

Professional and Creative Formation of the Federal University Teacher

Svetlana Yu. Zalutskaya^a, Svetlana V. Panina^a, Tatiana A. Makarenko^a, Nadezhda I. Nikonova^a

^aM.K. Ammosov North-Eastern Federal University, Yakutsk, RUSSIA.

ABSTRACT

The relevance of this article is related to the study of problems of professional and creative self-development of high school teachers as one of the major segments of their professional competence. Objective is to develop the conditions, stages and methods of forming the university teacher's readiness for their independent professionally oriented creative self-development in conditions of university education environment. The main methods are the overview of the theoretical positions of foreign and Russian researchers concerning the professional activity of the teacher; best practice of educational process organization in the M.K. Ammosov North-Eastern Federal University (NEFU); survey among teachers regarding the innovative mobility and creative approach to high school education; NEFU students and postgraduate students questioning. The authors have determined the main professional-significant qualities and personal characteristics of university teachers, as well as weaknesses hampering the teacher's professional development as a self-developing creative personality. The materials have a practical value for beginning and experienced teachers of modern high school focused on continuous process of professional and creative self-development.

KEYWORDS

Professional and Creative Development; teacher; university teachers; modern high school ARTICLE HISTORY Received 25 November 2015 Revised 1 February 2016 Accepted 22 March 2016

Introduction

The issue of self-development is always relevant in our ever-changing, technologically developing world, as it is one of the most important ontogeny structure-forming element ensuring continuous improvement of the individual who through his creative activity transforms not only objects, but also himself. "Positively oriented self-development <...> makes the person subject of his own development" (Ginsburg, 1994).

Challenges of today's realities, the active transformation of the political, economic, social, cultural and humanitarian human environment set new goals

CORRESPONDENCE Svetlana V. Panina 🖂 monblan.pro@yandex.ru

© 2016 Zalutskaya 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.

for the Russian education: the preservation and transfer of fundamental knowledge ensuring the success of a man in the technological society, and the formation of conditions for the creation of new information. It is "not a simple inheritance of the created things, but the creation of something new in the world around us and within ourselves" (Berdyaev, 1989).

In accordance with the traditions of Russian education, the mission of setting goals, principles, content and technology of education of creative personality in the process of learning has been entrusted on the teacher. His professional characteristics also include readiness for the formation, enrichment and realization of his own creative potential. Readiness for creativity has become one of the criteria for the selection and training of high schools teaching personnel. According to the research of A.A. Andreev & V.I. Soldatkin (2004), these criteria include a free orientation in general cultural (stable with respect to the various specialties) areas of knowledge; deep contextual specialization in specific sciences; mastery of methodological apparatus and communication activity technology; high moral and creative potential; fundamental psychological and pedagogical education.

Therefore, according to the modern expert community (Grinkrug & Fishman, 2012; Kashapov, Kiseliova & Ogorodova, 2013; Blyagoz, 2014), a modern model of competence of university teacher that has undergone various transformations, along with professional, autopsychological, common cultural, humanistic, communicative and psychosocial competencies must include creative, innovation and acmeological competences requiring well-formedness of unconventional thinking, knowledge of innovative pedagogical strategies, adaptation to changes in the content, tools, techniques and conditions of pedagogical activity. Therefore, experts emphasize the need to consider the nature of the pedagogical activity of the high school teacher as innovative, based on creativity, continuous professional and creative self-improvement.

We have to identify the nature, conditions and technologies of this selfperfection, its role in the professional work of the teacher of the modern Russian top university, aimed at the achievement of relevant educational targets in the world.

Literature Review

Discussion of the problem of professional and creative formation of the teacher's personality brings us to the fundamental research of its various aspects by foreign and domestic scientists:

- social significance of the phenomenon of creativity and self-actualization: A. Maslow (1970), V. Frankl (1967), C. Hampden-Turner (1977), R. Sternberg (1999), Sternberg & Grigorenko (1998) and others;

- pedagogical support of creative self-developing personality in the process of training and education: K.A. Abulkhanova-Slavskaya (1990), L.I. Antsyferova (1981), B.S. Bratus (1994), M.M. Bakhtin (1979), N.A. Berdyaev (1989), L.I. Bozovich (1995), L.S. Vygotsky (1983), I.S. Kon (2003), S.L. Rubinstein (1998), V.I. Slobodchikov (1991), P.A. Florensky (2009), N.S. Chinkina & T.V. Galuzo (2002), W. Stern (1997) and others;

- development of a creative personality, endowed with an individual set of properties, abilities, qualities, developing throughout the life: P.I. Pidkasisty

