

A Model for the Education of a Student of a Vocational Pedagogical Educational Institution Through the Gaming Simulation

Maria V. Fominykh^a, Bella A. Uskova^a, Valentina V. Mantulenko^b, Olga N. Kuzmina^b and Elena N. Shuravina^c

^aRussian State Vocational Pedagogical University, RUSSIA; ^bSamara State University of Economics, RUSSIA; ^cSamara State Technical University, RUSSIA

ABSTRACT

The relevance of the problem subject to the research is conditioned by the discrepancy between (a) the orientation of the modern vocational-pedagogical education on the result of the future teacher training that is based on the subject matter and contents, and (b) the need to develop pedagogical skills. The application of the gaming simulation within the process of pedagogical skills development takes such skills to a completely new level. A study of the process of pedagogical skills development at students of a vocational-pedagogical education by way of the gaming simulation is the purpose of the article. Experiment and research activities were carried out during four years. A pedagogical experiment using the specially developed programme allowing discovering the level of pedagogical skills development at the trainees is the leading method for the research of this problem. Research results: The article provides for a model for the education of a student of a vocational-pedagogical educational institution through the gaming simulation; a scheme for this model implementation has been developed. Article contents may be useful for lecturers and students of pedagogical higher education institutions at the monitoring of the education quality.

KEYWORDS

Educational institution; gaming simulation; pedagogical competences; simulation, three level task system; vocational-pedagogical

ARTICLE HISTORY

Received 17 May 2016
Revised 13 July 2016
Accepted 13 July 2016

Introduction

Urgency of the problem

One of the acutest education problems is produced by the discrepancy between the implementation of new targets of the educational system and insufficient preparedness of the lecturers for the work in the current circumstances, a low level of their pedagogical skills development. Obviously, the prospects of the

CORRESPONDENCE Maria V. Fominykh ✉ fominykh.maria12@yandex.ru

© 2016 Fominykh et al. Open Access terms of the Creative Commons Attribution 4.0 International License (<http://creativecommons.org/licenses/by/4.0/>) apply. The license permits unrestricted use, distribution, and reproduction in any medium, on the condition that users give exact credit to the original author(s) and the source, provide a link to the Creative Commons license, and indicate if they made any changes.

overcoming of the stated discrepancy are to a large extent connected with the increase in the level of professional competencies of future teachers of vocational education, an increase in the level of their pedagogical skills.

Achieving a high level of pedagogical skills is a strategic goal of vocational teacher education (Onischenko & Sokolova, 2010). Of particular importance is the formation of the ability for independent acquisition and processing of knowledge in a rapidly changing environment, as well as developing one's own pedagogical skills, as students will have to work with children. Thus, one of the main directions of modern didactics is a combination of traditional teaching methods and techniques and finding ways and means of activating the development of pedagogical abilities of students. Modern educational technologies used in universities are technologies that must ensure the quality of education; meet the challenges facing higher education, correspond to the level of development of science and industry; meet the objectives and requirements of the federal state educational standards (Kotlyarova, 2015; Kalimullin, Vlasova & Sakhieva, 2016).

According to Y.S. Ezrokh (2014), gaming methodology encourages independent and extracurricular work of students, which contributes to deepening their professional knowledge and the development of moral and volitional qualities. Modeling is a process of studying objects of knowledge on their models; building models of real objects and phenomena (social systems, processes of professional activities, etc.). Game modeling is a heuristic tool of research of relevant pedagogical phenomena, processes, or different educational systems through the construction and study of their models for further use in teaching practice; it is an important instrument for the development of pedagogical abilities of students in the process of studying the content of academic disciplines. Game modeling is carried out through "immersion" into a specific situation, simulated with the aim of training and education, and requires the most active position of students themselves. The educational process is a complex, multilayer pedagogical phenomenon (Strokova, 2016). Training a student of a vocational pedagogic higher school is a purposeful pedagogical process ensuring the absorption of knowledge and skills that are necessary and sufficient for a successful professional activity by the students of a vocational pedagogic institution. A vocational teacher is a specialist of an integral profile objectively called to have a universally-synthetic knowledge and universally functional activity and, therefore, have a synthetic competence to integrate in their activity the data from different fields of activity, sometimes far beyond the performance of specific operations (Romancev, 1997). By teaching skills we mean a set of individual psychological characteristics of a teacher's personality which meet the requirements of a pedagogical activity and determine success in mastering this activity (Kuzmina, 1989).

Methodological Framework

Research methods

The fundamental principle of any scientific study is a methodological principle of objectivity. It is expressed in a comprehensive account of factors generating a certain phenomenon, and conditions in which they develop, in the adequacy of research approaches and means of getting the true knowledge about an object, it implies the exclusion of subjectivity, one-sidedness and bias in the selection and

evaluation of facts. The principle of objectivity, however, does not exclude subjectivity and involvement in the research process of a researcher with his creative personality and definitely oriented inner world. Another methodological principle close to the one considered above on which we based our study is the principle of essential analysis. Compliance with this principle is connected with the correlation in the studied phenomena of the general, special and individual, insight into their internal structure, disclosure of laws of their existence and functioning, conditions and factors of their development, and possibilities of their purposeful modification. This principle implies the movement of research ideas from description to explanation, and from the results to forecasting the development of pedagogical phenomena and processes.

As a complex, multifactorial and continuously changing, pedagogical process is deeply dynamic by its nature. That is why an important requirement is the need to take account of the continuous change and development of the elements under study and the educational system as a whole. Functions of many elements in the development process change significantly, and some of them move in their opposite.

One of the common scientific principles is the principle of the conceptual integrity of research because, if the researcher does not protect, does not consistently carry out a certain concept, he will not be able to implement the unity and logical consistency of approaches and evaluation.

It is necessary to pay special attention to the need for an integral approach to education systems - in other words, to respect the principle of integrity of the study and a very careful approach to the isolation with the purpose of special study of individual aspects, elements, and relations of psychological pedagogical process. The very isolation can be carried out only partially, temporarily, constantly correlating the results obtained with the course of the whole process.

The opinion of N.V. Kuzmina (1989) is consistent with this point of view. She believes that specificity of pedagogical phenomena does not allow to achieve direct verification of a scientific hypothesis (when both members of a hypothetical relationship may become an object of direct observation). Here, "there are always factors such as personality traits of a teacher and a student, motives of their actions and behavior. Therefore, the hypothesis in pedagogical research is subjected to indirect verification, i.e. verification, based on the consequences that can be deduced, taking into account the availability of intermediate factors" (Kuzmina, 1989).

During the experimental research work we used the following methods: observation, questionnaires, interviews, the study of products activity and specially developed and tested techniques that have already proven themselves to be reliable and valid. On the basis of positively proven techniques we also developed our own methods, focused on the identification and determination of the level of formation of pedagogical skills. Observation is the most traditional and affordable method for studying the behavior of an individual in the learning process. By the scientific supervision we mean a specifically organized perception of a study group of students *in vivo*. The essence of the observation is that in the mind of a researcher the changes in the object under study, its qualitative, quantitative, and other variables are displayed and fixed. Getting objective information when using this method is possible only if the observation is quite lengthy and systematic. We tried to fully comply with these

requirements. During the observation we made up our guided surveillance program, which is based on the observation program of O.S. Grebenyuk (2003).

