



## Methodology of organizing and conducting pedagogical experiment-testing in the environment of digital training of professional education

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This article development of students' readiness for independent educational activities in the digital training environment of professional education model, provided pedagogical conditions, mechanism, improved methodology and effectiveness of pedagogical technology in the process of pedagogical experiment-testing are presented.

### Keywords:

Pedagogical conditions, pedagogical process, pedagogical experience-test, digital education, digital skills development.

Evaluating the effectiveness of training models is a critical yet under-researched problem. The concept of effectiveness has an evaluative nature and describes the results of training activities in accordance with the criterion of compliance with the established goals [1].

The conclusions of VMBlinov, VIZagvyazinsky, MMPotashnik, who emphasize that the pedagogical conditions that achieve it should be optimal in order to achieve an effective result, correspond to the purpose of our research.

The process of optimizing pedagogical conditions and determining their effectiveness is not only the improvement of the existing situation, but also the search for the best educational project in the system of professional development, the optimal option for its implementation in the existing conditions. Effectiveness involves determining not only qualitative, but also quantitative performance against a given goal. According to our estimation, the improvement of the organization and regulation of the system of training activities will be reflected in its efficiency [2].

It is difficult to directly measure the

effectiveness of training models focused on professional development, because its results are long-term and related to people's behavior and mindset, which cannot be measured precisely. Efficiency is often determined, first of all, by the effect of training, which is difficult to assess immediately after completing the course, the result may appear after a long time. Professionals who have achieved good results from professional development can count those who have acquired knowledge, skills and abilities, new work methods, exchange of experience, expansion of contacts necessary for development of professional activity.

Vocational training of specialists is aimed at solving actual problems for them related to their professional activities. On the other hand, the effectiveness of the training system should be evaluated by the dynamics of pedagogical processes in professional educational organizations and how changes affect the development of students' readiness for independent educational activities [3].

Undoubtedly, the positive attitude of the participants to the training process means the quality of its organization and content. In such

cases, according to many scientists, the following methods can be used.

- questionnaires that are conducted before and after the training and show how much the trainees' knowledge has increased;
- evaluation of the effectiveness of training programs by the trainees themselves using questionnaires or during open discussions.

During our research, it became clear that the above methods are acceptable for evaluating the effectiveness of our model. In addition, we believe that it is important to provide need-based training in the professional training system of specialists of professional educational organizations for the purpose of training and retraining for the implementation of independent educational activities.

By implementing this approach, it is possible to obtain a holistic view of the effectiveness of training students for independent learning activities in the digital training environment of professional education by organizing research in the following directions:

- determining the importance of training courses (over the last 3-5 years, monitoring the changes in the number of specialists of professional educational organizations);
- to determine the changes in knowledge and skills during the training of professional education specialists;
- to analyze the satisfaction of the trainees themselves from the training process.

Diagnostic, prognostic and organizational functions prevailed in the preparatory stage. The implementation of the diagnostic function includes the determination of the state of the research object: the analysis of modern ideas about the essence and content of the readiness of students for independent educational activities in the digital training environment of the professional education system, normative - analysis of legal documents and materials, analysis of the theoretical basis of professional education experts' qualification improvement, generalization of qualification improvement experiences . The conducted theoretical reasoning made it possible to identify contradictions and express the problem [4].

The prediction function at the preparatory stage of the experiment was carried out by developing a program of research activities, setting a goal

and dividing it into a system of tasks, expressing a hypothesis, choosing research methods, determining the stages and duration of the experiment, and the criteria for evaluating the expected results.

and missing pedagogical conditions for the implementation of the organizational function of the preparatory stage . In the process of implementing this function, independent educational activities in the environment of professional education and digital skills development selection of listeners who can perform , independently issues related to the preparation of specialists with management knowledge in the field of educational activity management , the development of a special course program that takes into account the current problems of professional education , the development of questionnaires and didactic materials were resolved.

The content of the practical stage of the experiment is the main problems in the independent educational activities of professional education experts , the implementation of the model of distance professional development, the development of professional education of the trainees at the institute. was to monitor the training process and its results.

the results of pedagogical tests were summarized , the results were analyzed and compared with the set goals, the progress and results of the training model implementation developed for the trainees were formalized and described.

The complex methodology of research activity includes: pedagogical observation, individual and group interviews, questionnaires, mathematical and statistical analysis of the results of experimental work.

The practical stage of the research activity is conducting a formative experiment , during which the state of the problems of skill improvement in managing independent educational activities was studied and summarized. A study was conducted to determine the need to improve students' professional skills in the field of independent learning activities . During the formative experiment, 412 listeners from Tashkent city, Tashkent region and Bukhara region took part.

We have studied the following aspects of the given problem:

- studying the degree of formation of the main types of independent educational activities;
- to study the level of effectiveness of independent educational activities using self-assessment.

Social research data confirmed the need to develop the problem of professional education specialists.

