DESIGN AND IMPLEMENTATION OF TECHNOLOGIES FOR PROFESSIONALLY ORIENTED ADULT EDUCATION

Alla Nikishova[1]   Elena Kryvonosova[2]

Keywords	Abstract
	The article analyzes the trends and processes occurring in the adult education system. The research is based on the synergy-andragogical and competence approaches. The features of the content, principles and technologies of adult education are determined. The „adult concept" comprises the ability to self-determination, a certain level of various competencies, responsible position and behavior. The investigation on adult education issues (Knowles & Swanson, 2005; Kolb, 1984; Jarvis, 2004) determines the theoretical and methodological foundations of andragogy, adult education technology, management and organizational aspects of the design of the educational process. One of the models of arranging the adult learning process is the introduction of professionally oriented technologies aimed at qualitative changes in the education system, at mastering students' professional and communicative competence. Humanistic and cultural approaches are supposed to be fundamental psychological theses.

I. Introduction

The call for the problem of adult education testifies the crisis phenomena in society that occurs against the background of the integration of the national professional school (Kukuev, 2008; Gromkova, 2009; Suykova, 2012) into the international educational environment and the international market of educational services. The emphasis is focused on the cultivation of a competitive personality, intellectual,

[1]Assoc. Prof. Dr., Belarusian State Technological University, Department of Intercultural Communications and Technical Translation, Belarus, e-mail: alla_nikishova@mail.ru
[2] Sen, Lec., Belarusian State Technological University, Department of Intercultural Communications and Technical Translation, Belarus, e-mail: ekrivonosova@tut.by

moral and civic development. Under these conditions, continuous adult education becomes a crucial factor in achieving this goal.

Nowadays, the relevant task is to constantly update the content of education. It contributes to the development of the individual, meets the personal needs and interests of people, professional needs of the population; it forms the key competencies that allow an adult to be in demand in the labor market, to cope with personal and professional problems.

The analysis of trends and processes occurring in the adult education system demonstrates that there are some significant contradictions:

– between the increasing educational needs of adults and the insufficient level of updating the state system of professional education;

– between the emerging structural and functional transformations in the adult education system and the lack of theoretical and methodological understanding of the problems that arise;

– between the need to implement the ideas of a competence approach in adult education practice and the continuing paradigm of knowledge and skills promoting professional knowledge and skills;

– between the need for personnel capable of working with adults and the lack of a training system for such professionals.

The purpose of this work is to identify the trends and processes occurring in the adult education system and determine the features of the content, principles and technologies of adult education.

The contingent of students of higher education institutions, both full-time and part-time forms of education, students of the system of professional upgrade and retraining, as well as structural units that provide second higher education, belongs to the category of adults and requires taking into account the specifics of this category of students.

Physical (physiological) adulthood does not always mean social maturity. The „adult concept" comprises the ability to self-determination, a certain level of various competencies, responsible position and behavior. Therefore, the ideas considered in the article are more focused on the contingent of socially adult people who clearly define and realize their educational needs, the need to improve their educational level and its vector orientation.

2. Method

The investigation on adult education issues determines the theoretical and methodological foundations of andragogy, adult education technology, management and organizational aspects of the design of the educational process.

We employed document analysis as a qualitative research method; it is a systematic procedure for reviewing or evaluating documents—both printed and electronic (computer-based and Internet-transmitted) material. Like other analytical methods in qualitative research, document analysis requires that data be examined and interpreted in order to elicit meaning, gain understanding, and develop empirical knowledge (Corbin & Strauss, 2008; Rapley, 2007)

The real changes that occurred in the world of work and the social relations as well as the science and technologies advances at the age of globalization, and the so-called „knowledge society", demand a thorough examination of the decisive role that educational technology plays in the higher education while forming qualified and capable professionals for the professional practice and for displaying social responsibility. It also demands the examination of the responsibilities and possibilities of applying the technology, the risks and challenges brought by this reality and the investigation on overcoming the risks, comprehending the need of ideas, contents and values systematization as well as its appropriate use in higher education (Ferreira et al., 2014).

