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Processes of Professionalization of Teachers as the Technology of Education Quality Management

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This article provides an overview of the results of researching the efficiency of the institutes of professional development of education workers of the Krasnoyarsk Territory held in 2009-2010 by the interregional group of researchers from Krasnoyarsk, Moscow, Khabarovsk and the Stavropol Territory at the initiative of Krasnoyarsk Regional Institute of Professional Development and Retraining of Education Workers, Ministry of Education and Science of the Krasnoyarsk Territory. The main objective of the research was determining the main factors, institutes and technology that influence the professional development of teaching staff for potential description of the standard model of professional development of a teacher.

During the research the authors have developed a matrix of professionalization including most of professional tasks a teacher solves during his/her professional activities. The matrix can serve as the basis for describing the dynamics of teachers' professional development, sequence of controversies appearing in professional activities and changes in the methods of solving case educational tasks. Management aspect of using the matrix of professionalization lies in developing instruments for estimation of the qualification and the new type of education workers, which would be based on determining levels and stages of qualification within the field of professional activities.

Keywords: professionalization, professional development, management.

Range of problems

The issue regarding the quality of the “labour power” in education refers to education policy, management of teachers' potential development, and lies far beyond traditional ideas about teachers'

education, training and retraining of human resources, and human resources management.

The process of individual professional development of teaching staff has become a new subject of management.

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Determination of this subject of management should be accompanied by redevelopment of the infrastructure of professional development of teaching staff. Nowadays different parties somehow interested in education (consumers, experts, specialists, managers) understand the objective problem of noncoincidence between the requirements to teachers' professional development and its contents, and tendency of modernized education of the country (region). The necessity to change previous methods of teachers' training with consideration of new conditions and requirements in education itself is realized.

Training, retraining and professional development systems applied today are focused on reproduction of "what has already happened", while education more and more expressively gets the features of new practice "supporting" innovative activities, innovative practice, i.e. something that does not exist widespread. In its turn, this leads to the necessity to solve the problem about models of professional development, which suppose turning to the profession and dynamic characteristics of professional development that would take into account differences in ideas of professionalism among different categories of teachers.

Possible approach to the problem solving

In 2009-2010 the interregional group of researchers from Krasnoyarsk, Moscow, Khabarovsk and the Stavropol Territory at the initiative of Krasnoyarsk Regional Institute of Professional Development and Retraining of Education Workers and the Ministry of Education and Science of the Krasnoyarsk Territory researched efficiency of the institutes of professional development of education workers of the Krasnoyarsk Territory.

The research was held with the general **objective** to study the situation at the market

of continuing professional education available for education workers of the Krasnoyarsk Territory.

The main objectives of the research included:

- estimation of the efficiency of methods and forms of work offered at the CPE market from the point of view of meeting expectation of the education workers;
- estimation of the efficiency of the offers outspread at the CPE market (programmes of professional development, different methods and forms of work with professional development of teachers and education administrators, and other workers of the field) from the point of view of its participants;
- determination of subjective pictures of education workers' careers, their objective and causative features;
- determination of new (out-of-the-institute) professional positions and types of activities in the field, their ratio with the reference to the current (institutionalized) professional positions and types of activities;
- description of the standard model of professional growth (development) of teachers and stages of growth (development) of a teacher.

Research methods:

Sociological interviews, focus groups, complex analysis of the data, heuristic methods.

Object and subjects of the research

The object of the research is the process of professional development of education workers of the Krasnoyarsk Territory.

The subject of the research is individual strategies of professional development (types of strategies).

Objectives of the research

The objective of the research is to determine the main factors (institutes and technologies) that influence the professional development of teachers (professional dynamics) in order to describe possible standard model of professional growth (development) of a teacher and stages of growth (development) of a teacher.

Scope of work

The following education workers of the Krasnoyarsk Territory took part in the research: administration of educational institutions, teachers, and tutors. At the first stage in 2009, 720 education workers of the Krasnoyarsk Territory took part in the study, among them 147 school headmasters, 341 teachers, 232 members of auxiliary teaching staff (tutors, methodologists, psychologists, programmers, etc.). In 2010, 1,326 people took part in the study. Among them 149 headmasters and 1, 177 teachers. The total amount of participants during two years made 2, 046 people, i.e. 6.7 % of all employees in the field of education.

General situation.

By 2009 45,788 people (30,609 managers, teachers, auxiliary teaching staff) was working

in the system of general education of the Krasnoyarsk Territory according to the statistic documents (RIK-83); 55 % of them belong to the group of teachers. General ratio of categories of workers in the field of education in the Territory is given on Fig. 1. About 90 % of workers in the field are female.

