Formation of the Noxologic Educational Environment in Elementary School: Application of Moderation Technology

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ABSTRACT
One of the pedagogical terms of noxologic educational environment formation within the competence-oriented approach implementation is the use of interactive training technologies. Moderation is an effective interactive technology of education subject's interaction where the teacher is not only a knowledge translator, but rather a moderator of the training process, creating a safe and comfortable educational environment. Qualitative execution of this role is the basis of the whole educational process success and education goals achievement. In this connection the article is aimed to identify opportunities for the application of moderation technology in noxologic educational environment formation. The leading methods in the research of this problem are the comparative-contrastive and examinational-diagnostic (questionnaire, testing, conversations), allowed to reveal the educational environment risks. Students of the Institute of Psychology and Education of Kazan Federal University participated in research. The article deals with the content of concept, application problems in educational process of elementary school moderation technology, compiled recommendations for moderation technique implementation. The article can be used by teachers of higher educational institutions in the process of pedagogical specialties students training.

Introduction

Urgency of the problem

Modern school departs from previous educational concepts. In traditional understanding the education purpose was defined as the student's knowledge, skills

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and abilities formation, familiarizing to human culture, preparation for work (Lomakina, 2013). According to the new generation standard the purpose and the main result of education is a development of the trained personality on the basis of universal educational actions adoption and learning the world. (Lomakina, 2013).

The traditional doctrine of national education "teach the subject" was replaced by a new benchmark "teach the child." The updated school teacher has to involve pupils in educational activity, help the child to realize "meaning" and to teach to use knowledge in practical activities. The education purpose and result change, therefore, methods and technologies of this purpose achievement have to change.

The educational process effective functioning within the framework of federal state educational standards introduction requires updating of educational activity methodical base at school. First of all, this is possible through the implementation qualitatively new training technologies in school educational practice. According to the standard requirements these technologies have to combine individual forms of work with work in pairs and groups, learning individualization and personification, differentiation of requirements and to form the basis of a safe training environment organization at school. One of such technologies is the moderation technology.

Providing insight into a moderation process, A.V. Petrov (2005) specifies that the use of special receptions, methods and techniques help to organize process of free communication, exchange of opinions, judgments and bringing the worker to adoption of professionally competent decision due to realization of his internal opportunities. The aim of this research is the moderation technology analysis in the educational process of modern elementary school, identifying the potential technology moderation in the safe educational environment, the level of teachers' readiness to use the moderation technology in risk.

Literature Review

Moderation as an educational technology was introduced into teaching practice in the 60 th - 70 th years of the last century in Germany. Modern domestic educators sparked interest with this technology in the periods of Federal standards introduction (2008-2014) as an effective form of educational process organization, aimed at active and interested participation of all students in the educational process, providing safe comfortable educational environment, formation of goal-oriented students to achieve results. This technology using effects fully comply with up-to-date requirements, providing achievement of training qualitative results, lead students to increase stimulation of their cognitive activity and creativity, comprehensive disclosure and development of abilities.

I.A. Zimnyaya (2011), A.V. Bagachuk, I.K. Gavrilov & N.B. Pilipchevskaya (2008), M.M. Kashapov (2011), M. A. Kosolapova (2007), T.S. Panina & L.N. Vavilova (2008), A.P. Panfilova (2009), V.A. Slastenin et al. (2004) E.G. Sabirova, N.N. Vasyagina & A.K. Imanov (2016) dealt with issues of future teachers vocational training in terms of competence approach implementation.

The problems of theoretical justification of the moderation technology and its implementation in teaching practice are reflected in the works of I.V. Plaksina (2014), I.I. Golovanova, (2014), R.V. Ovcharova (2007), E.A. Reutova (2012), N.N. Dvulichanskaya (2011); M. A. Kosolapova (2007), V.I. Panov (2007).

Theoretical and methodological substantiation of safe educational environment revealed in the works of V.A. Devisilov (2011), N.N. Sabinina (2010), E.N. Mihailova (2010), E.A. Bagnetova & E.R. Sharifullina (2013), E. Polovneva (2011), A.A.

Arlamov (2010), E.R. Khabibullin (2008), E.V. Mokeyeva, V.G. Zakirova & A.R. Masalimova (2015).