(2005), Y.K. Babansky (1977), B.T. Likhachev (2010), V.A. Slastenin (2009), N.V. Bordovskaya (2011) and others;

- common patterns of formation and functioning of the teacher's creative personality: P.V. Alekseev & A.V. Panin (1991), S.I. Arkhangelsky (1980), V.A. Kann-Kalik & Nikandrov N.D. (1990), F.V. Lazarev (1978), A.V. Mudrik (2002), B.N. Shiyanov (1991), V.I. Shchegol (2004) and others;

- creativity diagnostics: J.P. Guilford (1986), E.P. Torrance (1974), C. Taylor (1988), R.B. Cattell (1979), M.A. Wollach & N.A. Kogan, 1965;

- creative problem solving techniques: T. Ribot (1973), G. Wallas (2014), G.S. Altshuller & I.M. Vertkin (1994), etc.

A content analysis of scientific data leads to the conclusion that the active influence of the educational environment on the creative potential of the individual; the importance of the high school teacher as a model for the development of creativity of students; the necessity of forming a democratic style of communication in a "teacher-student" dyad as a condition of development of creative abilities of students; the importance of professional and creative development of the teacher responsible for the education of a new formation specialist thinking outside the box. However, the psychological and pedagogical literature does not consider an aspect of professional and creative development of the federal university teacher with due account of the current requirements to the quality of the educational activity of the Russian top universities (Kashapov, Kiseliova & Ogorodova, 2013).

Also, the analysis of Russian higher education teaching practice has revealed a number of shortcomings that hinder the professional development of the teacher as a self-developing creative person:

- focusing of the teacher on reproductive educational techniques;

- poor skills of creative self-development and self-realization in the scientific and educational activities;

- lack of the necessary environment and incentive system for continuous improvement of the level of creative development of the teaching staff in high schools;

- activation of standardization process of the high school educational activities related to the application of education quality management system, the introduction of new-generation public educational standards, often imperfect in terms of the requirements for the creative competencies of students and providing for the dominance of teacher's reproducing activities, activity by a pattern, standard set of rules and requirements.

The above determines to the need for a holistic view of the nature, structure, conditions, stages and technology of formation of profession-oriented skills of creative self-development of the higher education institution teacher.

Materials and Methods

Research Methods

During the research, the following methods were used: the theoretical (content analysis, synthesis, generalization); diagnostic (interrogation, conversation, ranging); empirical (the study and analysis of the regulatory and educationalmethodical documentation, study and generalization of experience of educational

institutions, teacher's insider observation and students' self-evaluation); methods of mathematical statistics followed by a qualitative analysis of the results.

Experimental Research Base

The North-Eastern Federal University (NEFU) was founded in 1934 as Yakutsk Pedagogical Institute and received its state university status in 1956. Located in the city of Yakutsk, northern Russia, it is the largest higher education institution of the Republic of Sakha (Yakutia). For many decades, Yakutsk State University was a sole regional university preparing specialists in various fields of study including medicine, education, humanities, sciences and engineering. A new phase of the university's evolution started in 2010 when it joined a network of Russian Federal Universities established in every federal district of Russia (Gounko, Panina & Zalutskaya, 2016).

The current NEFU's institutional mission is to educate competitive specialists, carry out research and develop innovative technologies contributing to social and economic development of the peoples of North-East Russia (Mikhailova, Larionova & Perfilieva, 2013).

Research Content: Analysis of Educational Technologies Used by Federal University Teachers

Since 2011, a continuous monitoring of the implementation of adequate educational technologies in the education of future specialists has been carried out in NEFU. Monitoring data allow determining how many of teachers apply innovative technologies demonstrating their readiness for innovations, innovative approaches to professional activity and for pedagogical creativity.

Thus, the results of a sociological survey among the teaching staff of the Federal University (attended by 1390 people from 1592 academic staff members) in 2015 allowed determining what innovative technologies were used in the educational process of the University and how many teachers used them (Mikhailova, 2015) (see Table 1).