Age characteristics of education workers in the field is represented at Fig. 2. As one can observe from the diagram most of working teachers belong to the age group of 35-55 years old. Amount of working teachers in the retirement age is less than 20 %. This corresponds to the All-Russian tendency. In the age group of younger than 25 years old there are mostly auxiliary teaching staff members.

In order to answer the question about attraction of specialists of different ages to the field the existing data with general demographic situation in the Territory should be compared. Basing on this comparison we can judge about attractiveness of education field for different age groups of the Territory population.

Significant results of the research.

1. The question of the questionnaire "Please, mark the statement that can be more likely the reason for you to move from one position to

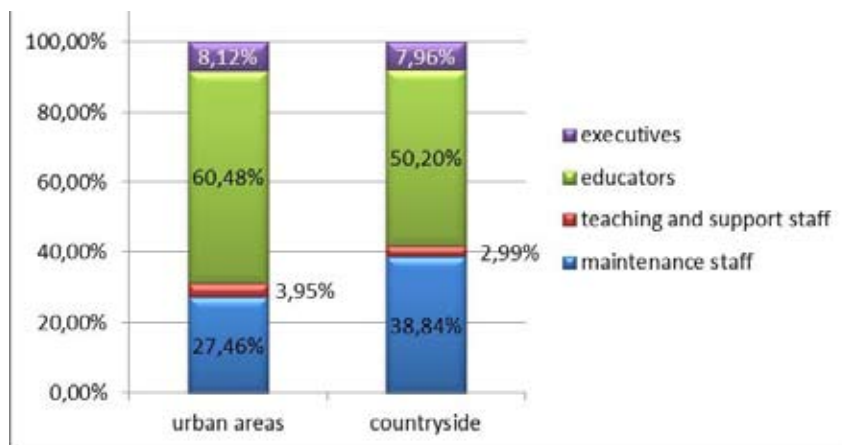


Fig. 1. Ratio of education workers by categories

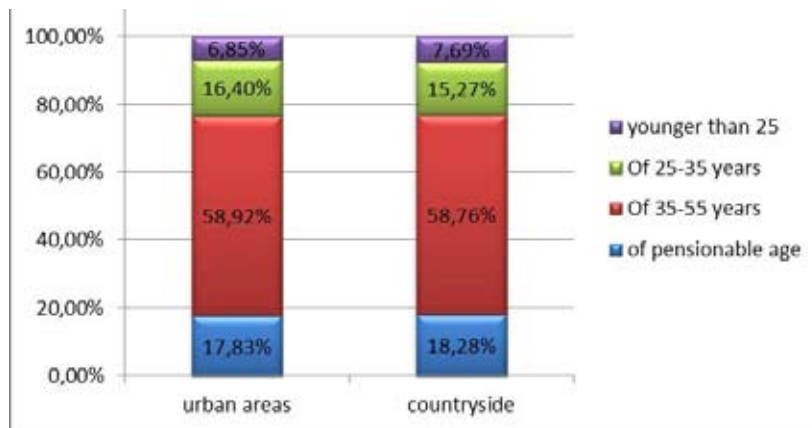


Fig. 2. Distribution of education workers by age

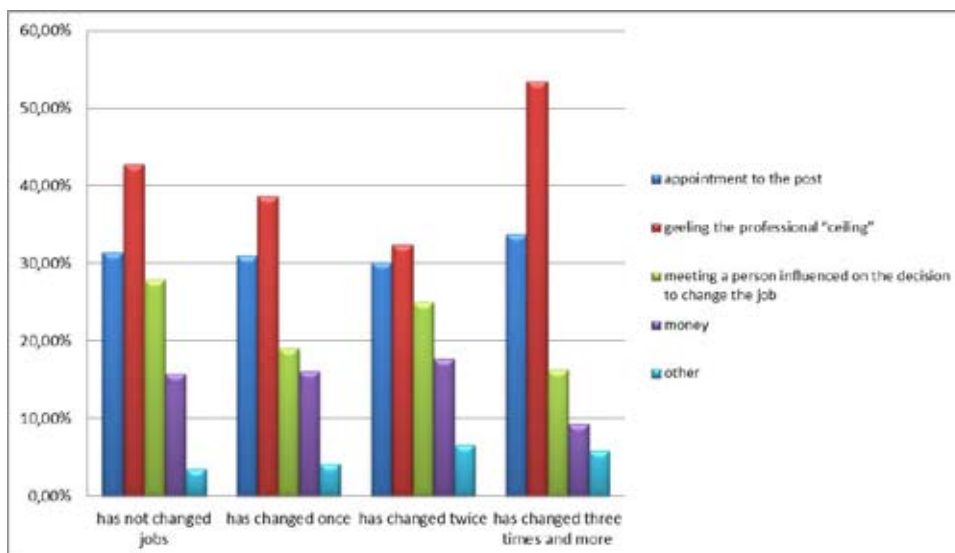


Fig. 3. Reasons of changing one position (place of work) for another

another” was answered in accordance with the following categories of answers (Fig. 3).

The diagram demonstrates the ratio of amount of transitions from one place of work to another in correlation with the reasons for changing positions. The most widespread reason for changing positions among respondents who have changed 3 and more positions is feeling at “dead end” at the occupied position. 12 % of education workers change work places 3 and more times and more than 50 % of them change the

position because of this “dead end” feeling. While amount of education workers in the Territory corresponds to 3 % (720 people) and their work experience corresponds to the general statistic picture in the Territory (up to 5 year 11.81 %, 5-10 years 12.22 %, 10-15 years 13.75 %, 15-20 years 20.83 %, 20-25 years 20.42 %, over 25 years 20 %) the conclusions can be referred to the situation in the Krasnoyarsk Territory in general. In general about 50 % of teachers in the Territory are in the situation of “dead end”. We suppose

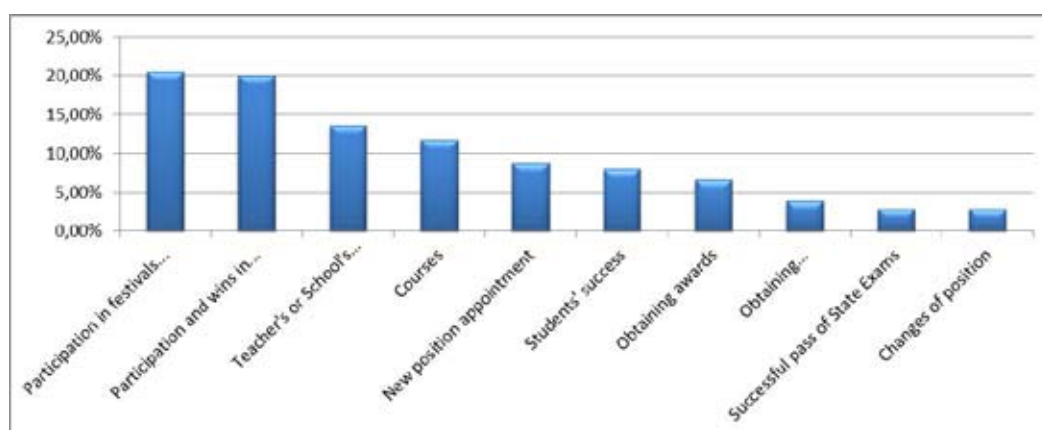