The analysis of the questionnaires showed that, in addition to self-education, exchange of experience and other forms of professional development, 92% of the respondents improve their skills at a training institute : seminar-training process, training institute [6].

independent educational activities, the level of knowledge and skills of directors of preschool educational organizations was determined. As diagnostic materials, we used a questionnaire on the important professional qualities of professional education specialists based on the model and methodology developed by us.

Self-assessment was carried out on a five-point scale :

5 points is the optimal level

4<x<5 points is an acceptable level

3<x<4 points is a sufficient level

2 <x<3 is the critical level

1 point is an unacceptable level

During the research, it was found that the largest percentage of the level of self-assessment is knowledge and skills of independent educational activities (24% - knowledge, 16% - skills ).

In our opinion, this is primarily professional education It is related to the ability to create a digital training environment and analyze it as a means of independent educational activity .

The supervisory work carried out by the leaders in planning the development of professional education is based on the observations of the listeners in the seminar sessions at the institute , the knowledge and skills of the leaders in collecting internal information and keeping it in accordance with the generated flows. shows that it has; there are difficulties in knowing the theory and methods of analyzing the results of the year, and the ability to analyze pedagogical events. The need to work with information helps reinforce the need for professional

development in this type of independent learning activity.

According to the results of the survey, it was found that the highest percentage of the permissible level of knowledge and skills of the listeners can be seen in three functions at once: plan-forecast, organizational-execution, control-diagnostic:

- plan-forecast : knowledge - 66%, skills - 66%;

- organizational performance : knowledge - 68%, skills - 70%;

- control-diagnosis : knowledge - 64%, skills - 70%,

At a low percentage of the optimal score, a high percentage of self-assessment of the possible level indicators means the thoroughness of the acquired or retained knowledge and skills in independent learning activities that the respondents received from their own or colleagues' previous experience. At the same time, the analysis of the results of the self-assessment showed that the new directions create difficulties for the trainees in the implementation of the specified tasks :

- types and structure of plans - 10%;

- ways to improve planning based on the use of complex target programs - 17%;

- development program development technology - 18%;

- the technology of involving learners in the pedagogical process in planning independent educational activities - 10%;

- the ability to organize independent educational activities - 13%;

- creation of new structures - 16%;

- creation of organizational relations - 15%;

- organization of creative groups - 13%.

Accordingly , the indicator of the ability to effectively master independent learning activities is the most sensitive for professional education specialists : 24% of trainees face difficulties in independent learning activities. The low level of implementation of independent educational activities is associated with both objective and subjective reasons. The objective reason is that part of the respondents have just started their independent educational activities (8%). 26.7 % of those who have difficulties with knowledge and skills in control and diagnostic functions are beginners; 73.3% are executives with 7 or more years of work experience.

Independent study professionals have less experience and 60% are experienced professionals . Planning-forecasting activities require improvement among 28.6 % of novice professionals and 71.4% of experienced professionals (the percentage is taken from among professionals who need to improve these types of activities ) [7]. The conducted survey revealed that the formed relationships of specialists of professional educational organizations in our field of practice ( knowledge, skills, qualifications that determine the ability to carry out independent educational activities ) tend to be reorganized, but this process is consistent . confirmed our theoretical conclusions that it is not always linear. It is very difficult for experienced professionals who have a well-established way of working . According to the results of the survey, it was determined that the professional education specialists were divided into the following differential groups according to their seniority.

#### REFERENCES

- 1.Dzhoraev RX Interactive technologies in education. - Tashkent, 2010.
- 2.Hamidov JA, Murodova AY (2023) Theoretical foundations of development of professional competence of future engineers based on virtual educational technologies. *Science and innovations*, 2023/2, pp. 182-189.
- 3.Murodova AY (2023) Creating an organizational-structural model of preparing future engineers for their professional activities based on virtual educational technologies. International scientific-practical conference on "Digitalization of modern education: problems and solutions". UzDJTU. Pages 188-191.
- 4.Murodova AB PEDAGOGICAL-PSYCHOLOGICAL CHARACTERISTICS OF PROFESSIONAL SKILLS FORMATION OF FUTURE TEACHERS //Scientific progress. - 2021. - T. 1. – no. 5. - S. 259-263.
- 5.Hamidov J., Muradova A. TECHNOLOGY FOR DEVELOPMENT OF PROFESSIONAL AND TECHNICAL COMPONENTS OF FUTURE ENGINEERS THROUGH VIRTUAL EDUCATIONAL TECHNOLOGY.
- 6.Muradova A. TECHNOLOGY OF DEVELOPMENT OF PROFESSIONAL AND TECHNICAL COMPONENT OF FUTURE

ENGINEERS BY MEANS OF VIRTUAL EDUCATION TECHNOLOGY //Science and innovation. - 2023. - T. 2. – no. B2. - S. 306-311 .

7.Abdurasulovich, Hamidov Jalil, and Murodova Aziza Yorkin Kyzi. "THEORETICAL BASIS OF PROFESSIONAL COMPETENCE DEVELOPMENT OF FUTURE ENGINEERS BASED ON VIRTUAL EDUCATIONAL TECHNOLOGIES." *Science and innovation* 2. Special Issue 10 (2023): 182-189.