METHODICAL ASPECTS OF PERSONAL WORK ORGANIZATION IN THE PROCESS OF PROFESSIONAL EDUCATION OF PROFESSIONAL TRAINING TEACHERS (AS EXEMPLIFIED BY STUDY OF PROFESSIONAL AND PRACTICAL TRAINING PROGRAM)

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Abstract. Based on the status growth of professional development of future specialists when studying at higher educational establishments, the author of the article outlined the tasks designed to solve the specifics of the approach to independent work organization in the professional training process of future teachers of the first (Bachelor) level of higher education by example of studying profile and practical disciplines. The emphasis is made on a number of new tasks related to the education content update.

Implementation of the function of deliberate development management lies in a combination of traditional education with modern electronic technologies. Therefore, in order to achieve the training objectives (the expected application of acquired competencies) and improve the quality of education, a student must master existing forms of self-education.

The practicability of using electronic means in educational activities has been proved as most students are active Internet and programs users that help to interest them, concentrate students' attention on studying new material, motivate their active cognitive activity.

Since it is a priority task of modern higher education establishments to create pedagogical conditions for the identification and development of students' abilities, satisfaction of their needs and interests, formation of competences, development of educational and cognitive activity and creative autonomy, purposeful regulation of independence development is carried out in the process of educational interaction by helping to form creative student activity experience.

The pedagogical aspect of students' motivation for independent cognitive activity has also been analyzed in the article by the author. It has been proved that the formation of educational motives is directly proportional to the success and further individual development as a future specialist.

Keywords: independent work, organization of independent work, professional training teachers, competence, educational activity motivation, electronic means of training.

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Thematic justification

At the present time independent work is growing proliferation. This is due to a decrease in students' academic load in higher education establishments. Therefore, it is necessary to use innovative approaches to the process of organizing individual student activity during training. Higher education reform is linked to the transition from a teaching paradigm to a paradigm for providing educational services. Independent work of students is not just an important form of educational process, but should be its basis.

The significance of the problem under study was reflected in the pedagogical heritage of Yu. Babanskyi, F. Disterveha, Y. Komenskyi, J. Pestalozzi, J. Russo, K. Ushynskyi and

others. The scientific researches of A. Aleksiuk, V. Zahviazynskyi, N. Kuzmina are devoted to the substantiation of the general pedagogical conditions of independent work; methodological and scientific principles of the process of its organization - S. Goncharenko, L. Zharova. Problems of individual work of students of vocational schools - M. Yeretskyi, N. Zhuravska, V. Kachurovskyi and others. In studies by Y. Babanskyi, O. Spirin, and I. Utanta, it has been established that the differentiation of individual work according to the individual and typological properties of students contributes to its effectiveness.

The problem outlined in the works of S. Hlushchuk, L. Zhuravska, N. Honcharenko, N. Kardash, T. Loboda, O. Malykhina, H. Romanova, L. Shaydur, etc is outlined at the level of thesis researches.

There is a shortage of interpretations of the concept of "organization of independent work". Joining the scientific work of researchers, we can generalize: *individual work* means this creative activity, which contributes to the creative person formation; individual study organization by students of study material during classroom-based and non-auditorium hours. Note that most scholars see in their individual work various types of individual and collective activity of students considered as a means of involving students in independent cognitive activities or understood as an activity performed by students with maximum activity, creativity, independent judgment, and initiative. Moreover, the a number of scientific works are generally devoted to the problem of individual work, in particular, the problem of organization of individual work has unexplored aspects process of professional training teachers of vocational preparation. *Independent work organization* means individual (collective) educational activity, carried out in training classes or in extra-ordinary time under the guidance of a teacher, but without his direct participation.

Normative aspects of the application of acquired competencies in the process of bachelor professional training in the specialty 015 - Professional education (Computer Technologies)

According to the Law of Ukraine "On Higher Education" *(Law "On higher education")*, independent work forms the basis of any education, form of organization training and means of mastering profound knowledge and skills. In present day conditions, the need to improve the technology of independent work organizing, giving it more systematic and concrete character, rationing and normative content remains relevant. Therefore, consideration of priority aspects of the Interim Standard of Higher Education of Ukraine of "Bachelor" graduate education in the field of 01 Education of specialty 015 Professional Education is relevant in the problem context (specialization 015.10 Computer Technologies). The training purpose (expected application of the acquired competencies) is: formation of general and professional competences from psychological and pedagogical, information systems and technologies (IST), which promote social and professional stability and mobility of a graduate in the labor market; receiving higher professional education that will allow a graduate to successfully carry out professional development, IST implementation and research in various fields of activity, national economy and production.