Educational conversation method was used as an extra, to obtain the necessary clarification of what was not sufficiently clear when observing or using other methods. Survey method (interview) is currently one of the most common in the study of collective (group) events. In pedagogical practice questionnaires of different types are applied: open, requiring independent formulation of an answer and closed, in which subjects are asked to select one of the ready-made answers, personal and anonymous, propaedeutic, monitoring, etc. As our work did not involve any social or educational consequences for subjects on the results of the survey, they had an opportunity to answer questions not anonymously, expressing their own opinion openly. In drawing up the questionnaire for teachers we took into account the fact that the subject is not always able to clearly define his/her own preferences, which required the inclusion of questions overlapping in a different formulation. Along with simple questionnaires, we also used a method of scales or scaling (Grebenyuk, 2003) allowing fast processing of the results and presenting them in the form of points.

We have determined that abilities are individual psychological characteristics of a personality, which are a prerequisite for successful implementation of a productive activity. N.S. Glukhanyuk (2000) notes that abilities cannot be reduced to knowledge and skills, but cause the ease and speed of learning new methods and techniques of work. The author emphasizes that the main features of abilities distinguish one person from another; are relevant to the success of the implementation of any activity or many activities; are not reduced to the existing knowledge and skills, but may explain the ease and speed of their acquisition. There is a kind of dialectical relationship between the abilities, knowledge and skills: relevant abilities are necessary to master them, and the very formation of the abilities presupposes the development of knowledge and skills related to the appropriate activity. As for the natural, innate factors, they are treated as anatomical and physiological inclinations (the properties of the nervous system), underlying the formation of abilities, the abilities themselves are always a result of development in a particular activity.

People differ from each other in a different ability to reflect the environment, to operate the information received, to see and disclose links and relations between objects and phenomena, to foresee the consequences of their actions, to remember events, etc. These and other abilities related to cognition of the world were united in psychology by the concept of "intelligence", which is one of the central concepts in psychological testing. Different authors have different definitions of this construct. Thus, D. Wechsler (1955) defines it as follows: intelligence is a complex overall ability of the individual to act purposefully, to think rationally, and to interact effectively with the environment. A. Anastazi (1982) treats intelligence as a complex of skills needed to survive and achieve success in a particular culture (Glukhanyuk, 2000). Summarizing these definitions, N.S. Glukhanyuk (2000) admits that intelligence is a descriptive construct, introduced by psychologists to describe a person's ability to function effectively and rationally in a particular culture.

Manifestations of intelligence are varied, but what they have in common that allows to distinguish them from other peculiarities of behavior, is general activation of any intellectual act of thinking, memory, and imagination of all

those mental functions that provide the cognition of the outward world. Accordingly, by intellect as the object of measurement not any manifestation of individuality is meant but, above all, those related to cognitive properties and characteristics. This is reflected in numerous tests designed to evaluate various sides of intelligence: logical thinking, associative and semantic memory, arithmetic ability, spatial visualization, etc.

An essential feature of intelligence is that it is a summation of the experience gained by a man in a particular culture from the time of birth. We can only estimate what a person has reached in the culture at the time of testing, but we cannot say why he has reached this level.

C.E. Spearman (1904) on the basis of the analysis of matrices of intercorrelations of different intellectual subtests hypothesized about univariate intelligence. He suggested the existence of G (General) factor that determines the results of various measurements of intelligence. This factor was interpreted by him as mental energy (Mental Energy) and was associated primarily with the ability to establish connections and relationships between objects and phenomena. Based on the theory of C.E. Spearman (1904) such tests as "Progressive Matrices" by J. Raven (2008), "Domino" test, test TIP and others were created.

Another view of the structure of intelligence was expressed by L.L. Thurstone (1924). As a result of careful mathematical analysis of intelligence tests data he concluded that intelligence by its nature is not homogeneous and includes a number of primary factors that determine different groups of mental operations. He singled out the following primary factors: V – verbal comprehension, W – word fluency, N – number facility, S - spatial visualization, M - associative memory, P - perceptual speed and I (R) - reasoning. On the basis of these positions L.L. Thurstone (1924) defends the view that intelligence should be presented not only as one indicator (IQ), but as a profile of marks by primary factors.

American psychologist J.P. Guilford (1967) suggested intelligence model which contains 120 factors. The model is a cube with three dimensions, combinations of which define different types of intellectual abilities. Every intelligence factor is formed by a combination of:

- The type of intellectual operation (C - cognition, M – memory recording, D - divergent production, N - convergent production, E - evaluation);
- The content or form of presented information (F – figural - concrete, S - symbolic, M - semantic, B - behavioral);
- The product, the result of application of a particular intellectual operation to a particular content or form of information (U - units, C - classes, R - relations, S – systems, T - transformations, I - implications).

Thus, every intellectual ability is encoded by three letter symbols, such as the ability to assessing the motives of another person - CBI. However, this breadth of signs of intelligence is both the advantage and disadvantage of this theory. The concept of intelligence by R. Cattell (1963) is quite wide-spread abroad. He believes that factor G consists of two common factors: fluid intelligence, due to individual properties (g_f), and crystallized intelligence, due to experience (g_c). There is also a recognized theory of intelligence. Developed by R. Sternberg (2002) triadic theory of intelligence includes contextual, component,

and experimental parts. Intellect, according to R. Sternberg (2002), cannot be considered outside the socio-cultural context. The concept of D. Wechsler (1955) stands out among the modern concepts of intelligence; it contains two factors of intelligence: verbal and nonverbal. Thus, both univariate and multivariate theories lay the foundation for designing intelligence tests. One of the most popular in Europe tests developed in line with the multivariate theory of intelligence is intelligence structure test by R. Amthauer (1953). In this test, intelligence is seen as a substructure in an integrated structure of a personality. This substructure is an ordered integrity of mental abilities, which are formed and manifested in the activity. R. Amthauer (1953) identified four major factors of intelligence: verbal, countably arithmetic, spatial and mnemonic. 9 subtests of the methods are aimed at their diagnosis.

Generally psychodiagnostics of abilities is carried out by means of intelligence tests, and the diagnosis of general and special abilities. IQ tests are tests of general abilities. They are a combination of methods, formed in the framework of the objective diagnostic approach. They are designed to measure the level of intellectual development and are among the most common in psychodiagnostics.

IQ tests are standardized methods aimed at measuring the general level of the individual's ability to solve a wide range of thinking tasks. Special tests of intelligence structure, for example, by D. Wechsler (1955) and R. Amthauer (1953) make it possible to correlate the degree of development of various components (or kinds) of general intelligence. Special abilities tests are aimed at measuring the level of success of solving the problems of a particular type in a particular area of activity.

The advantages of general abilities diagnostic methods are: ease of use, ease of processing, the visibility of reporting the results, high reliability, minimal impact of a psychodiagnostician on the survey results, the disadvantage is vagueness of informative content, making it difficult to plan correction and developing work (Glukhanyuk, 2000).

Intelligence tests are applied in different spheres of social practice, not only for diagnosis, but also for scientific research. These tests are a good diagnostic tool and in addition to the analysis of intelligence structure allow respondents to determine the success prognosis in certain types of activities, for example, success in professional and educational activities, etc. To determine the priority development of certain abilities to the chosen profession, one can use the available arsenal of domestic psychologists' tests. For example, the test by R. Amthauer (1953) allows to get a "test profile" of a respondent on three parameters: the intensity of the humanitarian, technical and mathematical abilities.

School mental development test helps to determine the intensity of abilities to socio-humanitarian, physical, mathematical and natural sciences areas of activity.

The main task of a psychodiagnostician in the application of intelligence tests as N.S. Glukhanyuk (2000) points out is the translation of the obtained objective diagnostic information into the consumer language. Without this, the information obtained may prove ineffective or harmful.

