methods and processes that ensure the realization of the project of the didactic process and the achievement of the diagnosed result.
8	D. Chernilevskyj	Pedagogical technology is a complex integrative system that includes an ordered large numbers of operations and actions that provide pedagogical targeting, content, information and the substantive and procedural aspects, aimed at the mastering of systematized knowledge, acquisition of professional skills and formation of personal qualities of students defined learning objectives.
9	N. Jaksa	Pedagogical technology is more or less rigidly programmed of (algorithmthe) the process of interaction between the teacher and the students, guaranteeing the achievement of this goal.

To disclose the content of the concept means to enumerate it is significant factores, i.e. the features necessary and sufficient to distinguish the object from similar objects [9, c. 119].

We will try to give an explicit (explicit) definition of the term through the nearest genus and species sign. Since we have a matter with attribute-relating definition, defense (defining the concept) separated ”organization of pedagogical process“.

It is important to emphasize that the encyclopedic dictionary interprets the term ”organization“ as a device, organizing, control, bringing into the system of something [12, c. 139]. About the pedagogical process, this goal-setting, diagnostics, forecasting, designing, planning, correction, implementation, control and analysis of results of process of mastering by the students the pupils the knowledge, skills or abilities.

The next important element of pedagogical technologies, which should reflect in the definition of allocated stages, the cyclical nature of the pedagogical process. Hard sequence of certain stages of mastering of educational material (severity in that go to the next phase only when the mastering assimilation) foresees the concrete definition of methods of interaction of participants of pedagogical process at each stage. Remind that it was the dosage of training material, step-by-step execution of the program is a dominant feature of programmed learning.

Most of scientists are studying the problem of technological of training, clearly emphasized that the orientation of educational goals, and with them of the whole course of the training for guaranteed results [8, p. 11] is a leading feature of educational technology. In addition, the educational technology should include the formulation of goals through the learning outcomes that are expressed in the actions of the pupil (Fig. 1) is constantly tested for both correction methods, and results. It's about the fact that language learning tasks should use the words for specific actions (list; to describe; to call, and so on) [2; 4]. Therefore the next important element of educational technology emphasized to specific educational goals.

Naturally, a educational technology should be established on the ideas of reproducibility: every teacher or teacher should be able to apply it effectively. Despite this, the significant sign of educational technology is specifically issued clear procedural characteristics, use of which ensures the achievement of results. Therefore, on a scientific basis is first necessary to develop a *project* of such organization of educational process, foresees ”... clear and strict implementation of certain educational actions in the conditions of operational feedback“ [3, p. 907]. And if you have developed such a project, educational technology can be reproduced, transferred to other conditions, to reproduce.

In this case, it is appropriate to note that today the lack of specific, clearly written, simple and understandable to the ordinary teacher of educational technology projects. It is leads to the sharpening of contradictions between pedagogical theory and practice: theses are defended a dissertations of technologization of educational process, produced the encyclopedia of pedagogical technologies, development of classification and structural models, but until scientific results in this sphere are not enough ”grounded“ in real vocational school, College or University. Scientists are constantly accused of practicing teachers in today training is carried out on the basis of outdated pedagogical concepts, ideas zunivskogo or reproductive treaning. Instead of practitioners did not satisfy modern scientific and methodical instruments on the introduction of pedagogical technologies, which mainly aims to persuade the academic community of the importance and suitability of using the technology (most

often today they are called ”innovative“) will declare pedagogical innovation. In addition, the researchers write in detail, what the knowledge, skills, abilities pupils will have master what qualities will be formed by the students. If you apply the technology training (problem, context, project etc.) training, features, the characteristic features of a technology, but rather generally prescribe specific training procedures. It's a fact the reproducibility of the declared, written in dissertation or monographs by educational technologies is extremely low.

We are seeing rather unexpected, in our opinion, the way to solve the lay stress on controversy now: teachers were actively design educational technology, masters of production training, teachers of vocational schools, colleges, universities. In the materials of Ukrainian scientific-practical conferences, the Internet can be found examples of projects of various technologies students have mastered the subjects of natural-mathematical, social-humanitarian, general professional, vocational and theoretical training. Not commenting on the qualitative component of these projects should be perceived ”technological activity“ of practicing - teachers as a significant shift in the introduction technological training.

However, it should be said that the achievement of learning results in the first place depends not only on the detail of the learning task, operational feedback or technical training, but also on the skill of the teacher to create personal developing situation. In confirmation of this we note that the pedagogical process is a dynamic interaction of teachers and pupils, aimed at the achievement of goals. The pedagogical interaction is a content and methods are determined by the tasks of teaching, education and personal development of the students. Undoubtedly, that position should also be taken into account in the determination of the studied categories.

If you analyze these signs of leading pedagogical technologies with the system approach, we should agree with those scientists who will see as a system. Remember that the concept of the system is based on three aspects [9]: 1) the system formed by the totality (multiplier) of elements with connections between them; 2) this aggregate forms a single whole, as regards the removal of one of the elements aggregate disturbs the integrity of the property; 3) formed by the number of elements of a single whole has some purpose or function that is characteristic of all the elements, not some combination of them.

Most scientists research the problem of technological educational, that the orientation of the educational purposes and with them of the whole course of the training for guaranteed results [2; 3; 8] is a leading feature of educational technology. In addition, educational technology is involves the formulation of goals through the learning results. It are expressed in the actions of the student or the pupils, are constantly tested for correction as methods and results. It's the fact that language learning tasks should use the words for specific actions (enumerate; to describe; to call, and so on) [4].

Note that the state of educational standard establishes requirements designed systematically to the level of preparation of persons, the requirements for mastering of knowledge, formation of knowledge and activity, as well as complex preparation for professional work in the cycles of the disciplines [3]. Competence according to modern concepts, the requirements should be formulated in the form of ”student has idea “, ”the student should know“, ”the student should be able“ and so on [2; 4]. In

the future these targets and requirements are specified in the learning programmes taking into account levels of assimilation by student or students of educational material (*knowledge – reproduction – heuristic – creative*) and indicate the desired result of achieving a goal through a description of the activities of the student.

Conclusions and perspectives for further research. Thus, from the reasoning needs to clarify the essence of the concept ”pedagogical technology“ in the following aspects:

- teaching technology is a special organization of the pedagogical process;
- the technological approach of the pedagogical process should be clearly aimed at the achievement of goals;
- to implement educational technology should beforehand on a scientific basis to develop the project;
- the project should represent the pedagogical technology as a system with components written out in detail, the stages, procedures and so on;
- we should be aware that guaranteed the achievement of training resuilts can be achieved provided that a productive pedagogical interaction.

The definition of the researched concepts we specify in this way: pedagogical technology is the purposeful organization of the educational process, which reflects the science-based of project logically structured system of pedagogical interaction in order to secure the achievement of planned learning resuilts.

Prospects for future research will be devoted to the ground of the generalized structure of pedagogical technology.

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