Fig. 4. Estimation of the efficiency of continuing education forms

that this indicates noncoincidence between qualification characteristics and professional tasks (requirements of the position).

There are several answers to the question “Please, mark forms of continuing education you participated in”. 94.9 % of respondents answered that they took courses of professional development. Therefore, traditional courses of professional development are the most widespread form of professionalization. After the analysis of the answers to this question of the questionnaire we have obtained the following picture about ranging of the forms of continuing education in accordance with the ideas of education workers (Fig. 4).

Comparison of interviewing results shows that professional development courses took only the 4th place by significance for a teacher falling behind such events as participation in festivals and conferences, winning in professional competitions, attestation and education services. The most significant events are connected with the professional status (festivals, conferences, competitions). Among their main characteristics such as screening out and assessment of results can be named.

At the next stage we asked “If you plan to take a professional development course, please,

explain why” (there are several possible answers). At Diagram 3 the structure of motivation to take a professional development course is given for the Krasnoyarsk Territory education workers. The blue line corresponds to the answers of directors of educational institutions, the red line stands for the answers of teachers (Fig. 5).

Interviewing results showed inconsistency in reasons why directors send teachers to professional development courses and reasons explained by teachers themselves. Most of directors give such reasons as the necessity for teachers to pass attestation, realization of new projects and programmes and needs of the school.

Most of teachers – 73 % – independently of their work experience indicate their personal interest and desire as the reason for attending professional development courses. Herewith, more than a half of the teachers are involved in development and realization of the programme of school development (Fig. 6).