According to the educational qualification characteristics of the "Education" knowledge field of "Professional education" specialty of "Computer Technologies" specialization, a higher education expert has to master a number of competencies among them a prominent place occupied by: 1. Knowledge of theoretical aspects and skills used in the analysis of specific professional production situations. 2. Understanding of specific

professional terminology. 3. Knowledge of definitions, handling of abstract concepts in the integration context of scientific laws and available research priority positions *(Hotskina, 2014)*.

In order to master the above, a student must acquire the existing forms of self-education in order to improve the quality of education, in particular, when mastering the cycle of profile and practical training, which encompasses not only the study of disciplines ("Psychology", "Pedagogical Skills", "Methodology of Professional Training", "Professional Pedagogy", "Fundamentals of Scientific and Pedagogical Research", "Ergonomics", "Computer and Analytical Activity", "Computer Technologies in the Educational Process", etc.), but also writing course papers on psychology, didactic principles of professional activities, methods of training, from professional pedagogy and passing of practice various types (technological, scientific and technological, educational). The disciplines "Theoretical and Legal Bases of Education and introduction to Specialty", "Fundamentals of Engineering and Pedagogical Creativity", "Fundamentals of Scientific and Pedagogical Research", "Communicative Processes in Pedagogical Activity and Creative Learning Technologies", etc., are related to the selective cycle. The final stage is writing a qualification paper for a bachelor's degree. We emphasize for the purposes on the disciplines associated with professional understanding and development at the first Bachelor higher education degree of Computer Technologies specialization. Professional specialization training provides for double specialization, since 70% of the time is spent on studying the information cycle disciplines, and 30% on the mastering psychological and pedagogical cycle disciplines.

In this program of study students receive a thorough theoretical and practical training in:

- programming in different environments;
- building information systems for management and training;
- work with intelligent, in particular, expert systems;
- work with network technologies, Internet technologies, Web-design;
- work with multimedia, means of large-scale demonstration and presentation of presentations;
- work with systems of automated designing;
- general and age psychology, labor psychology;
- methods of organizing and conducting classes on computer disciplines in higher educational institutions.

Work to be done:

- create and use computer technologies during control and training;
- transfer knowledge of psycho-pedagogical and engineering (computer technology) industries to students of vocational schools during control and training, students of higher education institutions.

Psycho-pedagogical and electro-technical branches during control and training.

Since specialists in process control will be able to hold the following positions:

- programmer engineer;
- operator of electronic computers;
- electronic engineer;
- developer of computer systems and computer programs;
- professional in programming;
- referent;
- administrative secretary.

As specialists in the field of education will be able to hold positions:

- practical training teacher of computer technologies of higher educational establishments;
- highest category methodologist;
- assistant;
- junior researcher;
- senior laboratory assistant;
- head of the training laboratory;
- production training instructor (master);
- methodologist.

In the process of specialist training in specialty 015 – Professional Education (specialization – Computer Technologies) is carried out for double specialization training: pedagogical and engineering branch of computer technologies. Students acquire engineering competencies in the computer industry; skills in the creation and use of various computer technologies during control and training; receive a thorough psychological and pedagogical training. In parallel, they master the methods of teaching specialty disciplines and have the right to teach computer and psychological and pedagogical disciplines in higher education establishments.

Today, when higher education actively implements the provisions of the Bologna Declaration and defines the main directions of its development, the discussions about the place and role of higher education establishments in the system of higher education should become a major action plan for modernization of their activities *(Kozakov, 1990)*. Principles of theory connection with practice, systematicity and consistency require learning process reconstruction and, therefore, it is necessary to identify such methodical aspects that interact and promote the acquisition of theoretical information in the process of practical activity.