N₂	Technology	Number of teachers using innovative technologies (%)
1	Case-study technology	17.2
2	Modular education	23.4
3	Problem-based learning	33.8
4	Contextual education	9.7
5	Debates	15.1
6	On-line learning	5.5
7	Collaborative learning	15.2
8	Dialogue education	53.8
9	Business role-playing game	31.7
10	Project-based learning	22.8
11	Training	11.0
12	Cognitive technologies	2.8

Table 1. Educational technologies used by NEFU teachers

The list contains the technologies that correspond to the content of higher education. They allow students spending significant time for independent work in the process of their preparation for classes; forming research skills; creative problem solving; activating their mental activity; simulating scenarios for their future professional activities. According to local acts of the NEFU Department of educational quality assurance (NEFU website, 2016) exposed to general knowledge, the innovation technologies involving a non-standard educational approach include

- Project-based learning (individual or collective activities on selection, distribution and systematization of the material related to a particular topic, which resulted in a draft project);

- Contextual education (active form of education focused on students professional education which is realized through the systematic use of professional context, the gradual entering into the educational process of professional activity elements);

- Case-study technology (analysis of real problem situations occurring in professional activities, and the search for the best solutions);

- Modular education (use of knowledge in the form of: a) individual modules, autonomous parts of the course that can be integrated together with other parts of the course; b) interconnected courses modules that can be studied independently from the other educational subject modules);

- Critical thinking development technology (educational activities aimed at developing the students' reasonable, reflective thinking, allowing putting forward new ideas and seeing new opportunities);

- Case-based developing technologies (question-answer interaction of the teacher and students, which is based on system of questions (case related and informational), tips, instructions, monologue inserts; algorithmic and heuristic prescription of activity of the teacher and students; posing the challenging questions, creation by the teacher of problem situations);

- Others.

According to the survey results, we conclude that the percentage of use of the case-study, dialogue education and role-playing game is the highest one. Those are the technologies that are traditionally common in the educational community of classical Russian universities. This indicates an insufficient, average level of readiness of the federal university teachers for innovations, bold creative solutions in the field of teaching.

Also the survey has shown that teachers with pedagogical experience from ten years and above are in the lead in almost all positions:

Ten of the eleven educational technologies presented are more often used by experienced teachers than other colleagues. Only modular education is used by young teachers more frequently, but the amplitude varies in a small range;

More than a quarter of teachers with experience of more than ten years actively use simulation modeling technology, case-study and research method, i.e. they are focused on technologies of formation of critical thinking and creative qualities in students;

15% of the surveyed teachers with experience of more than 10 years extensively use training opportunities to build confidence and readiness of students for successful independent professional activity.

Thus, we can conclude that the frequency of innovative technologies use increases with the gain in high school teaching experience (Mikhailova, 2015; De

Corte, 2014). So, with the accumulation of teaching experience, the majority of teachers increase their level of professional and creative competence allowing breaking down stereotypes, using non-standard educational approaches and carrying out pedagogical experiments.

Examination of Federal University Teachers' Readiness for their Professional and Creative Self-Development

Also, we carried out a survey of 87 NEFU teachers (random sample) with high school experience of more than five years. The purpose of the survey was to find out how teachers with little teaching experience were motivated to use creative self-development technology, how they mastered relevant educational technologies for creating innovative developmental educational environment. Analysis of the survey results revealed a need, possibility and desire of the majority of high school teachers (61%) to work using the creative initiative and a high professional mobility level. Respondents demonstrated a willingness to solve professional problems in a new way under condition of support from their more experienced colleagues. In accordance with the modern complex requirements, they have to implement models of advanced education, which are based on the idea of personality development influencing the basic social processes.

Russian High school feels the urgent need for qualified scientific and pedagogical staff. These are basically the yesterday's graduates who have demonstrated their abilities in science and entered a postgraduate program. But is a young employee ready for teaching, what is his motivational readiness for innovations? To this end, we have carried out a study using a focus-group of 18 NEFU postgraduate students of 3-4 years: potential candidates for the position of federal university teacher. The survey has showed that 11 persons consider themselves ready for educational activities. Among them 9 are already working as teachers in higher educational institutions in the territory of Yakutia; 2 postgraduate students are going to continue the scientific work in research institutes; the others are focused on work in companies not related to the of education, and therefore they believe that it will be difficult for them to teach.

Analysis of the survey regarding the motivational readiness of postgraduate students to innovations in pedagogical activity has revealed the following main motivations: the desire to create an educational environment that would facilitate the personality developing (11), awareness of poor progress and the desire for improvement (7), need for contacts with interesting, creative people (8), the need for novelty, change of conditions, routine overcoming (5). Only 7 out of 18 respondents consider the motivation for the innovation mastering as an opportunity for professional and creative self-realization.

Study of Students' Expectations from the Federal University Teacher

One of the objectives of our study was to find out how the students, being the main consumers of educational services, see the today's teacher? Do they have a need for a teacher who not only transfers knowledge to them, but is also able to solve non-standard professional tasks? What qualities, according to the students, should the federal university teacher have?