Diagnostic results can be described for at least three categories of consumers:

- a) professionals;
- b) administrative staff;
- c) the consulted (clients).

Theoretical possibilities of diagnosing predisposition to pedagogical skills are considered in detail by N.A. Aminov (1997). "Pedagogical professionalism" is defined through the concept of "pedagogical mastery", which bears a great meaning. Pedagogical mastery can be considered as an ideal of pedagogical work, encouraging teachers to improve themselves, and as a standard containing the assessment of the effectiveness of educational activities, besides, "pedagogical mastery" is often perceived as the most important professional quality of a teacher's and educator's personality. However, no matter what meaning is embedded in the concept of "pedagogical mastery" both the society in general and teachers, children and parents in particular wish pedagogical skills could characterize the activity of each teacher.

Modern diagnostics of a teaching style promotes not only the self-knowledge of a teacher, but also makes it possible to correct pedagogical style in order to increase its professionalism.

First you need to define the criterion of pedagogical mastery. One of the most important criteria of pedagogical mastery in modern psychology is considered to be the effectiveness of the work of a teacher, which is manifested in one hundred per cent performance of students and in the same - one hundred percent - interest in the subject, i.e. a teacher is a master if he/she can teach anyone without exception. Teacher's professionalism is most evident in good results of the students, who are considered to be unwilling, incapable and unable to learn.

On the one hand, the criterion offered to the students as a pedagogical purpose encourages them to professional self-improvement - "to work so that all wanted and could study well with the help of a teacher" (Aminov, 1997; Aminov, Morozova, & Smyatskih, 1994).

On the other hand, the criterion of high efficiency of pedagogical work defines the means of its achievement, the main of which is considered to be the formation of individual pedagogical style of students.

Since high performance is achieved by teachers at higher levels of manifestation of pedagogical mastery with the established on the basis of their natural inclinations individual teaching style, then, according to our hypothesis, students' pedagogical style is purposefully formed. On the assumption of students' individual background the basics of pedagogical mastery can actually be formed.

Suggested by N.A. Aminov (Aminov, Morozova, & Smyatskih, 1994; Aminov, 1997) psychodiagnosis represents a fundamentally new approach to the training of teaching staff and provides a number of advantages, as it allows:

- 1) to make the process of formation of students' pedagogical skill bases purposeful and therefore humane, because the diagnosis allows to take into account the individual characteristics of the students in the learning process;

2) to form effectively in students values motivation of mastering pedagogical skill;

3) to establish a relationship of cooperation and understanding of students and teachers, which has a positive effect on the learning process;

4) to expand and implement the range of educational and training objectives of the subject, aimed at the study of one's personality, a focused selection of educational technology in accordance with one's capabilities, forecasting one's educational activities with the analysis of possible difficulties and strong points, etc.;

5) to develop the natural background of individual pedagogical style of a future teacher and thus contribute to a more efficient mastery of teaching professionalism;

6) to determine objectively the students with unexpressed traits of style and implement appropriate corrective work.

These advantages of psychodiagnostics allow us to state that it should become an integral part of professional training of both future teachers of vocational education and teachers in in-service training system.

By psychodiagnosis of individual pedagogical style the definition of three basic style levels is meant.

The first level is the level of the natural prerequisites of pedagogical styles or inclinations to styles. The determinant characteristics of natural inclinations are activating, lability, the strength of the nervous processes. High scores on these parameters, especially in strength of measuring processes, characterize the representatives of resultative style, low scores indicate assumptions of developing style in the testee.

The second level is the level of expressiveness of teaching styles. This level allows taking into account the impact of social conditions of the individual development of a future teacher, in particular, the impact of family background at an early age on natural prerequisites of style, which are displayed in the orientation of adult personality and reflect the presence of one of the three basic lines: focus on oneself, focus on partnership, focus on the task, i.e., result. Unlike the line reflecting the focus of a person on oneself the other two (focus on partnership, focus on the task) contribute to mastering teaching activity. Thus, the second level is characterized by inclinations combined with professional orientation of the candidate

The third level - the level of mastery - is characterized by the presence of inclinations, style and reflection (awareness of one's style) and displays manifestation of pedagogical style in teacher's activities, and besides in combination with the two previous levels mastery is reflected in the teacher's awareness of the peculiarities of his/her personality, which he/she deliberately uses when choosing educational technologies, strategies for dealing with children and so on, i.e. a teacher purposefully uses his/her personality as a tool to achieve the greatest effect in pedagogical activity. Psychodiagnostics is carried out in the form of testing. For this purpose N.A. Aminov (Aminov 1997; Aminov, Morozova, & Smyatskih, 1994) developed a block of tests which allows to define individual pedagogical style on each of three levels. Natural inclinations of style are investigated with the help of tapping-test. Self-assessment scale and a questionnaire to determine the effective style of

pedagogical influence by N.A. Aminov (Aminov 1997; Aminov, Morozova, & Smyatskih, 1994) are used to study the level of mastery.

Experimental basis for the research

The experiment and research study was carried out on the basis of Russian State Vocational Pedagogical University, Ekaterinburg. The **purpose** of the study was to study the process for pedagogical skills development of students of a vocational-pedagogic educational institution through the gaming simulation. A special task system using the gaming simulation for the stimulation of pedagogical skills development was the means for the purpose achievement. The experiment and research study was conducted during four years.

The object of the experiment and research study is the process of pedagogical skills development of students of a vocational-pedagogic education institution.

The subject matter of the experiment and research study is a technology for the application of the task system using gaming simulation.

The experiment and research study shall be deemed to mean the method of the introduction into the pedagogic process of deliberate changes aimed at the increase of its efficiency, with a constant inspection and evaluation of the results. In essence, this is a specially staged experiment being carried out on the scientific basis using the programme or project developed in advance.

The composition of the participants in the experiment and research study: students of the 1st, 2d, 3d, 4th years of study of the Linguistics Institute of the Russian State Vocational-Pedagogical University, whose study major is “The English Language” with the breakdown as per study year (Table 1).

Table 1. Number of participants of the experiment and research study

Study year	Number of students in experimental Group 1	Number of students in experimental Group 2
1 st year	66	66
2nd-3rd year	67	67
3rd-4th year	67	67
Total	200	200

In total, 400 people participated in the experiment and research study.

The essence of our study is as follows: the learning activity is carried out through the students’ performing tasks using gaming simulation. Construction of a self-consistent, integral system of such tasks presents a serious didactic problem and required several years of focused effort in this direction. While compiling such task system, we relied on the above stated methodological principles. Determination of the level of the skills maturity is the main problem of the experiment and research study on the development of pedagogical skills of students of a vocational-pedagogical education institution.

Conclusions on the success of our activities were made on the basis of a comparative analysis of the dynamics of the results of pedagogical skills maturity within a year. Obviously, the study group is a relatively non-homogenous unit, both in terms of the initial level of pedagogical skills maturity and qualities of the personalities making up such group. Therefore, it was necessary to develop a respective instrumentarium to determine both the initial

level of pedagogical skills maturity, and the dynamics of change in the students' attitude to the pedagogical work.

Study phases

The experiment and research study was carried out in three phases that we conditionally denoted as the initial-launching, intermediate-transformation and final-formation phases. In essence, such phases of the experiment and research study represent consecutive phases of the implementation of technology of tasks using gaming simulation.