Methodological aspects that help regulate the development of the autonomy of future teachers of vocational training

Interactivity, mobility, and learning process intensification are the advantages of modern technologies that have determined the relevance of their use in education. Therefore, one of the areas of information education is the implementation of ICT in the process of independent work organization.

Currently, educational establishments are faced with the task of pedagogical foundation creation to identify and develop students' abilities, meet their needs and interests, develop competencies, educational and cognitive activities and create self-reliance. In this regard, the purposeful regulation of independent regulation development is carried out, helping to form the experience of students' creative activities. The realization of this function of educational process consists in combining traditional education with modern electronic technologies. Thus, the use of ICTs can not only encourage students to learn, but also help them form systematic and independent in the educational process. Taking into account the current pace of development of electronic ICTs, the success of solving the task depends to a large extent on how the software and hardware are used in the learning process, the adaptability and capabilities of the software, and the location of the technical ICT in the system of teaching tools.

The introduction of such technologies into the learning process is appropriate, as most students are active Internet and program users. The use of electronic means in educational

activities helps to interest, concentrate students' attention on the study of new material, and motivate their active cognitive activity.

Taking into account that educational activity is a leading activity in higher education establishments, it is activated and driven by motivation to study. It is from the prevailing educational motives that the prevailing part learning and further individual development success as a future specialist depends.

Student motivation for independent cognitive activity

Nevertheless, it is worthwhile to highlight the methodological aspect of students' *motivation for independent cognitive activity.*

Researchers D. Atkinson, M. Alekseienko, E. Ilyin, A. Markov, R. Nemov, A. Rean, Kh. Khekhausen et al. studied the problem of studying and organization and motivation of students' educational activities.

Training motivation and creation of a corresponding value-motivational sphere play a significant role in the process of student educational and cognitive activity activation and development of the abilities and inclinations. Thus, the exceptional importance of motivation is emphasized by K. Izard, who emphasizes that it brings students to engage in self-realization and self-expression during educational activities *(Izard, 1980).*

For example, during self-study of the topic "International legal standards of education. Implementation of the provisions of the Bologna Declaration in Ukraine" (from the discipline "Theoretical and legal basis of education and admission to specialty"), students should take stock of the documents of the Bologna Process on the introduction of a credit-modular system of educational process organization in higher education establishments of Ukraine (Sorbonne Declaration; Bologna Convention; Conference European higher education establishments and educational organizations; Cmmunique of the conference of ministers responsible for higher education) and to clarify the preconditions for the entry of higher education in Ukraine to the Bologna process, on the proposed aspects (Stages of development and higher education system current state in Ukraine. Education modernization in Ukraine in the context of the Bologna Process. Educational law sources and their characteristics. Educational relations and educational legal relations. International legal standards in education. Integration of educational the rights of Ukraine within the European educational space. Stages of development and higher education system current state in Ukraine. System of higher education standards. Bologna process and its importance for the development of higher education in Ukraine, etc.)

Thus, while studying the topic "Competency Paradigm in Modern Educational Systems" (definition, approaches of scientists) is proposed to provide the competence approach essential characteristics. It is known that domestic scientists define five modern paradigm models that appear as innovations in education: scientific picture formation; education as a professionalization; mental activity; culture of preparation for life; continuous education concept (give a description).

Educational motivation is defined as a separate type of motivation involved in learning activities and consists of a variety of constantly changing motives (needs, meaning of learning, emotions, etc.). The motive of educational and cognitive activity is a student's efforts to reach a certain level of development in education and professional activity, based on general scientific and professional knowledge, skills and abilities *(Yahupov, 2004).*

E. Ilyin, A. Markov, T. Matys, A. Orlov substantiated in their works internal and external motivation of educational activity and conditions of their formation. Thus, according to M. Milman, "a positive motivation to learning, created and supported primarily by a teacher, is a prerequisite for the constructive socialization of students. Absence or erroneousness of such motivation leads to the threat of social isolation and the emergence of deviations in the social behavior of young people" *(Millman, 1987: 43)*.

Confirmation thereof is the statistical data, which testify that modern youth actively uses social networks (Fig. 1).