To obtain the data, we have conducted a "What should the high school teacher be?" survey. The survey involved 129 students (random sampling) of the

Physics and Technology Institute, Philology Department, Institute of Foreign Philology and Regional Studies of NEFU. Using the content analysis method, we have defined common features of the high school teacher's qualities that we have ranked. These data are given in Table 2.

Table 2. Results of the students' survey "Which should the high school teacher be?"

Rating position	Teacher's qualities	Number of mentions (%)
1	To make subject matter comprehensible to students, to be an	38
	interesting and charismatic person, to be an example in	
	everything	
2	To be kind, strict and quick to understand someone	22
3	To be on friendly terms with students	21
4	To have a good sense of humor, to know his subject matter, to	17
	love his job	
5	To keep pace with modern advances, to be just and well	14
	informed	
6	To encourage students, to observe the communication ethics	10
7	To be easy to communicate with students, to be responsible	8
8	To be cheerful, motivated and attentive	4
9	To speak foreign languages	3
10	To know how to control his temper	2

As an example, we will cite a student's answer: "The teacher has to be perfect in everything he/she does and be an example. The main thing is to make his/her subject matter comprehensible and interesting to students, to be strict, sociable, able to plot a vector for the working process, to speak several foreign languages, to support students, to teach them, to help, to advise the students and love his/her job".

Thus, the students want to see a professional who would be easy to understand them, an expert in his field, strict, responsible, with sense of humor, democratic and good. In the first place, the respondents pay attention on the professional qualities of the teacher, then on his personal ones. We want to draw attention to the first rank position: "To make subject matter comprehensible to students", "to be interesting." As we believe, comprehensive and interesting presentation of the material requires a fairly high level of mastering of innovative educational technologies, which in turn requires a creative approach to teaching. Taking into consideration the obtained results, we conclude that students intuitively emphasize teachers with creativity, democratic style of communication and such personal qualities that are important to the creative person as humor, optimism, attentiveness and motivation.

To the same end, we have conducted a survey with participation of 34 postgraduate students (random sample) of the 1 and 2 year of study, including the following questions:

1. Is there a need for creativity in educational activities? How should it be manifested?

2. Does the teacher need to develop himself?

Thus, one hundred percent affirmative answers have been given on the first and the second questions. Postgraduate students have determined that the entire educational process in high school has to be based on a teachers' creative approach, aimed at the educational quality ensuring. And the teacher is

constantly facing new educational tasks, developing a new project construct and predicting the result of learning. This requires from teacher not only his subject matter knowledge, but also the creative imagination, continuous improvement, so the process of professional and creative self-development of the university teacher must be permanent.

Results

The study clearly shows the presence of motivation and commitment in the majority of representatives of the federal university education community to develop their creative potential, as well as the need to solve professional problems unconventionally, learn new knowledge and educational technologies, improve the quality of students' education in conditions of standardization of educational activities through the use of pedagogical innovations. Students, in turn, have a need for teachers who can creatively solve professional problems during the educational and scientific activities.

An adequate response to social challenges regarding the self-developing personality of the teacher is possible upon condition that the high school teachers are ready to become active participants of the creative process, endowed with creative charisma and meeting the following requirements:

- understanding of the fact that the teacher is a determining factor in the system of education and creative development of students;

- having qualities such as social and psychological maturity, the successful pedagogical experience, emotional wealth, industriousness; "Creativity is the highest level of creative initiative, the ability to creatively solve professional problems" (Klikunov, 2003), innovativeness (thinking flexibility, the ability to innovate, to develop innovative models of education, etc.);

- ability to create a developmental educational environment for the creative development of students;

- ability to create and manage professional environment through educational organization methods, helping the teacher in his self-development;

- readiness of the teacher to work with the various segments of students, differentiated by age, by level of education (bachelor, student in the master's program, postgraduate student, retrainee), with different skills, level of intellectual and creative development, general and specific abilities, aptitudes and interests, personal qualities etc.;

- willingness to implement the principle of succession between the different levels of pre-university and post-graduate education, determining the formation and development of creative abilities of the individual throughout his life;

- knowledge of and ability to apply in the educational process appropriate methods, techniques, strategies, conceptual model of creative self-development of students.