3. Findings

The characteristic features of adult learners include:

– physiological, psychological, social, and moral maturity. We consider that the adults are unbiased in their judgments and can control independently their learning; they are aware of themselves as self-sufficient, self-governing persons;

– life experience: household, family, professional, educational, scientific experience. Adults have a substantial amount of social experience that can be successfully evolved into the learning process; ignoring this experience leads to „barriers" in communication and study;

– restrictions in obtaining education: financial, temporary, family, professional difficulties. The motivation of the adult audience in learning is explained by their desire to change (improve) their social status; this determines the readiness to learn;

– desire to solve their life problems and achieve a specific goal through educational activities;

– need to implement autonomous educational activities;

– strive for collaboration in the learning process;

– pragmatically oriented motivation for education followed by the application in practice. Adults in training have a well-formed motivation and need to provide opportunities for immediate application of the acquired knowledge in practice;

– desire to participate in the selection of educational content;

– desire to immediately use the knowledge and experience gained during training in life and the professional sphere.

Adult education today is based on the following principles:

– recognition of the leading role of the student's personality in the educational process;

– strive for self-management, independence, self-government;

– train to achieve a specific goal;

– rely on the immediate application of the skills, knowledge, and personal qualities acquired during training;

– significant determination of educational activities by temporal, spatial, household, professional, and social factors.

The above-stated theses are determined by the psychological, physiological, social, and professional characteristics of adult students, as well as the goals and conditions of their education.

The goals of adult education are linked to professional, personal, social, psychological problems; they are usually specific and clear. Adults have the understanding and awareness of the direction and possibilities for further application of the acquired knowledge and gained skills.

Adult learning conditions (temporary, social, spatial, professional) in most cases hamper the studying, and the learning process takes place under the conditions of short intensive training periods.

The andragogical model of training assumes the peculiar characteristics of the students' audience and determines the content of education, selection of methods of presentation, organization of individual, group and autonomous work, ways of evaluating the formed skills, organization of individual differentiated approach. The leading role in the learning process arrangement in the andragogical model belongs to the student.

Thus, the following conditions can be considered for successful training of an adult audience:

– adults should feel as respected participants in the learning situation and feel supported;

– the case study is inspired with a collaboration spirit and joint search for problem solutions; self-analysis stipulates the training needs;

– assistance is provided by assessing correctly the level of competence required to perform an activity; by determining the current and necessary level of competence;

– adults should be involved in planning their educational programs while the teacher serves as an adviser, assistant, and source of ideas;

– technological model of adult education should have problematic features;

– systematic evaluation of activities is of a diagnostic nature.

These distinctive features must necessarily be reflected in the principles of the organization of pedagogical communication in the educational process and the selection of teaching methods in order to create an optimal methodological model. Therefore, active learning methods could be widely used in adult education. These methods are more common than reproductive and informative methods in modern higher education and post-graduate education. They contribute to the formation of such qualities of a future specialist as responsibility, creativity, tolerance, cooperation, and communication skills.

4. Discussion

Modern researchers continue to elaborate the principles of adult education, taking into account new theories and representations of andragogy. The ideas of the American scientist (Knowles, 1980) about the difference in adult education at different stages of adulthood remain modern. Holton & Swanson (2005) agreed with M. Knowles; they widely analyzed the conceptual apparatus of andragogy. Andragogy was described as a theory, a philosophy, a set of instructions and suggestions. Brookfield (1995) supported the ideas of scientists-andragogists, Knowles distinguished clearly two models of training: pedagogical and andragogical, indicating their different principles. The scientist presented the pedagogical model as a system of students ' personalities dependent on the educational situation, and the andragogical model as a system of teaching individuals who independently build their own learning trajectory.

To improve the effectiveness of pedagogical technologies is possible only if they are used at all stages of the educational, creative, search activity. One of the models of arranging the adult learning process is the introduction of professionally oriented technologies aimed at qualitative changes in the education system, at mastering students' professional and communicative competence. Humanistic and cultural approaches are supposed to be fundamental psychological theses.

The main idea is to employ professionally-oriented technologies as a means of implementing the activity content into adult education.

While arranging the adult education, it is necessary to keep in mind the parity of the leadership positions of the teacher and the student, determined by the subjectivity in relation to the activities of each participant in the teaching-learning process.

The guide of professionally oriented technologies of adult education is a teaching research approach, the essence of which is considered to be a sphere of research activity.