Analysis of answers to the question “Do you have any career plans?” showed that the shorter the period of work the more respondents have an approximate career plan. And vice versa, the longer the period of work the less amount of respondents plan their career. We suppose

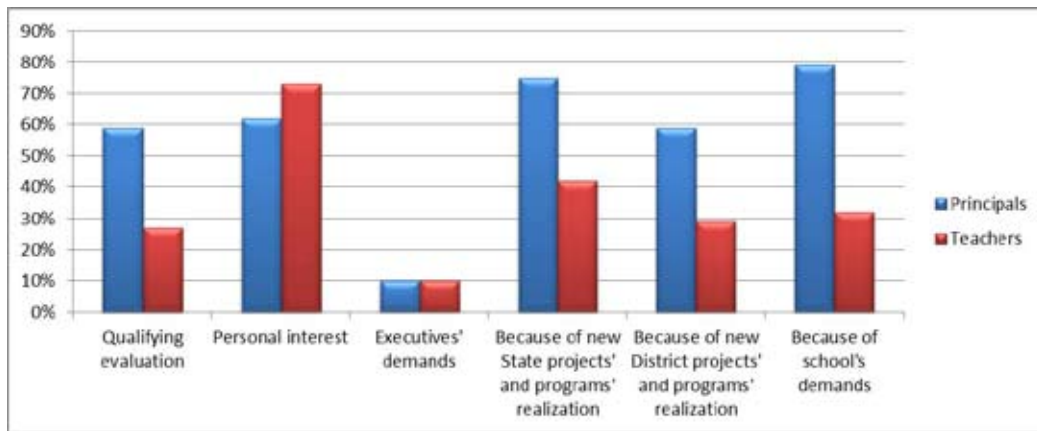


Fig. 5. Structure of motivation to take a professional development course

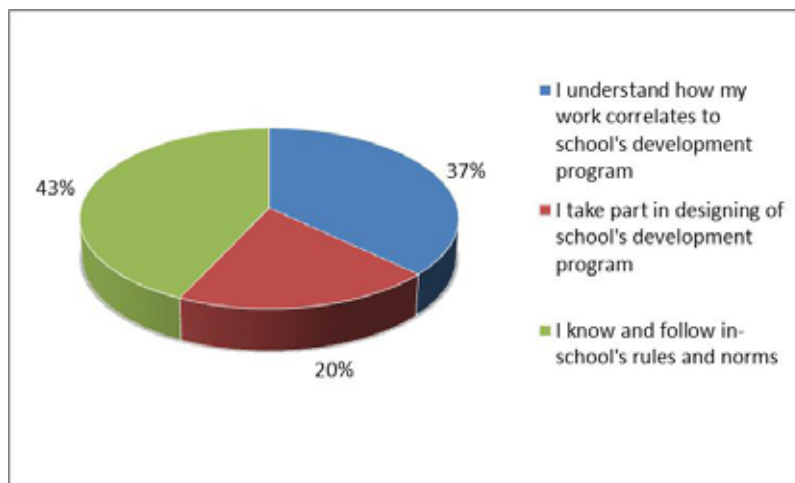


Fig. 6. Level of participation in school management

that this may be interpreted in two ways. One of the reasons may be that young specialists who have plans for the future do not see possibilities to fulfill their ambitions in education. Another reason is that their career is not connected with education. In a word people who can plan cannot stay for a long period of time in education. This can be observed at the diagram given below. (Fig. 7)

For young teachers professional career is not very attractive and takes a long period of time to make. Career issues (in the questionnaire the question was “What career in education do

you consider to be successful?”) are considered by the respondents via recognition (about 30 %) and expansion of activities’ spheres (about 25 %). Career success was assessed quite low (from 7 to 15 %). Administrators consider “occupying the position of the educational institution head” to be the biggest success; for teachers besides this consider a success “to get titles and awards”; representatives of auxiliary teaching staff consider expansion of spheres of activities to be a success. Therefore, workers of education sphere in the Krasnoyarsk Territory do not have any real description of “career in education”.