Results

Model structure and contents

The technology implemented by us is personality-oriented. Let us state the definition of such type of technology. "This is a ranked-order combination of actions, operations and procedures aimed at the personality development, instrumentally securing the achievement of the result that is being diagnosed and forecasted in pedagogical situations, creating an integrative unity of forms and methods of education while scholars and lecturers interact" (Zeer, 2003).

The following moments of the personality-oriented education technologies are emphasized in this definition:

- a targeted orientation on the personality development;
- congruence of the education contents to the future professional activities;
- reliance on the subjective experience of the trainees;
- integration unity of forms, methods and means of education;
- interaction between the trainees and lecturers; individual style of pedagogical activities.

The implementation of the technology in the educational process is ensured by the provision of the following conditions:

- availability of a clear and diagnostically set education purpose, i.e., a measurable notion about the expected result;
- presentation of the study material that is being learned as a system of cognitive and practical tasks, situations, assignments, projects, exercises, etc.;
- availability of a relatively stable consequence, logic, stages of the study assignments performance;
- indication of means of interaction between the educational process participants:
 - motivation support of pedagogical activities subjects and learning based on the implementation of their personal functions in this process;
 - indication of borders of the rule-consistent (algorithmic) and artistic activities of lecturers, a permitted deviation from the rules;
 - openness of education to the professional future, orientation at its anticipation.

The personality-oriented education is an integration of the education, upbringing and development. Therefore, technologies should be aimed at the achievement of these three components ensuring the personality development (Zeer, 2003).

While developing a practical implementation of our approach we relied on the modern views on the education theory, methodologies and methods of the didactic research.

Currently, there is no unified definition of educational technologies. Regardless an availability of a large number interpretations of this notion (Pidkasistiy, 2004; Savelyev, 2000; Slastenin, 2003; Chernilevskiy, 2002), the technology has the following constant features:

- presence of a clearly and diagnostically set target as an expected result;
- presentation of the study material that is being learned as a system of cognitive and practical tasks, tentative framework and their solution;
- availability of a relatively strict consequence, logic of certain stages of material mastering, set of professional functions mastering etc.;
- indication of means of interaction between the educational process participants;
- motivation support of teachers' and students' activities based on the implementation of their personal needs in this process;
- indication of borders of the rule-consistent (algorithmic) and creative activities of a teacher, a permitted deviation from the uniform rules.

Pedagogical technologies are traditionally named as organizational forms and methods of the education that are being used by the lecturer during the preparation for, and carrying out the educational process; its functions boil down to the implementation of the system of consecutive operations on the organization, observation, control and correction of students' activities.

The basic technologies of the vocational training include the following:

- traditional technologies oriented at the mass-reproductive nature of the future specialists' training and ensuring development of separate (particular) components of the pedagogical activities. Traditional technologies fail to secure an integral development of the specialist's personality.
- innovative technologies, including imitation and non-imitation technologies of active learning. D.V. Chernilevskiy (2002) attributes to innovative technologies the technologies of modular, problem-based and distance education having a personality-oriented, personality-activity based or project-based nature. It is advisable to include in the same category the contextual education technology, technology of open system of intensive learning and informational technologies.

Contradictions between these two technological aspects of the vocational training of a future teacher reflect the discrepancy between his/her professional development and training for the work in the subject area.

In the personality-oriented technologies, knowledge, skills and proficiencies are viewed not as an education purpose, but, together with value conscious attitudes and value-conscious orientations, serve as the means for the development of the trainee's personality and his capacities for the self-realisation. An emphasis in such technologies is made on the formation of "I-concept" and axiological component of the personality and professional spheres of a future specialist.

According to V.A. Slastenin (2003), an axiological approach to the development of modern education technologies is oriented on the discovery of

psychological reserves and personal potential of a professional – his skills, competencies, proficiency, at the increase of his personal freedom extent, stimulation of the processes of target setting, target achievement, target assertion.

According to L.M. Mitina (1999), knowledge as such does not disappear in the axiologically oriented technologies, it simply stops to be a self-purpose of education. Imitation trainings, didactic, staging, role and psychological games, discussions, exercises aimed at the formation of the notion of one's "I" and its correlation to the profession's requirements, mastering of skills of the improvement of the emotional self-regulation and self-control processes, analysis and discussion of the pedagogical situations from fiction movies and fiction literature, study groups and workshops become the main forms for the organization of the technological process. S.V. Kulnevich (1999) notes that such technologies are aimed at the establishment of an integral connection between such types of the pedagogical activities which are focused on the formation of sense creating, socially-mental and reflectionally-emphatic culture of a future lecturer.

According to E.F. Zeer (2003), a driving force for the development of the necessary vocational-pedagogic orientations, specific for all technologies offered as of today, – intra-personal discrepancy between "I-who is acting" and "I-who is reflected". Discrepancy between the already formed value-conscious paradigms of the personality and value-conscious views about the pedagogical profession is needed for the solution of the arising controversies in pedagogical situations in order to find new means of self-realisation in the professional behavior. A conceptual statement of such process is that an individual trajectory of the individual's future professional life is determined by ordinary and extraordinary events, random facts, as well as irrational desires of a person, i.e., main elements of the person's life experience.

A specific feature of the technology of tasks using gaming simulation to develop students' pedagogical skills will be not just emotional experience of these or other pedagogical situations, but conscious experience that gives material for the self-reflection. Any apprehension of another person, circumstances of his life comes only through self-comprehension. Comprehension becomes a mechanism allowing determining the sense of a pedagogical situation, interpreting the nature of a pedagogical problem finding ways to solve it.

Technologies of tasks using the gaming simulation for the purpose of development of students' pedagogical skills must correspond to certain essential conditions of apprehension in pedagogical hermeneutics:

- capacity for self-awareness (self-comprehension), "transition of oneself to another person's place";
- capacity for a dialogical reasoning, a leading idea of which is mutual understanding;
- reflection nature of the educational process;
- creative self-manifestation of a future lecturer in the game, mental activity, conflict, approbation of new behavior models;
- comprehensive accounting for the features of the pedagogical environment, in which sphere a technological process will be deployed;
- reliance on the subjective experience of an individual.

The following serve as criteria for the technology creation: implementation of the subjective nature of a future lecturer; methodological system adaptedness (construction of methods, means and techniques) to the educational practice; polylogue, efficiency of pedagogical activities, matching of the results of the technological process with the diagnostically set purpose; securing unity of the personality-essence and cognitive development of future teachers (Serikov, 1999).

One should also note that not each lecturer seeking to implement gaming technologies into the educational process is capable to see the need of a special gaming and technical competency. Using A.P. Panfilova statements (2006), there is a “competency ladder” demonstrating that the education cycle starts from the state when not only cognitive cards and reference experience are absent, but also the understanding of their absence is absent. To conduct gaming technologies at the high professional level, to organize group interaction and give an interactive nature to the educational process, to diagnose the educational and developing efficiency, a lecturer needs not only pedagogical skills and proficiency, but also new competencies, including special communicative, interactive, perceptual and gaming and technical knowledge, skills and proficiencies.

In this connection, benchmarking has a major significance in the activities of a pedagogue – gaming technique master. It is used for the systematic comparison of his work with the best samples of specialists’ work in this sphere conducting their master classes, artistic workshops, training programmes, brainstorming, business and organizational and activities games. Proactiveness of the trainees not only has a vital significance, but also is a profiling condition for the efficiency of the gaming interaction.