The efficiency of creative self-development depends also on the quality of the professional work of the teacher. Description and analysis of the quality of the teacher's work in a modern university can be made using a four-level classification of pedagogical activity of the high school teacher shown in Table 3. (Andreev & Soldatkin, 2004). IEJME - MATHEMATICS EDUCATION 00 1223

N₂	Level	Characteristics
1	Reproductive	The teacher only transfers knowledge. This characteristic is common for
		teachers deeply knowing their discipline ("narrow specialists")
2	Conceptual	The teacher, in addition to his main subject, has an extensive
		knowledge of at least the adjacent educational modules allowing him
		professionally building an interdisciplinary knowledge system
3	Productive	The teacher has an unambiguous super-subject education, a system of
	FIGULCLIVE	psychological and pedagogical knowledge and skills that he applies in his
		activity. This implies the effective motivation of students
4	Integrative	Teacher of the highest productive level degree, has pedagogical
		communication skills

 Table 3. Characteristics of the levels of pedagogical activity of high school teacher

The teacher's work quality level reflects the level of professionalism that is correlated with the level of creative development of the high school teacher, realized in the scientific, educational, artistic, social and other kinds of activity of the person.

Correspondence of the federal high school teaching staff to the proposed requirements will allow increasing their level of professional competence and solving the problem of creating innovative, developmental, creative educational environment ensuring a maximum personal fulfilment of students and teachers.

Discussion

Structure of the Teacher's Creative Abilities

Speaking about the formation of the teacher as a creative person, the attention should be paid to the most important component of professional and creative self-development: the human capacity for creative activity, i.e. creativity. They are formed gradually, in the course of activities, being the complex general abilities of the person. They include "the memory; flexible thinking; imagination and intuition; ability to quickly understand the essence of the problem situation, formulate the problem, see the relationships specific for the problem; ability to find the opportunity to reorganize the activity elements for the new operations, to meet the new challenges; ability to clearly see several ways to solve the problem and choose the most rational one; ability to recognize, to regroup, to isolate and combine elements of activity and set them out in the sequence; ability for rapid and broad generalization of objects, relations and actions; ability to propose new hypotheses, problem solving and see an alternative method of creative problem solving; ability to see the new features of the object; ability to act "mentally" etc. (Panina & Zalutskaya, 2009)

Structure of creativity determines the conclusion that the professional growth of teachers depends not only on psychological and educational awareness of the creative process, from the learning of certain standards as the basis of reproducing activities, but from the mobility and flexibility of thinking in making the best creative solutions in a complex educational process. The teacher solving countless educational problems is working in constantly changing circumstances, requiring the search for innovative approaches mediated by "objective and subjective creativity" features in the process of teaching interaction with the students.

Personal and procedural aspects of creativity also require from the teacher the availability of specific qualities: the appropriate level of intelligence, ambitions and intentions, creative approach, focusing of the teacher on selfdevelopment, which is reflected in the choice of efficient means and methods of different activities, including the professional one, reflection during the activity, and development of the capacity of self-control. In emotional and volitional terms, the teacher shall be able to focus creative efforts, be persistent, stouthearted and have qualities such as: inner-directedness, improvisation, progressing, integrity, mobility, originality, productivity, constructiveness, readiness for a reasonable risk and play, optimism, sense of humor, sufficiently high level of the self-esteem, positive self-perception in general, etc.

Awareness, detection and monitoring of these main components of an individual creativity take place in the beginning of professional activity. Their enrichment, development and implementation will be carried out throughout the entire professional life of teacher following his individual path of selfimprovement.

Stages of Professional and Creative Development of the High School Teacher

Early Stage

The initial stage of the teaching activities at the university is of particular importance for the creative self-development of the teacher. This is a time for professional formation, self-determination, related to the identification and development of a whole range of professionally required qualities, including creative abilities and skills important for success in the chosen field (Zalutskaya & Panina, 2010).

At this stage of the teacher's career growth, the most intensive are the processes of control, accumulation, preservation, logical restructuring of the acquired knowledge, practical experience, their projection into pedagogical activity, which adjusts the meaning, values and motivation. Start of teacher's career in high school is characterized by professionalization of interests, the development of independence, creativity, activity, deepening and enriching relationships, adequacy of character and outlook, need for further development.

The success of the formation of the teacher in this period is largely determined by understanding the importance of professional and creative selfdevelopment as a conscious process of independent activity related to the improvement of previously acquired creative abilities and qualities "associated self-identification, self-stimulation, self-determination with and selfactualization" (Kulikova, 2001); as integrative personal characteristics of the teacher ensuring his "success in standard and unconventional teaching situations, the structure of which includes psychological and pedagogical knowledge, general cultural knowledge, professional pedagogical thinking; special abilities and skills; readiness for creative actions formed by a complex of creatively significant personal qualities" (Makarova & Sharshov, 2005).