Materials and Methods

In recent times moderation has been actively used in the organization of vocational education as the most effective technology of professional-significant competences formation of social sphere future experts (Plaksina, 2008; Kirij & Verzunova, 2010; Tsarapkina & Vorobiova, 2014). However, it is insufficiently considered the application method of this technology in elementary school educational process to reduce emotional tension and to form the students noxologic culture.

The research aim was to study the moderation technology in 3 directions:

as a leading technology of interactive training,

as technology of a safe educational environment organization in elementary school,

as technology of future teachers professional noxologic competence formation.

In research there were applied the comparative-contrastive and examination-diagnostic methods (questionnaire, testing, conversations). The research involved the 3rd year students in the direction of Pedagogy Education (specialization – Elementary education), 3-4 grades pupils of basic schools of the Institute of Psychology and Education of Kazan Federal University.

Diagnosis of student group progress

Within the framework of educational discipline "Traditional and non-traditional forms of training and education" seminars were conducted on the moderation technology. The main attention was paid to the opening of developmental and educative work potential for students according to the moderation principle in elementary school and the possibility of removing emotional barriers between the teacher and the student.

During diagnosis we fixed such parameters of student success as an activity, interest in a subject, initiative, searching innovative ways to solve problems.

Self-assessment of student-trainee activities

According to I.G. Abramova classification (1996) the educational environment contains certain dangers (risks) to participants of educational process. The educational environment technological risks are characterized by successes and mistakes in the choice of techniques, receptions, methods and ways of pedagogical activity. For professional self-assessment research during the practical training students-trainees were offered the questionnaires directed to an assessment of their own pedagogical activity, its results and organization of pedagogical communication with children. The questionnaire consisted of two sets of questions: leading technology in pedagogical activity in a particular class (effectiveness assessment in achieving educational objectives), organizing a safe educational environment (comfort for the pedagogical process people, noxologic culture formation among students).

Comparative-contrastive analysis of moderation

It is aimed to identify the possibilities of this technology using in elementary school, defining and justifying of advantages and disadvantages working with

primary school age children, making recommendations to overcome arisen difficulties.

Results

Diagnosis of student group progress

We created e-learning resources for the course "Traditional and non-traditional forms of training and education". In each subject of electronic resource students were offered to take an anonymous survey, assessing passed lesson on 3 criteria (lesson content, organizing form, learning topics). The survey results are output in percentage and are discussed at the end of the next lesson with the whole group, identifying the theme and goals of the subsequent seminar. Results are fixed in the form of visualization techniques (fishbone or Ishikawa diagram) and are a guideline to prepare for subsequent lesson, as well as the supporting scheme in preparation for the control points on the subject.

Alternation of the moderation techniques and traditional methods of working in seminars and follow-up control sections have shown high efficiency of the moderation techniques in the formation of interest in subject and removing the emotional stress among students. However, it should be noted the problem of lack in mastering precise (dogmatic) concepts. For example, on check assessment in subject "Concepts of form and methods of educational process organizing" student's works have shown high degree of success in creative character questions (80%) directed to find alternative ways of the solution in formed problem, use of creative tasks in educational process. But many students correctly answered the questions of the first category were faced with problems while solving tasks to find cause –effect relationships.

As part of the training course the possibility of introducing in the educational practice moderation technology have been studied within the core disciplines of elementary school, such as World around, Mathematics, Russian language, Literary reading. Together with the students the following conclusions have been drawn:

this technology effectively operates on the lessons of the World around, Literary reading because of the specific content of educational material, and not always successfully moderation operates at the lessons of Mathematics and Russian language,

this technology is suitable for lessons "new knowledge discovery", monitoring lessons (repetition lesson) and combined lessons.

Self-assessment of student-trainee activity

The survey results revealed the following tendencies in the students' professional development.

After familiarizing with various technologies and forms of training students are more critical to teaching practice. At an assessment of the pedagogical activity there is a reasonable criticism directed to identification of positive and negative sides of various training technologies and methods use.

It is noted the possession of lesson designing skills with the combination of different techniques and methods taking into account the specifics of educational material and within separate technology. However, students have difficulties in conducting classes with the use of interactive technologies, including the moderation techniques.

Students note psychological comfort, unity with a class when carrying out the final lessons with use of the moderation technology elements.