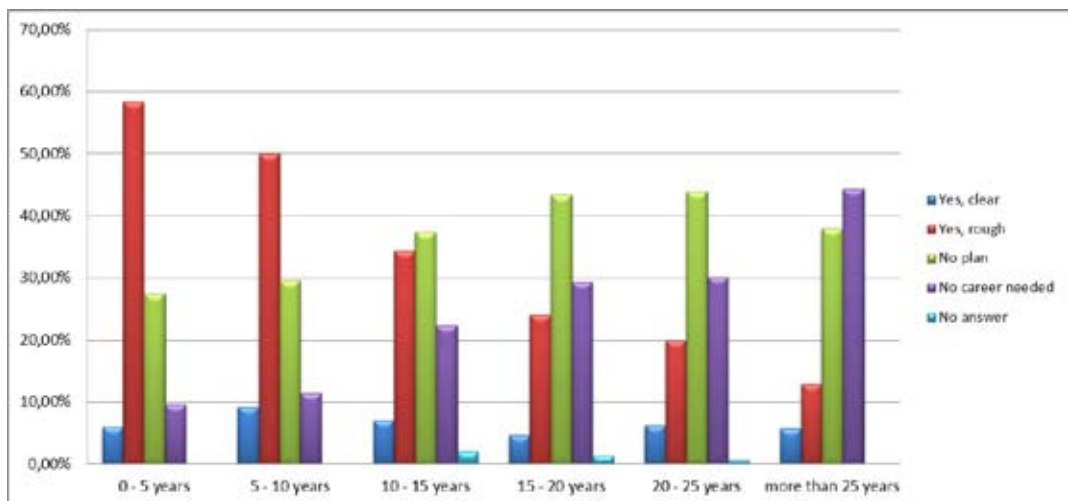


Fig. 7. Career plans depending on the length of work experience

Table 1. Matrix of professionalization

	Programmes	Technologies	Age limits of the audience	Standards / Institutes
Modelling (by the subject)	Development of the author's programme	Projects and research	Foresight, scenarios of development, forecast	Development of programmes of development and justification of activities of educational institutions
By the algorithm (with the subject)	Compilation from different programmes	Interactive technologies	Individual peculiarities and results referred to age characteristics	How can it be arranged correctly?
By the example (in the subject)	Basic programme	Lesson / extracurricular classics	Referring to age standards	Prohibition where to get information

The research has shown the necessity to develop a mechanism (instrument) of self-assessment of the professionalism level of education workers that would provide solving two tasks: management of professional development of teaching staff and management of teachers' own progress in career (individual educational programme) depending on their characteristics and scale, as well as work experience in the field of education.

The instrument should be based on the model (matrix of professionalization) developed

within the framework of the research, which would include most of possible professional tasks a teacher solves in his/her activities.

In order to estimate professionalism we offer standards of professional understanding and thinking organized in Table 1 as a hypothesis and basis of the project for professionalization of teachers' work. We claim to get a fundamental model, which would include most of (all) possible professional tasks a teachers solves in his/her activities: from lessoning, holding a meeting with parents to development of new educational

contents, designing and supervising an individual educational programme of a pupil/student.

The idea offered is presented in the following matrix (table).

But another vector is possible that gives a third dimension in the matrix. This vector is professional age. Then professionalization can be considered in the area of inevitable crises (by the anthology with crises of age development described by L.S. Vygotsky for children) connected with professional formation, coming into professional culture and expansion of the list of professional activities. Such an approach has quite a long history in Russian tradition (works of Klimov, Mitina, Zeer).

If we can describe distinctly the main contradictions and tasks to be overcome at each stage of professional dynamics, then we can speak about developing a fundamental model of teachers' professional development.

There are several consequences of developing a theoretical "matrix of professionalism".

The first consequence is the basis for describing the dynamics of teachers' professional growth, consequence of contradictions that have their logics to appear in professional activities and change the method of solving case and teaching tasks.

The second consequence is that the offered matrix can be the basis for development and description of levels, stages of qualification within the field of professional activities.

And the third consequence is that after the research the task for developing instruments for assessment of qualification of education workers can be set, i.e. the task of professional development management can be set only after we can conceptualize the object of management.

The first column in the model given above (matrix of professionalization) shows the level of knowing subject programmes. Therefore, answer

to the question "How do you assess your level of knowing the subject matter?" the teachers answered as follows in accordance with their work experience (Fig. 8)

Therefore, when we compare the first column of the matrix with our selection by work experience in the system of education there are two places that rise doubts. The first one is that young teachers with work experience from 0 to 3 years name the characteristics of the third line – modelling – more often than representatives of the next work experience category. This can be explained by absence of professional language understanding that a young teacher lacks. It is more likely that university graduates understood something different from modelling under the phrase "I can develop my own education programmes including intersubject and interage ones". Teachers with work experience in the system of education from 12 to 25 years name characteristics of the second line as often, as the teachers with average work experience in education. May be this indicates professional deformation.