IEJME - MATHEMATICS EDUCATION 00 1225

Self-education of the high school teacher in the early stage of his career is focused on finding reserves in his professional development aimed at selfrealization and continuous self-improvement. The teacher's self-development at the early stage of his formation is considered by T.A. Vekovtseva & I.V. Rezanovich (2012) as a process that determines the content of professional activities, development of qualities that transform the three aspects of the reality: methodical, innovation and scientific. At the same time, I.A. Sharshov when designing spatial model of the professional and creative self-development of the high school teacher distinguishes two areas of creative activity: scientific and pedagogical. The author believes that they are fundamentally different in terms of goal setting. In science it is an acquisition of new knowledge and in pedagogy it is a development of already acquired one. There is also a difference in terms of the area of activity: in science it is patterns, in pedagogy it is people. In terms of breadth of knowledge: in science it is local, in pedagogy it is extensive. So there is a "conflict" between these two areas, as the scientist needs to have a "concept" mind-set, and for the teacher it is important to have a "social" set of mind. As a result, the researcher comes to the conclusion that a scientific and research culture is part of the professional-pedagogical culture of the teacher of high school and is seen as a way of his creative self-realization (Sharshov, 2005).

Modern federal high school in accordance with its objectives and specificity of scientific and educational work requires from the beginning teacher to pay attention on both teaching and research activities. For example, in NEFU being a Russian top-university, an effective contract with academic teaching staff determines the productivity criteria for each category of employees. The main criteria for the assistant are indicators of its publication activity and effectiveness of the work with the students. And there is one important condition: the work of assistant and senior lecturer is emotionally and financially stimulated and actively supported by the professor-mentor, research supervisor and the university management.

Productive Stage

The next stage of professionally-oriented creative self-development of the high school teacher is the productive stage, which is a stage of purposeful modeling of scientific-innovation and teaching activity characterized by a correlation of career growth strategy with the criteria and indicators of creative self-development of the teacher, such as "gnoseological activity, technological activity and readiness for creative actions.

1. The gnoseological activity as a criterion of creative self-development component. The indicators are: methodological, intellectual, research, psychological and pedagogical competences.

2. Technological activity as a criterion of activity-developing component of creative self-development. The indicators are: eurologic, organizational, educational, methodical and technological competences.

3. Readiness for creative actions as a criterion of personality-developing component of professional and creative self-development. The indicators are:

focus on the creative nature of the activity; empathy, creativity, reflexivity, clear-sightedness, communicativeness, improvisation approach" (Tutolmin, 2006).

Experts define criteria of professional competence of the teacher of the mentioned level of professional formation as six groups of qualities: a deep knowledge of the subject (modern scientific and practical knowledge in the field of field-specific subjects); pedagogical skills (ability to transfer knowledge, motivate students for their regular updating); broad scientific outlook (erudition, ability to be interesting, readiness for permanent professional and cultural self-development); taste, interest and need for innovation and scientific work (permanent readiness for progressive change, a creative approach to scientific problems); availability of academic rank, science degree, knowledge of the methods of scientific inquiry (ability to conduct scientific research); innovative mobility (knowledge of foreign languages, computer and modern educational technologies) (Reznik & Vdovin, 2014).

The technological component of the process of actualization of the teacher's creative personal possibilities at this stage of professionalization is presented by humanitarian, personality-oriented and activity-developing technologies, providing a favorable psychological climate, stimulating the readiness for independent creative actions. The specified requirements are met in particular by the project activity, including pedagogical, scientific, social project planning; Technology of Inventive Problem Solving (TRIZ); play activities; case technologies; group technologies of creative professional problem solving; problem-oriented developing technologies; teaching activity dialogueness.

The practice of the top universities must include methods of professional and creative self-development of educational process participants: for example, the creation of portfolios, creative projects performance report, demonstration lessons, professional competitions, creativity self-diagnostics, introspection of creative process products, self-control and collective control etc. An important thing is to ensure that each high school teacher receives a special psychological and pedagogical training in creativity theory, which is closely related to the practical experience as a factor of professional competence of the teacher.

Conclusion

The survey has shown that the trends in the domestic higher education are the following: high school focusing on the creation of a developing educational environment; shift of professional education paradigm from knowledge-oriented to the formation of competencies; transition from the mass, collective forms of teaching to the individual ones with due account to the level of the students' intellectual and creative abilities; severization of requirements for the development of creative abilities in students and teachers on the basis of selfeducation, self-development and self-improvement; determination of modern humanistic education as a priority area; an addressing to the scientific strategies of creative psychology and innovative pedagogy. These are the trends forming the necessary conditions for the education of the individual building the future, which require further scientific development.