Therefore, we can conclude that the use of moderation techniques in the educational process contributes to the students' self-assessment as the teachers, develop personal social and significant qualities, namely communicativeness, stress resistance, creative thinking, mobility that characterizes the teacher as a professional who is able to assess the situation and find the most appropriate ways to solve certain problems.

Recommendations for using the moderation technology in elementary school

The moderation technology in modern pedagogy has become known primarily for professional adult education in middle and high school, as a method of activating the creative potential of pupils' communicative abilities development. However, this technology in our opinion is able to integrate successfully in elementary school educational environment as an effective development technology of the child's personality and guarantor of a safe, psychologically comfortable educational environment.

Recommendations for using the moderation technology in elementary school at the noxologic environment organization:

- Before using the technology clearly define the lesson goals and objectives, have an idea about a particular result. The teacher-moderator is primarily the process manager, not the translator of educational material content (Plaksina I.V., 2014). Clearly defined goals are the core of the work, and concretized result of its execution control.

- The teacher has to remember moderation specifics as way of activity within a subject. The content of some subjects are difficult to present in the form of moderation. The most open academic disciplines to this technology are Literary reading, World around, Productive activities (design and technology). Besides the lessons-repetitions and the new knowledge discovery reveal the essence and beauty of the theme better exactly in the form of search activity.

- The moderation process requires teachers to constant replenishment of working microgroups with idea, motivation. Technology implementation of this recommendation is the setting of different types of questions and their alternation. At the same time the teacher-moderator must clearly know the purpose of the issue and its impact on children.

For example, the open question is aimed at gathering information, opinions that disposes to dialogue. The closed question gives the chance to make a choice, to operate discussion. Rhetorical turns to a contradiction, induces to a reflection. Alternative aims to identify priorities, makes to do a choice, etc.

- The information-education environment has to be organized taking into account individual and psychological features of educational process subjects. This is an adequate visibility of the objectives classes (necessary and sufficient), ergonomic furniture and its correct location, background sound.

- The process of achieving goals should be divided into certain components (in elementary school no more than 5 stages) and visual enshrined as a "game stations", "fishbone", or a decision tree.

- To focus on cooperation and not on microgroups competition. Traditions of the Russian pedagogy in the use of technology group work is based on creating competition between participants of the educational process that is the basis for the formation of groups defeated negative attitude. In moderation the child competes with a training material in group of the companions. They compete with their former and their real, and other children at the same time are their assistants, participants of cooperation.

- When summing up it is necessary to pay attention to the process of work. How was the search for solutions to problems; what interfere; what unconventional creative solutions were discovered by children; Do not get involved in the results interpretation.

- Note the child's relation to the case, lessons assessment conducted by the children themselves, their sense of security and comfort.

Discussions

According to the new generation standards pupils of primary school age should be able to work with the material, have the ability to search and processing knowledge, to be able to substantiate their answers, logically argue. Another important factor is the presence of positive learning motivation.

One of the conditions of knowledge acquisition, social skills development is the introduction of new techniques that enable the active participation of students in the educational process. It can be stated that the main methodological innovations are essentially associated with the use of interactive technologies and teaching methods, which allow through the active interaction of the teacher and students in the learning process, to create favorable conditions for the harmonious personality development. One of such technologies is the moderation method. The moderation technique has a high potential in the organization of safe educational environment. It is a good basis for the activity approach introduction as the basic paradigm of the modern elementary school. However, the real introduction to the teaching practice of this technology has a certain danger for young teachers. It is insufficient methodical justification of moderation techniques and methods, lack of concrete samples on the example of subject matters. The students interest in this technology suggests the need for further development of methodical bases of this technology introduction into the education practice.

Conclusion

Noxologic educational environment is the basis of academic and social success of the educational process subjects. This is evidenced by research in the field of pedagogical riskology and the development of a culture safety. Implementation issues of noxologic approach at schools affect all components of pedagogical activity: educational space and the environment, the relationship of the process entities, organization techniques of educational process, as well as the process of teachers training. Moderation is one of the technologies for the efficient functioning of noxologic educational environment in elementary schools, affecting the process of educational space and teacher training organization.

We have conducted surveys to identify the personal relationships of students enrolled in the Elementary education, to teaching activity at school and at University in terms of its psychological assessment and process safety. Students note the need to implement some qualitatively other technologies in the educational

process. On the basis of obtained results there were made recommendations on implementation of the moderation technology in the educational process in elementary school to ensure noxologic educational environment.