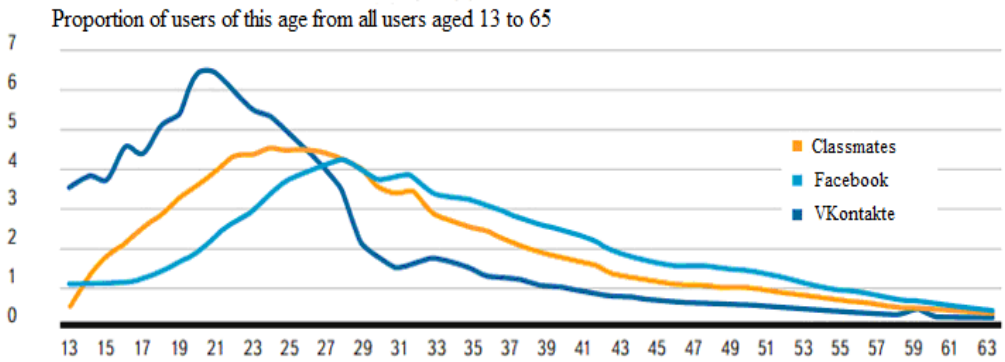

Fig. 1. Age structure of social network users in Ukraine *(Lapchyk et al., 2008)*

Based on the results, we see that social network active users are young people aged 16 to 23 studying at various educational establishments. It should be noted that the essential factor that confirms the relevance of using electronic ICTs is that students use mobile devices, computers, and the Internet to access social networking services.

It goes without doubt that educational and cognitive activities of students are always poli-motivated, that is, they combine external and internal educational motives. External motives are oriented to the values that lie beyond the educational activity (the desire to get some encouragement for learning success, to interact with classmates and teachers (directly and using electronic devices). Internal motives include: the desire to acquire new knowledge, skills and abilities (KSA) ; awareness and perception of cognitive and cognitive actions and the role of acquired KSA both in life and in particular professional activity (see Figure 2) *(Milman, 1987)*.

Fig. 2. Basic types of motivation for independent work of a student

Educational activity motivation formation is a responsible stage of the teacher's activity. Stable, emotionally loaded, meaningful motives ensure the effectiveness of students' educational and cognitive activity and give them direction.

Training motivation plays an important role in educational activity activation of a student in general and the ICT use in particular. It is necessary for a student to take active participation in educational activities that the purpose and content of training and professional activity are not only internally accepted by him/her, but acquired personal meaning, caused positive emotions, attempts and aspirations for effective actions in the electronic environment.

Thus, the findings of the Open Colleges Australian Organization *(2015)* study showed that most students and faculty were positive about using electronic devices during training (Figure 3).

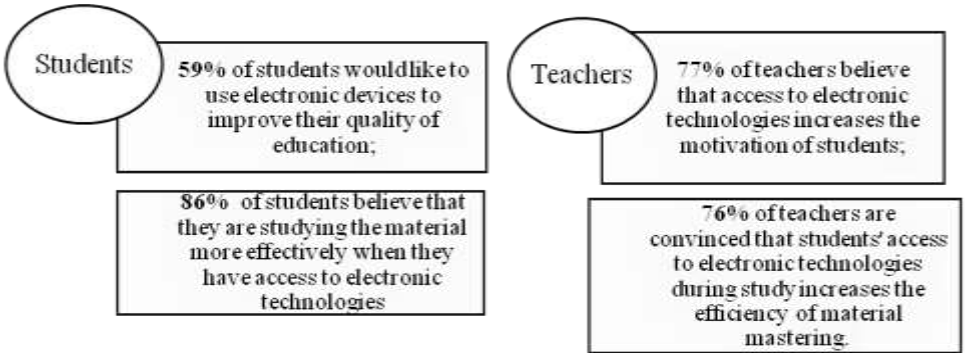

Fig. 3. Computer devices use in learning *(Efficiency but not necessarily motivation, 2010)*

The following characteristics of learning motivation are essential: sustainability, connection with the level of intellectual development and nature of educational activities. Consequently, the problem of motivation formation is the most important condition for success in achieving the positive results of material self-study.

Use of electronic ICT in the process of independent learning and cognitive activity

The teacher can interest the student and make the learning process interesting and productive by combining traditional teaching methods and modern ICT. After all, the use of electronic devices in the classroom makes it possible to make the learning process mobile, differentiated and individual, and to influence the formation of students' motivation to study.