The use of the teaching research approach as a structural component of professionally oriented technologies, teaching adults, educational model is based on the basic adragogical learning principles: priority of independent learning (independent learners implement their learning); the individualization of learning (the creation of individual training programs oriented to specific educational needs, adequate to the formation of socially significant qualities of personality); foregrounding learning results (immediate application of the acquired learning experience as new knowledge, skills, qualities, competencies); electivity of learning (providing a certain autonomy in choosing goals, content, forms, methods, means, terms, time, and place of training) (Mirabile, 1997).

It is obvious that it is reasonable and necessary to create such a methodological model for organizing the educational process for adult audience, in which students would navigate independently in the information field, extract, analyze, interpret and apply adequately knowledge to solve the tasks set.

The teaching research approach has a number of characteristics that allow us to define it as the main one in the methodological model of adult education. They are the following:

– performance (the student gets a real result in self-acquired knowledge, skills, and competencies);

– high motivation in educational activities;

– ensuring high mental and intellectual activity of students;

International Journal of Current Approaches in Language, Education and Social Sciences

Design and implementation of technologies   **CALESS 2020, 2 (1), 413-424**
for professionally oriented adult education

– formation and development of common educational skills;

– ability to display individuality and creativity in solving the educational task set;

– increasing the informative capacity of the training content.

5. Suggestions

The teaching research approach provides main statements of the organization of the adult learning process: the involvement of students in real activities for planning and implementing the learning process; the design and implementation of their educational search pattern; the priority of their autonomous activities; a certain arbitrariness of choosing training parameters.

According to a number of authors (e.g. Kolb, 1984; Rogers, 1983), to improve the effectiveness of educational technologies is possible only if students' creative and search activities prevail over their performing and reproductive ones at all stages of the educational process; they avoid rigid unification, uniformity of goals, content, methods, means and organizational forms of training; and individualization and differentiation of the educational and cognitive activity itself (Halupa, 2015).

The teaching research approach in the structure of the educational model of adult learning can be seen as a system of psychological, pedagogical, methodological and didactic procedures of interaction between teachers and students, focused on the implementation of content, methods, forms and means of education adequate to the purposes of education, future activities and professionally relevant qualities of specialists taking into account their educational needs and abilities.

The main methods of professionally oriented technologies include creative work, gist, research, patent and scientific research, report, work on the creation and implementation of projects, and thematic discussion.

The teaching research approach cannot be considered or applied as a fragment or element of the overall adult learning process. It should serve as a methodological basis for organizing the entire learning process and permeate all its constituent elements. On the other hand, the organization of training for adult audience requires adequate use of a particular technology, a particular approach in accordance with the characteristics of this category of students, goals and conditions of the educational process.

The process of developing a specific technology for professionally oriented training can be called the process of pedagogical design. The sequence of its stages will be as follows:

– selection of the content of professionally oriented training provided by the curriculum;

– selection of priority goals the teacher should be focused on: what skills, professional and personal qualities are acquired by students during the study (development) of the designed educational material;

– selection of a technology that is focused on a set of goals or a single priority goal of professional training;

– developing stages and sequence of actions for the implementation of training technology.

Designing training technology involves designing the content of the discipline, forms of organization of the educational process, choice of methods and means of training. In each specific situation of the pedagogical activity, the teacher faces a problem: how to ensure the optimal and effective implementation of the training technology. It is necessary to be able to choose the technology that is most appropriate in this situation and, most importantly, to ensure high efficiency of its implementation working with a student, a group of students. In its essence, the process of implementing training technology is a purposeful sequence of actions of a specialist that provides the most optimal achievement of a certain pedagogical goal in training, professional training of a student. According to the content, the process of implementing the training technology is manifested in its structural components, each performs a certain functional purpose and a qualitative and quantitative solution. The leading component that determines the content and direction of the pedagogical process of implementing the training technology is its object (a student). And since the object, as well as the subject of the process of implementing the training technology, is a person, he (she) also has individual characteristics, opportunities, social problems, etc. The training technology chosen for implementing in a specific situation of professional training in a higher education institution is focused on achieving a certain (predictable) goal. Each goal needs to solve a certain set of tasks and assumes a specific content of the teacher's activity to achieve it. The most important and responsible is the activity of the teacher at the stages of selecting the target technology and its practical implementation. Among the features of the teacher's activity at the stage of selecting the target technology, the most significant