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Disclosure statement

No potential conflict of interest was reported by the authors.

Notes on contributors

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References

Abramova, I. G. (1996). *The theory of pedagogical risk*: Abstract PhD Thesis, St,Petersburg. 36p.

Arlamov, A. A. (2010). Pedagogical risk as the problem related to methodology of social pedagogy. *Bulletin of the Adygei state university*, *1*, 121-136.

Bagachuk, A. V. Gavrilov, I. K. & Pilipchevskaya, N. V. (2008). Educational space of pedagogical high school as a condition of formation of key competences. *TGPU Bulletin, 3 (77)*, 25-28.

Bagnetova, E. A. & Sharifullina, E. R. (2013). The occupational risks of the pedagogical environment. *Basic researches*, *1*, 27-31.

Devisilov, V. A. (2011). Noxological aspects of education humanization. *Higher education in Russia*, *1,* 129-132.

Dvulichanskaya, N. N. (2011). *Interactive training methods as means of key competencies formation*. Direct access: http://technomag.edu.ru/doc/172651

Golovanova, I. I. (2014). *Interactive Learning Practices*. Kazan, Kazan University, 288p.

Kashapov, M. M. (2011, July 7) Creative thinking of the teacher as a basis for effective self-realization in the profession. *VII international scientific-practical conference "Actual problems of modern education: development, health, efficiency"*. Moscow, MGPPU, 33-36.

Khabibullin, E. R. (2008). *Willingness to take risks as a factor of effective teaching activities in situations of uncertainty:* Abstract PhD Thesis. Moscow, MSU,150p.

Kirij, N. V. & Verzunova, L. V. (2010). The moderation center as the infrastructure support of additional vocational education at the University. *Up-to-date problems of science and education*, *4*, 43-47.

Kosolapova, M. A. (2007). *Technological approaches in the organization of professional training for teaching activities in high school*. Tomsk, TSU, 177p.

Lomakina, G. R. (2013). Federal state educational standard of elementary general education: realization problems and practical application. *University proceedings. Volga region. Humanities*, *3(27)*, 185-193.

Mihailova, E. N. (2010). Pedagogical risks in research and experimental activities: forcasting and mitigation. *World of Science, Culture, Education*, *3*, 98-100.

Mokeyeva, E. V., Zakirova, V. G. & Masalimova, A. R. (2015). Tolerant pedagogic space as a condition of non-violence position education among elementary school pupils. *Review of European Studies*, *7(4)*, 216-220.

Ovcharova, R. V. (2007). *Psychological facilitation work of the school teacher: a manual*. Moscow, Amaltea, 464p.

Panfilova, A. P. (2009). *Innovative pedagogical technologies: Active training: a training manual*. Moscow, Academy, 192p.

Panina, T. S. & Vavilova, L. N. (2008). *Modern methods of activization of training*. Moscow, Academy, 176p.

Panov V. I. (2007). *Psychodidactics of educational systems: theory and practice*. St.Petersburg, Peter, 352p.

Petrov, A. V. (2005). *Discussion and decision-making in the group: moderation technology*. St.Petersburg, Speech, 80p.

Plaksina, I. V. (2008). *Psychological-acmeological support of pedagogical innovations*. Vladimir, VSHU, 200p.

Polovneva, E. (2011). Professional Risk as the Pedagogical Category. *Bulletin of the Trans-Baikal State University*, *2*, 71-74.

Reutova, E. A. (2012). *The use of active and interactive teaching methods in high school educational process*. Novosibirsk, NSAU, 58p.

Sabinina, N. N. (2011). Risks in innovative activity of the teacher and their preventive maintenance. *World of Science, Culture, Education*, *6(1)*, 85-89.

Sabirova, E. G., Vasyagina, N. N. & Imanov, A. K. (2016). The model of the professional and personal orientation of the teacher. *Mathematics Education*, *11(1)*, 291-301.

Slastenin, V. A., Belozertsev, E. P., Goneev, A. D., Pashkov, A. G. (2004). *Pedagogics of professional education*. Moscow, 272p.

Tsarapkina, Y. M & Vorobyova, K. P. (2014). The development of students social competencies using the moderation method. *Historical, social and educational thought*, *3*, 148-157.

Zimnyaya, I. A. (2011). *Social competence learning*. Moscow, MPSI; Voronezh, MODEK, 592p.