Interactive learning presupposes both intra-group and intergroup activities. Virtually any interactive technology “provokes” physical, social and cognitive activities of trainees; and each of them is significant for the achievement of the planned results according to the gaming, learning and developing targets. Physical activities of participants correspond to the educational targets of the change in the physical environment and three-dimensional environment, changes the course of actions (methods of learning activities), partners in the gaming interaction; for instance, the game participants:

- change their workplace, change seats;
- participate in a plenary session, gesticulate;
- draw pictures, make sculptures.

Social activities of the interactive game participants are displayed in the fact that they initiate interaction between themselves corresponding to the learning and developing targets, methods and techniques of the information exchange, methods for the conversation with a game organizer, with experts. For instance, they do the following:

- select interaction strategies;
- ask various questions: to clarify, to develop, to understand;
- check if they understand and formulate responses;
- respond to the questions;
- exchange opinions, replies, comments;
- participate in the discussion in the role of “critics”, “provokers”,

“opponents”, “reporters” etc.;

- act in the role of the “trainee” and “trainer”;
- exercise self-reflection;
- act on behalf of the gaming role: “manager”, “business” “partner”;
- work on the game with “experts” or “competent judges”;
- provide comments regarding... and summarise, etc.

Cognitive activities of the interactive game participant are displayed in the initiation of question formulation that corresponds to the educational purposes, determination of the diagnostics methods and game material analysis, narration or presentation of new results, influencing the contents of the education and development technology itself. For instance, game participants:

- state the problem and its formulation;
- identify priorities, problems, difficulties and dead ends;
- find ways and possible solution for the situation or task;
- introduce amendments, supplements;
- act as one of the sources of professional experience;
- offer recommendations, develop advice;
- develop or create programme or project and provide a rationale therefore;
- carry out debriefing, learn lessons and formulate new skills and proficiencies.

Within the gaming simulation a student is viewed, as previously noted, as a subject of the pedagogical process, and, consecutively, we are talking here about subject-subjective activities, while the educational process becomes a personality oriented one, pedagogics of the cooperation and partnership.

We attribute the following to the gaming simulation technology:

- “staging”, “dramatizing” the situation using different roles;
- role games with instructions and specific roles;
- training (organizational, communicative, sensitive, management, corporate, video training etc.);
- imitation games;
- simulation games;
- business games (attestation, didactic);
- mental activity imitation technologies (organization and activity game, innovative game, research and approbation game, problem and business game etc);

creative interactive technologies (brainstorm and its varieties, **еро** **разновидности**, synectics, association method etc.);

computer game imitation technologies.

Phases of the model implementation

Initial-launching phase

The first phase (initial-launching) of the experiment and research study included an analysis of pedagogical conditions, in which the experiment and research study was undertaken, objective capabilities and limitations related to the specifics of the research activities according to the declared goals, selection of the experimental groups of students. A main problem being subject to the resolution at this phase is connected to the specific of the subject that is being studied – foreign language – as its teaching presupposes a small number of students in the group. This problem is being solved through the engagement of colleagues – lecturers to the carrying out of the experiment and research study that allows a significant increase in a number students involved into such activities.

The initial-launching phase included the diagnostics of the initial level of pedagogical skills of students of the experimental groups, the analysis of the diagnostics results and the determination of the procedure for working with each group participant taking into account his or her individual specific features. At this stage we carried out the questionnaire survey for lecturers to identify their attitude to the gaming simulation and students' pedagogical skills development. The lecturers were offered to respond to the queries in any format. The lecturers' responses are presented in Table 2.

Table 2. A summary table of the questionnaire survey results

No.	Question	Lecturers' responses
1	Are you familiar with the term “gaming simulation”?	Yes - 10 people; No - 9 people; Cannot say - 1.
2	What types of games do you know / use during your lectures with students?	Know: business and training-business; role; imitation; organizational-assignment; organizational-training; Use during lectures: role, business.
3	Do you spend, in your opinion, sufficient amount of time on the development of pedagogical skills of students?	Yes - 4 people; No - 16 people.
4	Do you use gaming simulation for pedagogical skills development?	Yes - 0 people; No - 20 people.
5	Which techniques or resources do you use to develop pedagogical skills of students?	Techniques: conversation, story, quoting of prominent educators, disputes. Resources: fiction on the problems / issues of pedagogics, mass media (various magazine articles), movies. Cannot say: 7 people.
6	Are you familiar with the notions of “role game”, “imitation situation”, “hidden role game”?	Yes - 16 people; Not entirely- 2 people; Partially - 2 people.
7	Do you know the essence and specifics of pedagogical	No - 9 people;

skills of vocational education pedagogues? (only lecturers of vocational-pedagogic universities responded to this question).

The results of the questionnaire survey permitted wording of the following statements:

1. Not all lecturers are familiar with the term “gaming simulation”;
2. The lecturers spend insufficient amount of time on the development of students’ pedagogical skills;
3. Not all lecturers are familiar with the specifics of pedagogical skills of a vocational education lecturer;
4. The lecturers fail to develop students’ pedagogical skills through the gaming simulation.

In addition, at the beginning of the study we carried out a diagnostics of the pedagogical skills development level. We developed a diagnostics instrumentarium consisting of 32 methods determining an actual level of students’ pedagogical skills development.

The set of psychodiagnostics proposed by us reflects a revolutionary approach to the vocational training of the personnel and provides an entire range of benefits, as it permits:

- 1) to make the process of students’ pedagogical skills development a goal-oriented and, subsequently, more humane, as diagnostics allow taking into account individual specific features of students within the educational process;
- 2) to form efficiently a value conscious motivation for the pedagogical mastering for students;
- 3) to establish relations of the cooperation and mutual understanding between students and a lecturer that has a positive impact on the educational process;
- 4) to broaden and implement a spectrum of educational and instructional assignments of the subject aimed at the study of one’s identity, results oriented selection of pedagogical technologies in connection with one’s capacities, forecasting of one’s pedagogical activities with an analysis of potential difficulties and strengths etc;
- 5) to develop natural patters of an individual pedagogical style of a future vocational education lecturer and thereby contribute to a more efficient mastering by them of pedagogical professionalism;
- 6) to determine objectively students with unpronounced (undeveloped) pedagogical skills and carry out a respective correcting work.

Such benefits of the set of psychodiagnostics created by us allow asserting that it should become an integral part of the professional preparation of both future vocational education lecturers and lecturers working in the advanced vocational training system. The set of psychodiagnostics methodics that was developed includes 16 control and evaluation tests. At the current stage we determined the following tasks:

- (1) to identify the nature of students’ pedagogical skills development;
- (2) to determine the level of students’ pedagogical skills development.

A primary analysis of the diagnostics data allows making two main conclusions:

1. Such diagnostics complex allows singling out three groups of students: students with a high level of pedagogical skills development; students with an average level of pedagogical skills development; students with a low level of pedagogical skills development — so called ambivalent or conditionally underqualified.

2. Students who have highly evident features of pedagogical style constitute an insignificant group that confirmed our assumption that students cannot have a well-established pedagogical style. The same is true for pedagogical skills. The fact that students have a weakly-developed self-analysis, they do not know themselves well, incorrectly estimate their capacities is symptomatic.

Such conclusions ultimately persuaded us that there was a need to carry out a complex psychodiagnostics.

Proceeding from the tasks of the initial-launching stage, we determined the structure of general pedagogical skills of experimental groups: pedagogical conversation skills; pedagogic tact; organizational, cognitive, leadership, communicative and expressivity and language skills; pedagogical imagination. The nature of pedagogical skills development is incoherent (Table 3).