International Journal of Current Approaches in Language, Education and Social Sciences

Design and implementation of technologies   **CALESS 2020, 2 (1), 413-424**
for professionally oriented adult education

are: the level of professionalism of the specialist; features of a student and possible pedagogical problems in education, educational activities that need to be solved; the specifics of the learning technology and its practical implementation; professional competence at each stage in the activity of the expert, personal teaching experience, scientific and pedagogical work with a certain category of people; solution of relevant pedagogical problems; motivation of work of the expert; the style of his professional activity. In general, the choice of technology of professionally oriented teaching at the University depends on the type of content in the specific science and study of the subject, topic; age peculiarities of students (in particular, full-time students or extramural study); the level of actual cognitive capabilities of students; the time designed for the study; objectives, tasks and content of training; possibilities and peculiarities of the teacher, his personal and professional qualities, level of theoretical and practical training, methodological skills; technical facilities of the University, availability of equipment, visual aids, etc.

UNESCO documents outline the range of competencies that should be considered by all as the desired result of education. In the report of the International Commission on education for the twenty-first century „Education: a hidden treasure", Jacques Delors formulated „the „four pillars" which education is based on: learn to study, learn to do, learn to live together, learn to live" (1st UNESCO Global Forum,2002).

Thus, key competencies are the most common and broad definition of an adequate manifestation of human social life in modern society. The concept of competence is broader than the concept of knowledge, or skill, it comprises them. This concept has a slightly different meaning.

The concept of „competence" includes not only cognitive and operational, i.e. technological components, but also motivational, ethical, social and behavioral ones. This broad definition of the conceptual content of competence makes it very difficult to measure and evaluate it as a learning outcome. This is also evidenced by the content of the main key competencies cited by J. McKenzie, the list of which includes: value-semantic, general-cultural, educational-cognitive, informational, communicative, social-labor, and personal competencies (McKenzie, 2001).

The implementation of the current competence approach in adult education is based on the conceptual ideas of pedagogical synergy and self-management. The synergetic concept of training is based on the idea that a person's key competencies are built on the basis of reflection of their past, personal and social professional experience when

the development of competencies occurs as a „build-up" of abilities in various fields of activity.

The idea of self-management as the second theoretical prerequisite for designing a competency-based adult learning process is the thesis that the most perfect model of development management is „human self-management", „conscious and meaningful self-regulation" (Peccei, 1977). At the same time, if the teacher plants the „seeds" of culture and cultivates them, then andragogist deals with the already cultivated one. Therefore, the first thing is to make an andragogist understands what is nurtured. What is meant is already the essence of man, his consciousness, the change of which will lead to the disappearance of this essence. An andragogist must determine the boundaries of the possible changes. Therefore, the reflexive activity of the andragogist has its object the understanding of the other as separate integrity. Based on this, we can speak of andragogic consciousness as understanding consciousness (Peccei, 1977).

A synergistic approach to adult learning is to correctly formulate the strategic goals of education and understand what turns out to be the parameters that determine the process. It is proposed not to expand the curriculum, but rather to reduce classroom lessons and shift the center of gravity to autonomous work, which will help students develop the skills of „self-management" necessary for professional activity.

It aims to support teachers in improving their practice while also developing their efficacy, well-being, and professional engagement. This is in contrast to approaches that subject teachers to greater levels of accountability, evaluation, and performance review. Simultaneously, and ambitiously, our approach aims to provide evidence of a kind that is persuasive to governments and education systems that want to be sure their investments have pay-off, especially in terms of student outcomes (Goreet al., 2017).

6. Conclusion

The importance and necessity of autonomous work of students has long been proved by scientists, but its actual arrangement remains a very urgent problem. Autonomous work plays a leading role not only in mastering professional knowledge and skills of a specialist, but most importantly – in the formation of the personality. It is not only that solving problems independently makes a person more reliable in upcoming work, and not only that self-understanding of the truth opens up more opportunities for creative application of the accumulated knowledge. The main value of such work is that it contributes to the development of the individual,

International Journal of Current Approaches in Language, Education and Social Sciences

Design and implementation of technologies   **CALESS 2020, 2 (1), 413-424**
for professionally oriented adult education

which is based on the universal factor of society development, i.e. independent human labor. This is the point of view of state-of-the-art scientists. The ways to overcome the difficulties of the educational and pedagogical plan are seen in new techniques of structuring them, updated methods of teaching, based on independent cognitive activity, aimed at acquiring their point of view, independent formulation and solution of problems, including collaboration work.