Recommendations

The article may be interesting for researchers who develop the problem of creative personality improving in professional activities, as well as for university pedagogy teachers, postgraduate students and students, as well as for managers of educational organizations focused on a new quality of higher education and its monitoring in accordance with the requirements of the international community.

Disclosure statement

No potential conflict of interest was reported by the authors.

Notes on contributors

Svetlana Yu. Zalutskaya, Candidate of pedagogical sciences, Professor of the M.K. Ammosov North-Eastern Federal University, Yakutsk, Russia.

Svetlana V. Panina, Candidate of pedagogical sciences, Associate Professor of the M.K. Ammosov North-Eastern Federal University, Yakutsk, Russia.

Tatyana A. Makarenko, Candidate of pedagogical sciences, Associate Professor of the M.K. Ammosov North-Eastern Federal University, Yakutsk, Russia.

Nadezhda I. Nikonova, Candidate of pedagogical sciences, Associate Professor of the M.K. Ammosov North-Eastern Federal University, Yakutsk, Russia.

References

- Abulkhanova-Slavskaya, K. A. (1999) Personality's Psychology and Conscienceness. Voronezh: MODEK. 252p.
- Alekseev P. V. & Panin, A. V. (1991) The theory of knowledge and dialectics: a manual for high schools. Moscow: Vysshaya Shkola. 362p.
- Altshuller, G. S. & Vertkin I. M. (1994). How to become a genius? Minsk: Belarus. 363p.
- Andreev A. A. & Soldatkin V. I. (2004) About the professional competence of higher vocational school teacher. Direct access: http://litceysel.ru.
- Antsyferova, L. I. (1981) On dynamic approach to the dynamic studying of personality. Psychological Journal, 2, 8-18.
- Arkhangelsky, S. I. (1980) The educational process in high school, its regular bases and methods. Moscow: Vysshaya Shkola. 253p.
- Babansky, Y. K. (1977) Optimizing the learning process: general didactic aspect. Moscow: Pedagogika. 295p.
- Bakhtin, M. M. (1979) Aesthetics of verbal creativity. Moscow: Khudozhestvennaya Literatura. 362p.
- Berdyaev, H. A. (1989) The Meaning of Creativity. Experience of justification of the man. Moscow: Pravda. 322p.
- Blyagoz N. S. (2014) The professional competence of the high school teacher: the main components. Direct access: http://nigniikp.adygnet.ru/index.php/vypuski-2014/vypusk-4-noyabr/19-stati-k-4mu-vypusku/58.
- Bordovskaya, N. V. (2011) *Modern educational technologies*: a training manual. Moscow: KNORUS. 253p.
- Bozovich, L. I. (1995) Selected psychological works: Problems of personality formation. Moscow: International Pedagogic Academy. 333p.
- Bratus, B. S. (1994) Psychology. Morality. Culture. Moscow: Moscow State University Press. 256p.
- Cattell, R. B. (1979) Personality and Learning Theory: The Structure of personality in its environment. New York: Springer. 463p.
- Chinkina, N. S. & Galuzo, T. V. (2002) Pedagogical systematisation and evaluation of the significance of motivation incentives of students' creative self-development in training. Kazan: Pedagogic University Press. 274p.