Table 3. Source data on the extent of pedagogical skills of students received during the first test year (in %)

Pedagogical skills	Experimental group 1			Experimental group 2		
	Development level					
	high	average	low	high	average	low
General pedagogical skills	15	25	60	13	24	63
Pedagogical conversation skills	20	27	53	21	30	49
Communicative skills	23	17	60	21	18	61
Expressivity and language skills	21	66	13	21	67	12
Pedagogic tact	13	19	68	12	17	71
Cognitive skills	19	47	34	21	57	22
Leadership skills	22	16	62	20	16	64
Organisational skills	13	65	22	16	68	16

One should note that organizational skills presupposes organizational skills of a future lecturer in terms of self-command, punctuality, correct distribution of one's time, planning skills; while leadership skills are viewed as skills to organize an efficient activities of students, a skill to organize an educational process efficiently.

The data on the levels of pedagogical skills development presented in the table allow us making a conclusion that at the initial stage students of both groups have approximately equal degrees of pedagogical skills of one type; at this, primarily, expressivity and language skills dominate. General pedagogical skills are available in a relatively small extent (13 – 15% of the high development level).

The Fisher's ratio test was used in the process of mathematic and statistical processing in order to estimate the differences between the samplings using the frequency of occurrence of the feature that is of interest (in this case – using the level of pedagogical skills development). The choice of such criteria was

conditioned by the number of experimental group as well as by the number of the test persons (Starichenko, 2004).

We may state that the test persons groups are equivalent and the pedagogical skills development level is similar that gives us grounds to introduce a projected technology.

Further, in addition to the students' pedagogical skills development level we determined the level of the capacity for the self-development and self-education that is not insignificant for a future vocational education lecturer. The results are presented in Table 4.

Table 4. Estimate of the capacity for the self-development, self-education (in points)

Exercise year	Level of the capacity for the development, self-education in the experimental group 1, points	Level of the capacity for the self-development, self-education in the experimental group 2, points
1	30	40
1-2	35	30
3-4	45	40

As may be seen from Table 4, average indices of capacities for the self-development, self-education vary depending on the year from average to slightly above average or slightly below average. Without doubt, all questionnaire survey results were different for different students and only general conclusions may be made based on them.

After the preliminary determination of the source data one carried out a target oriented work on the pedagogical skills development and establishment of a required contact with students. One should note that the need to develop pedagogical skills was received by the students positively, however, a certain time and special efforts were needed in order to overcome some uncertainty of individual representatives of the educational groups in their own capabilities.

Thus, in accordance with the stated tasks of the initial stage, we determined the nature and level of students' pedagogical skills. Our observations maintain that in the groups expressivity and language skills and communicative pedagogical skills primarily prevail. We note that only several people in each group had well developed general pedagogical skills.

Intermediate-transformation stage

We determined the second stage to be an intermediate-transformation. Within which a planned work was carried out consisting of the educational process itself, completion of assignments using gaming simulation, control over the changes in the pedagogical skills development level, analysis of current results and local problems that arise. At this stage, an additional work with special literature was needed, mainly, literature on the organization and carrying out of psychological and pedagogical research. A correcting work on the development of pedagogical skills of students was carried out.

The purpose of this stage was to develop students' pedagogical skills through the consecutive application of the task system using gaming simulation

in conjunction with techniques of emotional and mental stimulation. We set the following tasks for ourselves at this stage:

- 1) to determine the impact that the task complexity level using gaming simulation has on the pedagogical skills development level;
- 2) to determine the dependency between the tasks set using gaming simulation and the growth of the pedagogical skills level.

During the academic year, students went through the two cycles of the task system using gaming simulation; these cycles were approximately equal in terms of timing (one semester). Each cycle included a three level task system with the application of gaming simulation of the incremental complexity: stimulating, productive and creative. After each cycle, students' pedagogical skills development level was determined.

Control over the pedagogical skills development level was carried out within the entire period of conducting the experiment and research study.

In addition to the stage by stage types of control, we also carried out control of each lesson using express-method (carried out during the entire period of the study), conversations, self-evaluations etc.

As noted previously, our tasks using gaming simulation include a three-level system of the incremental complexity. Our three-level task system presupposes a gradual introduction of a student into the activities based on the principle «From simple to complicated». In connection therewith, we set specific targets before starting one or another level of their performance.

While performing tasks of stimulating nature, i.e., the simplest tasks, our purpose was to develop pedagogical skills with the help of tasks using gaming simulation, where the main conditions for their performance are dictated externally, i.e., are determined by the lecturer entirely. At this stage, students were offered tasks encouraging reflection, problem search, without conscientious search for their solution ways and reasons. Imitating gaming simulation was used here. Training exercises (improvisation, dramatization) were applied based on not complicated situational games.

Application of the already learned knowledge, proficiencies and skills in certain pedagogical situations was the target of the performance of the tasks of the second level, being a productive one. At this stage, students were offered assignments focused on the search for a problem and its solution ways, apprehension of the correctness of its solution ways. In such form of activities, imagination, ingenuity, creative pedagogical initiative were already required from students. Here gaming simulation with an emphasis on role gaming was used.

While setting the tasks of the third level, being a creative one, we followed the purpose of the application of the already settled pedagogical knowledge, proficiencies and skills in pedagogical situations, where students themselves initiate and are able to trace manifestation of pedagogical skills at the solution of complicated problem situations. At this stage, students were offered tasks where it is necessary not only to understand the reasons for the problem situation that arose, but also to think over how to prevent and avoid it in the future. Here we use gaming simulation on the basis of business and training-business games.

Final-formation phase

The experiment and research study has shown that students' pedagogical skills development is a vital problem for the modern education. It is particularly vital in the system of the training of specialists with the higher education while training future vocational education lecturers. Discovery of changes in the pedagogical skills development level of students was the purpose of the final-formation phase.

The following was used to determine the efficiency of the work on students' pedagogical skills development:

- (1) analysis of products of students' activities;
- (2) long term observation;
- (3) interviews and questionnaire surveys;
- (4) self-evaluation.

We identified the following criteria to determine the pedagogical skills maturity level:

1. Competency:
an ability to construct pedagogical thought and frame it correctly;
communicativeness and constructiveness of behavior;
value of professional behavior;
degree of management of pedagogical actions.
2. Awareness of pedagogical knowledge.
3. Motivation on the profession.
4. Satisfaction from the pedagogical activities process.

The research methods used by us allowed us to identify three levels of pedagogical skills degree: low level, high level and average level. To carry out an analysis of the pedagogical skills development, we carried out an incoming control, intermediate control and final control.

Our long term research shows that students enter the major "foreign language" with weakly developed pedagogical skills. Such assertion is confirmed by the data of Table 5, received while the questionnaire survey and scaling at the initial-launching phase.

Table 5. Data of the research of the development of pedagogical skills of the experimental group 1 students during the experiment and research study at the initial-launching phase (in %)

Exercise year	Levels of students' pedagogical skills development		
	Low level	Average level	High level
1	60	25	15
2-3	62	28	10
3-4	57	24	19

In the middle of the academic year (in February) we carried out a second questionnaire survey scaling. Based on the data in Table 6, one may reach a

conclusion that even after six month the pedagogical skills development level changed.

Table 6. Data of the research of the development of pedagogical skills of the experimental group 1 students during the experiment and research study at the intermediate-transformation phase (in %) (B %)

Exercise year	Levels of students' pedagogical skills development		
	Low level	Average level	High level
1	39	27	34
2-3	35	30	35
3-4	33	29	38

The results of the final-formation phase are presented in Table 7, and they evidence that a further growth in students' pedagogical skills development level has slowed down somewhat, but has not stopped.