On the one hand, the main obstacles in the widespread use of the teaching research approach are the unformed students' common educational skills (insufficient ability to navigate the sources of information, independently analyze the material, make a presentation of the acquired knowledge, determine and design a personal educational research pattern, etc). On the other hand, it is the teacher's pedagogical, methodological, didactic reluctance to employ this approach. It is important to take into account the availability of prior training in this area of activity.

Adult education should be based on the widespread use of professionally oriented technologies in the educational process, which are designed to ensure the formation of intellectual and self-development culture. Within the framework of professionally oriented technologies, wide use of teaching research approach that best meets the educational needs of adult audience and corresponds to its specifics. Their use in the andragogical model of training creates prerequisites for rapid adaptation of specialists in the social-cultural and professional environment. Students get the opportunity to implement the existing methods, mastering the mechanisms of self-management and self-development.

References

BrookField, S. (1995). Adult learning: An overview. In: A. Tunijmam (Ed.), *International Encyclopedia of Education.* [Electronic Version]. Oxford: Pergamon Press.

Corbin, J., & Strauss, A. (2008). *Basics of qualitative research: Techniques and procedures for developing grounded theory* (3rd ed.). Thousand Oaks. CA: Sage.

Ferreira, N.S., Haddad, M. E., & Faria, A. A. (2014). Educational technology and educational management in the higher education: New Ways of Forming Professionals. *Open Journal of Social Sciences*, 2(4), 7-11. Retrieved from https://www.researchgate.net/deref/http%3A%2F%2Fwww.scirp.org%2Fjournal%2Fjss

Gore, J., Lloyd, A., & Smith, M. (2017). Effects of professional development on the quality of teaching: Results from a randomised controlled trial of quality teaching rounds. *Teaching and Teacher Education*.. 68, 99-113. https://doi.org/10.1016/j.tate.2017.08.007Gromkova, М. Т.(2012). *Андрагогика: теория и практика образования взрослых : учебное пособие.* М. : ЮНИТИ-ДАНА.

Halupa, C.P., (2015). Pedagogy andragogy and heutagogy. In : *Transformative curriculum design in health sciences education*, 143-158. Retrieved from http://agelesslearner.com/intros/ andragogy.html

Jarvis, P. (2004). *Adult education and lifelong learning, theory and practice* (3rd ed.). London and New York: Routledge Faimer, Tailor and Francis Group.

Knowles, M. S. (1980). *Moving from pedagogy to andragogy.* Retrieved from http://www-distance.syr.edu/andraggy.html

Knowles, M. S., Holton, E. E., & Swanson R. A. (2005). *The Adult learner: The definitive classic in adult education and human resource development* (6th ed.). Elsevier Butterworth Heinemann.

Kolb, D. A. (1984). *Experiential learning: Experience as the source of learning and development* (Vol. 1). Englewood Cliffs, NJ: Prentice-Hall.

Kukuev, A. I. (2008). *Андрагогический подход в образовании взрослых.* Ростов н/Д. : Булат.

McKenzie, J. (2001). How teachers learn technology best. *The Educational Technology Journal.* 10 (6), Retrieved from http://www.fno.org/mar01/howlearn.html

. Mirabile, R.J. (1997). Everything you wanted to know about competency modeling. *Training and development,* 73-77.

Peccei, A. (1977). *The Human quality.* Oxford; New York: Pergamon Press.

Rapley, T. (2007). *Doing conversation, discourse and document analyses.* London: Sage.

Rogers, C. (1983). *Freedom to learn for the 80's.* Merrill Publishing Co.

Suykova, O. A. (2009). Синергетический подход к управлению системой саморазвития спортсменов школьного возраста в условиях общеобразовательного учреждения . *Мир науки, культуры, образования,* 5 (17).

1st UNESCO Global Forum on International Quality Assurance, Accreditation and the Recognition of Qualifications in Higher Education. Paris, 18-19 Oct, 2002.