- De Corte, E. (2014) An innovative view of learning and teaching in higher education system in the 21st century. *Education Issues*, *3*, 8-29.
- Florensky, P. A. (2009) Anticipated polity in the future: A compilation of archival materials and articles. Moscow: Gorodets Publishing House. 375p.
- Frankl, V. E. (1967) Psychotherapy and Existentialism. New York: Simon and Schuster. 363p.
- Ginsburg M. R. (1994) Psychological essence of personal self-determination. *Psychology Issues*, 3, 45-49.
- Gounko, T., Panina, S. & Zalutskaya, S. (2016) Establishing World-Class Universities in Russia. In Assembling and Governing the Higher Education Institution. Palgrave Macmillan UK, 853p.
- Grinkrug, L. S. & Fishman, B. E. (2012) High school human potential. Moscow: Publishing House of the Academy of Natural Sciences. 366p.
- Guilford, J. P. (1986) Creative talents: Their nature, uses and development. Buffalo-New York: Bearly Limited. 363p.
- Hampden-Turner, C. (1977) Comment on "Maslow's other child". Journal of Humanistic Psychology. 17(2), 25-31.
- Kann-Kalik, V. A. & Nikandrov N. D. (1990) Pedagogic Creativity. Moscow: Pedagogika. 267p.
- Kashapov, M. M., Kiseliova, T. G. & Ogorodova, T. V. (2013) Creativity as a key competence of the teacher. Yaroslavl: "Indigo" Publishing and Printing Complex. 563p.
- Klikunov, N. D. (2003) Institutional changes as a way of the higher education system to adapt to modern socio-economic conditions. Orel: OrelGAU Press. 397p.
- Kon, S. I. (2003) The child and society. Moscow: Academia. 436p.
- Kulikova L. N. (2001) *The problems of personal development*. Blagoveshchensk: the Belarusian State Pedagogical University Press, 644p.
- Lazarev, F. V. (1978) Cognition, Creativity, Culture. Moscow: Znanie. 426p.
- Likhachev, B. T. (2010) Pedagogics: a course of lectures. Moscow: VLADOS. 355p.
- Makarova, L. N. & Sharshov, I. A. (2005) Technologies of professional and creative self-development of students. Moscow: Sfera. 255p.
- Maslow, A. (1970) Motivation and Personality. New York: Harper. 283p.
- Mikhailova, E. I. (2015) The concept and technologies of continuous pedagogical education in modern high school. Yakutsk: NEFU Press. 322p.
- Mikhailova, E. I., Larionova, M. V., Perfilieva, O. B. (2013) University and region. Moscow: Logos. 353p.
- Mudrik, A. V. (2002) *Social Pedagogics*: a manual for students of pedagogic high schools. Moscow: Akademiya.
- Panina, S. V. & Zalutskaya, S. Y. (2009) The content of vocational and personal competencies of the student: creativity and social activity of the person. Bulletin of the Yakutsk State University, 6(1), 61-66.
- Pidkasisty, P. I. (2005) Organization of educational and cognitive activity of students.. Moscow: Pedagogical Society of Russia. 264p.
- Reznik, S. D. & Vdovin, O. A. (2014) High school teacher: technology and organization of activities. Direct access: http://www.s-vfu.ru/universitet//departamentt_quality/docs.php.
- Ribot, T. (1973) Essay on the creative imagination. New York: Arno Press. 363p.
- Rogers, C. R. (1995) On Becoming a Person: A Therapist's View of Psychotherapy. 2nd ed. Mariner Books;
- Rubinstein, S. L. (1998) Fundamentals of General Psychology. St. Petersburg: Piter. 363p.
- Sharshov, I. A. (2005) Spatial model of professional and creative self-development of the high school teacher. *Gaudeanus*, 7(1), 26-40.
- Shchegol, V. I. (2004) Creative self-development of the future teacher in the course of implementation of the competence-based approach. Toyatti: Tsentr Yunipress. 463p.
- Shiyanov, B. N. (1991) Humanization of becoming a professional teacher. Soviet Pedagogics, 9, 80-84.
- Slastenin, V. A. (2009) Psychological and pedagogical hands-on training. Moscow: Akademiya. 337p.
- Slobodchikov, V. I. (1991) Category of age in psychology and pedagogy of development. Issues of Psychology, 2, 37-50.

- Stern, W. (1997) Intellectual giftedness: Psychological tests of intellectual giftedness in their application to children of school age. St. Petersburg: Soyuz. 264p.
- Sternberg, R. & Grigorenko, E. (1998) Investment theory of creativity. Psychological Journal, 19(2), 144-160.
- Sternberg, R. J. (1999) The theory of successful intelligence. *Review of General Psychology*, 3, 292-316.
- Taylor, C. W. (1988) Various approaches to and definitions of creativity. In: Sternberg R.J. The nature of creativity. Contemporary psychological perspectives. Cambridge: Cambridge University Press. 152p.
- Torrance, E. P. (1974) Torrance Tests of Creative Thinking. Bensenville: Vayot. 255p.
- Tutolmin, A. V. (2006) Formation of a professional and creative competence of the national primary school teacher: Theory and Practice. Moscow: Sholokhov Moscow State University for Humanities. 353p.
- Vekovtseva, T. A. & Rezanovich, I. V. (2012) Methods of professional self-development of the high school teacher. Modern problems of science and education, 6, 1-8.
- Vygotsky, L. S. (1983) The history of the development of higher mental functions. Moscow: Pedagogika. 328p.
- Wallas, G. (2014) The Art of Thought. Solis Press.
- Wollach, M. A. & Kogan, N. A. (1965) A new look at the creativity intelligence distinction. Journal of Personality, 33, 348-369.
- Zalutskaya, S. Y. & Panina, S. V. (2010) Professional formation of the high school teacher in the context of creative personal self-development. *Siberian Pedagogical Journal*, *8*, 213-219.