Table 7. Data of the research of the development of pedagogical skills of the experimental group 1 students during the experiment and research study at the final-formation phase (in %)

Exercise year	Levels of students' pedagogical skills development		
	Low level	Average level	High level
1	22	22	56
2-3	19	20	61
3-4	10	29	61

We would like to present results of our work as more personified results using an example of one group. The group consisted of 10 persons. In general, one may define it as the most typical group. At the beginning of the academic year, the pedagogical skills diagnostics revealed the following indices of this group students (Table 8).

Table 8. Personified indices of the extent and level of pedagogical skills development in the experimental group 1 at the initial-launching phase

Group participants										
Pedagogical skills	Daniila K.	Yulia T.	Yulia K.	Nadezhda E.	Olga T.	Inna K.	Yulia N.	Tatyana S.	Larisa F.	Marina K.
General pedagogical skills	L	L	H	A	A	L	A	L	L	L
Pedagogical conversation skills	A	A	A	H	L	L	L	A	A	L
Communicative skills	H	H	H	H	A	L	A	A	A	A
Expressivity and language skills	A	A	H	A	L	L	L	A	H	H
Pedagogic tact	L	L	L	H	A	A	A	L	L	L
Cognitive skills	L	L	A	H	A	L	L	A	L	A

Leadership skills	A	L	L	L	H	A	L	L	A	A
Organisational skills	A	A	A	H	L	L	L	A	L	L

Note: H - high development level; A - average development level; L - low development level.

The change in pedagogical skills development level – intermediate control – is presented in Table 9.

Table 9. Personified indices of the extent and level of pedagogical skills development in the experimental group 1 at the intermediate-transformation phase

participants Pedagogical skills	Group									
	Daniila K.	Yulia T.	Yulia K.	Nadezhda E.	Olga T.	Inna K.	Yulia N.	Tatyana S.	Larisa F.	Marina K.
General pedagogical skills	A	A	H	H	A	A	A	H	A	L
Pedagogical conversation skills	A	H	H	H	A	L	A	H	A	A
Communicative skills	H	H	A	H	A	A	H	H	A	L
Expressivity and language skills	A	A	H	A	A	A	A	H	H	H
Pedagogic tact	A	A	A	H	A	H	A	L	A	L
Cognitive skills	A	L	H	A	H	L	A	A	A	A
Leadership skills	H	A	L	A	H	A	A	A	H	A
Organisational skills	H	H	A	H	A	A	A	H	A	L

Note: H - high development level; A - average development level; L - low development level.

The change in pedagogical skills development level – final control – is presented in Table 10. It can be seen that practically all group participants display an evident change in pedagogical skills level in the direction of increase.

Table 10. Personified indices of the extent and level of pedagogical skills development in the experimental group 1 at the final-formation phase

participants Pedagogical skills	Group									
	Daniila K.	Yulia T.	Yulia K.	Nadezhda E.	Olga T.	Inna K.	Yulia N.	Tatyana S.	Larisa F.	Marina K.
General pedagogical skills	H	A	H	H	H	A	H	H	H	A
Pedagogical conversation skills	H	H	H	H	A	A	A	H	A	H
Communicative skills	H	H	A	H	H	A	H	H	A	A
Expressivity and language skills	A	H	H	A	H	H	A	H	H	H
Pedagogic tact	H	A	A	H	A	H	A	A	A	L
Cognitive skills	A	A	H	H	H	L	H	H	A	A
Leadership skills	H	H	A	H	H	A	H	H	H	A
Organisational skills	H	H	H	H	A	H	H	H	H	L

Note: H - high development level; A - average development level; L - low development level.

Summing up pedagogical skills level growth in this experimental group, we may note that each student in the group has developed pedagogical skills to a certain extent. However, two people continue to have a low level of development of cognitive and organizational skills. It is necessary to continue the work on the further development of these sub-types of pedagogical skills.

Analysis of the results received within five years of the research evidences an obvious change in students' pedagogical skills development level (Table 11).

Table 11. Final data on the extent of pedagogical skills of students obtained at the final stage of the research study (in %)

Pedagogical skills	Experimental group 1			Experimental group 2		
	Development level					
	high	average	low	high	average	low
General pedagogical skills	61	29	10	57	31	12
Pedagogical conversation skills	74	12	14	76	22	2
Communicative skills	81	9	10	80	11	9
Expressivity and language skills	76	20	4	70	25	5
Pedagogic tact	65	24	11	60	30	10
Cognitive skills	59	40	1	59	31	10
Leadership skills	88	10	2	80	10	10
Organisational skills	79	9	12	81	9	10

Data on pedagogical skills development levels presented in Table 12 allow us to make a conclusion that general pedagogical skills are available to a larger extent (61-57% of the high development level).

Table 12. Data on the extent of pedagogical skills of students obtained at the initial-launching stage and intermediate-transformation phase of the research study

Levels of students' pedagogical development skills	Before the experiment and research study		After the experiment and research study	
	Experimental group 1	Experimental group 2	Experimental group 1	Experimental group 2
	Low	60 %	63 %	10 %
Average	25 %	24 %	29 %	31 %
High	15 %	13 %	61 %	57 %

It is difficult to present the entire diversity of the received materials in the table format; however, the methods used by us allowed representing in a concise form data on students' pedagogical skills development both at the beginning of the experimental study and at the end of it.

A number of students with a high pedagogical skills development level increased significantly (57 % in the experimental group 1, 61% in the experimental group 2). Only 31% and 29% students, respectively, have an average level.

As a result of the carried out experimental and research study, one may argue about the following dynamics in the change of students' pedagogical skills level: a number of students being at the low level decreased by 51% in the experimental group 1, and by 50% in the experimental group 2.

Discussions

Recently, views on the existing education system have drastically changed: the society is already inspired with the thought that both the contents, the methods and the tools for the education and upbringing must be more flexible, adapted to the changing world. The strengthening of the orientation on the personality becomes one of the priority directions in the development of the education system. The society needs pedagogues who are professionals, who fully understand the essence of their activities, who are able to bear responsibility for products of such activities. This is where the need arises in the development of various means, methods and tools aimed at the students' pedagogical training, thereby developing students' pedagogical skills, that received a collective name «methods and forms of active learning».

We have analysed works of the modern scholars I.O. Kotlyarova (2015), Y.S. Ezrokh (2014), D.V. Chernilevskiy (2002). Our contemporary writer T.V. Nadolinskaya (2005) in her work "Game without losers" identifies the game as a special kind of activities of social nature, a derivative of the primary type of activities – labour, non-productive, quasi-productive activities, motives of which are located within procedural actions of activities as such – actions, operations, skills, proficiencies, functions etc.

In our view, the game is a model in a certain sense.

In addition, at the more detailed analysis of gaming simulation it is impossible not to note the work of A.P. Panfilova (2006), that underlines that the learning through gaming takes place within the framework of the situation imitating professional activities being of conditional nature.

One should note that A.P. Panfilova (2006) is a leading distinguished scholar in the sphere of gaming simulation.

Starting from the 1990s, the lecturer's behavior and his pedagogical skills become a subject matter for psychological and pedagogical research. This problem is being reviewed in various contexts, both in monographs, study guides and thesis research of such scholars as N.S. Glukhanyuk (2000), E.F. Zeer (2001; 2003), N.V. Kuzmina (1989), N.A. Aminov (Aminov 1997; Aminov, Morozova, & Smyatskih, 1994), G.M. Romancev (1997). However, a diagnostics instrumentarium that would allow identifying the pedagogical skills development level of students of a vocational-pedagogical education and its impact on the gaming simulation results has not yet been developed.