Electronic learning tools provide the ability to view information, record and edit it, which can greatly help a modern student, as well as promote motivation and formation of a stable interest in learning, prompt the search for new, non-traditional forms and methods of learning. However, from the teacher's perspective, this method of study motivation formation is quite attractive, since it helps to objectively assess the abilities and knowledge of subjects of educational interaction.

The main advantage of using electronic ICTs is their organic integration at any class stage. Students master different activities using electronic ICTs in a properly organized, interesting and dynamic form, while improving their knowledge of educational subjects, developing memory, spatial imagination, logical thinking, and creative abilities.

Taking into account these features, the use of electronic teaching means in classes allow to: organize feedback in the learning process; make learning more effective at the expense of the possibilities of adapted electronic ICTs for effective and visual presentation of educational material; provide search information from a variety of sources using Internet access; individualize learning for students, taking into account different learning styles and perceptions; organize collective and group work; exercise control over educational achievements; create a favorable atmosphere for communication.

The use of electronic learning tools as a means of student motivation to study has a broad spectrum: conditions are created to learn any teaching material anywhere and regardless of time, depending on the different types of electronic media and programs.

One of the essential stages of the learning process is control, accounting and assessment of students' knowledge. The purpose of control is to determine the quality of material learning, the degree of correspondence of the formed skills and the goals and teaching objectives of that or another educational subject. Responsible attitude of a student is formed in the process of control towards learning activities, and the effectiveness of teaching methods is established.

Motivation increase and cognitive activity due to a variety work forms can make the classes meaningful, developmental and emotional, due to the reasoned use of electronic ICT for educational purposes. Positive influence on the effectiveness of independent learning activities, in the conditions of student's motivation by means of electronic ICTs can be considered schematically (Figure 4) *(Yahupov, 2004)*.

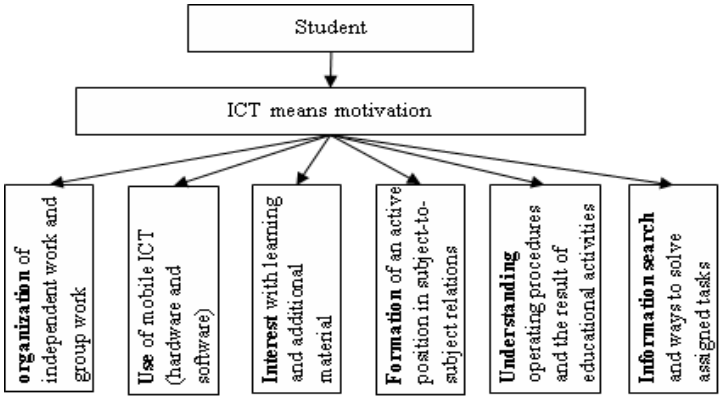

Fig. 4. Student motivated to self-study activities

Therefore, one of the leading means of ICT for the organization of independent work of vocational training teachers in higher education establishments in general and in the professional training is the technology of mobile learning, which provides:

– the opportunity to study anywhere and anytime, regardless of place and time;
– access to training materials from mobile devices;
– continuous access to educational materials;
– increased learning interactivity.

Thanks to these modern technologies (the "student – teacher" interaction is carried out in massage exchange high-velocity medium) through mobile learning is ensured by a high degree of interactivity, which is crucial for student self-study *(Rashevska, Tkachuk, 2015)*.

Conclusions

It is worth noting that considerable volume of independent work is based on work with theoretical material. The block of practical tasks and diagnostics has a creative direction, which contributes to the formation of the creative personality of a future specialist capable of substantiating understanding of the essence of a certain problem on the basis of the results obtained from analytical and cognitive processes.

Thus, independent work organization will be effective when promoting conscious learning of the normative and pedagogical knowledge base, which form the basis of vocational training; developing creative thinking, creative abilities; forming a creative personality; preparing students for engineering and pedagogical activity; forming personality qualities necessary for self-realization (initiative, organization, persistence, confidence, independence); preparing students for research work; forming skills to work with scientific and educational literature.

It allows organizing cognitive independent activity of students, optimizing it, increasing the volume of information important for mastering and, accordingly, intensifying study interest.

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