Conclusion

In our research we presented a set of general and special pedagogical skills that were required to be developed in the course of the study. While constructing the technology for the application of tasks using gaming simulation, the following pedagogical conditions were taken into account: personality-oriented focus of the educational process; reliance on the subjective experience of students; self-analysis and self-evaluation by students of their personal pedagogical competence etc. Ideas of the personality-oriented and competence based approaches in the training of future specialists made up a conceptual framework

for the technology. A basic technological procedure as game modeling composed of the apprehension, analysis of a pedagogical situation and identification of links between its structural components, understanding and projecting of common activities, and solution of a problem issue factored in the pedagogical description of the situation. A system of tasks on the development of pedagogical skills through the gaming simulation was the comprehensive framework for the technology; such tasks were offered in the form of role and hidden role games, training-business and imitation games, training exercises (improvisation, dramatisation) on the basis of simple situational games etc. In the process of carrying out of the experiment and research study we discovered a positive impact of the implementation of the task system using gaming simulation on the dynamics of students' pedagogical skills development. The practice of the observations, questionnaire survey and scaling carried out by us show that tasks using gaming simulation offered in the system change the level of students' pedagogical skills development. The progress and results of the experiment and research study confirmed the proposed research hypothesis. Technology based on the application of the task system using gaming simulation of stimulative, productive and creative levels, in conjunction with the tools of the emotional-mental stimulation is the most efficient technology for the development of students' pedagogical skills. Such tools include the following: creation of optimistic prospects, realization of the personality potential in the success circumstances, pedagogical infusion and relaxation, creation of beneficial microclimate in the study group. The technology implementation contributed to the formation of students' pedagogical skills at the average and high level, as well as weakening of destructive tendencies that evidences its efficiency.

Disclosure statement

No potential conflict of interest was reported by the authors.

Notes on contributors

Maria V. Fominykh is candidate of Pedagogy, associate professor of Chair of Germanic Philology, Russian State Vocational Pedagogical University, Ekaterinburg, Russia.

Bella A. Uskova is candidate of Pedagogy, associate professor of Chair of Germanic Philology, Russian State Vocational Pedagogical University, Ekaterinburg, Russia.

Valentina V. Mantulenko is Associate professor of Samara State University of Economics, Samara, Russia.

Olga N. Kuzmina is Associate professor of Samara State University of Economics, Samara, Russia.

Elena N. Shuravina is Associate professor of Samara State Technical University, Samara, Russia.

References

- Aminov, N. A. (1997) Differential psychodiagnostics of pedagogical styles. Moscow: Institute of social work. 166p.
- Aminov, N. A., Morozova, N. A. & Smyatskih, A. L. (1994) Psychodiagnostics of pedagogical skills. Pretests: manual. Moscow research center of training quality problems. 221p.

- Amthauer, R. (1953) Amthauer Intelligenz-Struktur-Test. Retrieved July 28, 2016, from http://svetlakov.ru/wpcontent/files/ArticlesBox/Diagnostika_odarennosti/Amthauer_rudolf_struktury_intellekta.pdf
- Anastazi, A. (1982) Psychology testing. Moscow: Pedagogy. 316p.
- Cattell, R. B. (1963) Theory of fluid and crystallized intelligence: A critical experiment. *Educational Psychology*, 54, 1-22.
- Chernilevskiy, D. V. (2002) Didactic technologies in the higher education institution: study guide for higher education institutions. Moscow: Yuniti-dana. 437p.
- Ezrokh, Y. S. (2014) Gaming method for the stimulation of the motivation and success of activities of students-economists of junior classes. *Education and Science*, 7, 87-102.
- Glukhanyuk, N. S. (2000) Psychology of a lecturer professionalization. Ekaterinburg: Ural State Vocational Pedagogical University, 219 p.
- Grebenyuk, O. S. (2003) General framework of pedagogics: study guide. Moscow: Vadoso-press. 160p.
- Guilford, J. P. (1967) The nature of human intelligence. New York: Mc-Grawhill. 274p.
- Kalimullin, A. M., Vlasova, V. K. & Sakhieva, R. G. (2016). Teachers' training in the magistrature: Structural content and organizational modernization in the context of a federal university. *International Journal of Environmental and Science Education*, 11(3), 207-215.
- Kotlyarova, I. O. (2015) Readiness of university's lecturers to use modern educational technologies. *Education and Science*, 1, 103-114.
- Kulnevich, S. V. (1999) Pedagogics: a personality in humanistic theories and systems of education: study guide. Moscow: Rostov on Don; Artistic Center "Uchitel". 560p.
- Kuzmina, N. V. (1989) Professionalism of a personality of a lecturer and vocational training master. Moscow: Higher Education Institution. 233p.
- Mitina, L. M. (1999) To manage or to suppress: choice of the strategy of the professional life work of a lecturer. Moscow: Sentyabr. 192p.
- Nadolinskaya, T. V. (2005) Game without losers. *Art at School*, 6, 50-53.
- Onischenko, E. V. & Sokolova, I. I. (2010) Monitoring of the quality of continuous pedagogical education: development problems and prospects: *Collection of scientific articles of the All-Russian Research and Practice Conference "Problems of systemic research of the vocational training"*. St. Petersburg: Institute of pedagogical education of the Russian academy of education. 324p.
- Panfilova, A. P. (2006) Gaming simulation in the lecturer's activities: study guide for students of higher education institutions. Moscow: Publishing Center "Akademiya". 366p.
- Pidkasistiy, P. I. (2004) Pedagogics. Moscow: Pedagogic community of Russia. 608p.
- Raven, J. & Raven, J. (2008) Uses and Abuses of Intelligence: Studies Advancing Spearman and Raven's Quest for Non-Arbitrary Metrics. Unionville, New York: Royal Fireworks Press. 363p.
- Romancev, G. M. (1997) Theoretical basis of the higher vocational training: monograph. Ekaterinburg: Ural State Vocational Pedagogical University. 333p.
- Savelyev, A. D. (2000) Innovative education and scholarly traditions. *Higher Education Institution Bulletin*, 5, 15-18.
- Serikov, V. V. (1999) Education and personality. Theory and practice of pedagogical systems projection. Moscow: Publishing Corporation "Logos". 272p.
- Slastenin, V. A. (2003) Introduction into pedagogical axiology: study guide for the students of higher education institutions. Moscow: Akademiya. 192p.
- Spearman, C. E. (1904) 'General intelligence' objectively determined and measured. *American Journal of Psychology*, 15, 201-293.
- Starichenko, B. E. (2004) Processing and presentation of pedagogical research data with the assistance of a computer. Ekaterinburg: Ural State Pedagogical University. 218p.
- Sternberg, R. (2002) Practical intelligence = Practical Intelligence in Everyday Life. St. Petersburg: Piter. 272p.
- Strokova, T. A. (2016) Criteria-diagnostics instrumentarium of the monitoring of quality of training of future lecturers for the practice-oriented research activities. *Education and Science*, 3, 29-43
- Thurstone, L. L. (1924) The Nature of Intelligence. London: Routledge. 266p.
- Wechsler, D. (1955) Manual for the Wechsler Adult Intelligence Scale. New York: Springer. 353p.

Zeer, E. F. (2001) The framework of the education oriented on the personality. Ekaterinburg: Ural State Vocational Pedagogical University. 51p.

Zeer, E. F. (2003) Psychology of professions: study guide. Ekaterinburg: Business Book. 336p.