The following data have been obtained by answers to the question formed by the result (Fig. 9).

The Fig. shows that the part of the matrix that stands for subject programmes is recognized. We obtained direct relation when we compared answers to the question about the level of the subject matter knowledge and expected results from professional development courses.

Analysis of answers to the question "How do you assess your level of knowing education technologies?" showed the following picture depending on work experience in the system of education (Fig. 10).

In general ideas of teachers about professionalization development correspond to the model contained in the matrix of professionalization. The general picture is

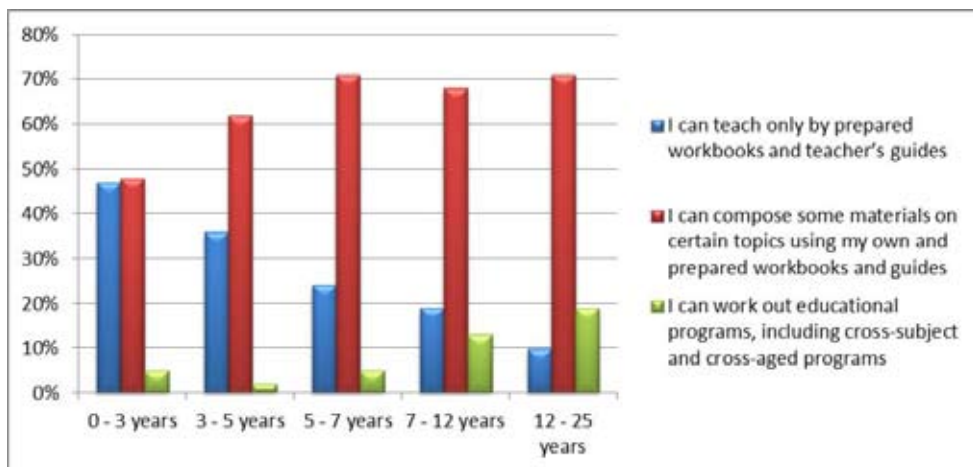


Fig. 8. Ideas of teachers about their level of knowing the subject matter depending on their work experience in the system of education

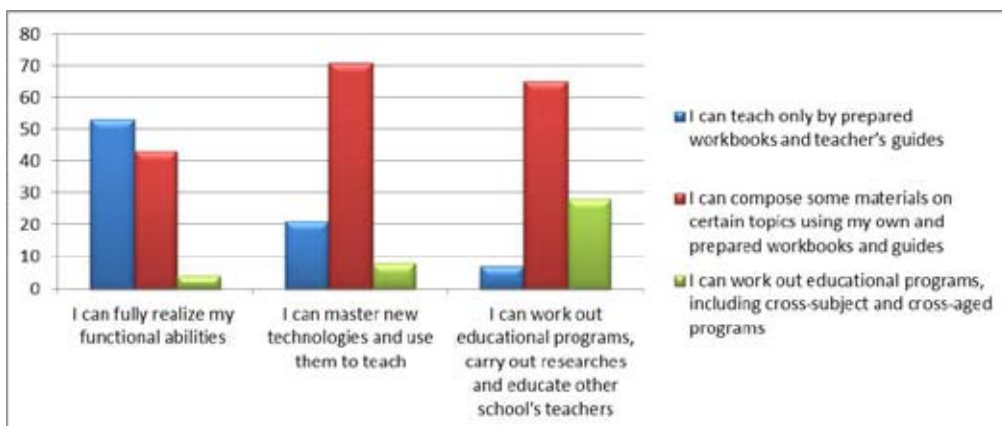


Fig. 9. Ideas of teachers about the level of knowing the subject matter in accordance with the result expected from professional development courses

disturbed by ideas of young teachers about their level by such answers as “I use interactive forms of organizing activities”, i.e. by the algorithm (with the subject). We suppose that young teachers either do not recognize themselves in the first line or overestimate themselves.

We have obtained the following data from analyzing the results teachers expect from professional development courses (Fig. 11).

Like with the previous question the expected results from professional development depend

on the level of knowing education technologies. Therefore, the matrix is recognized by the column connected with education technologies as well.

After analysing answers to the question “How do you consider age and individual peculiarities of pupils?” we have obtained the following data (Fig. 12).

Here the analysis is more complex, relations are not so direct as in other cells of the matrix and teachers' ideas are different from what we offer in the matrix. For example, information about what

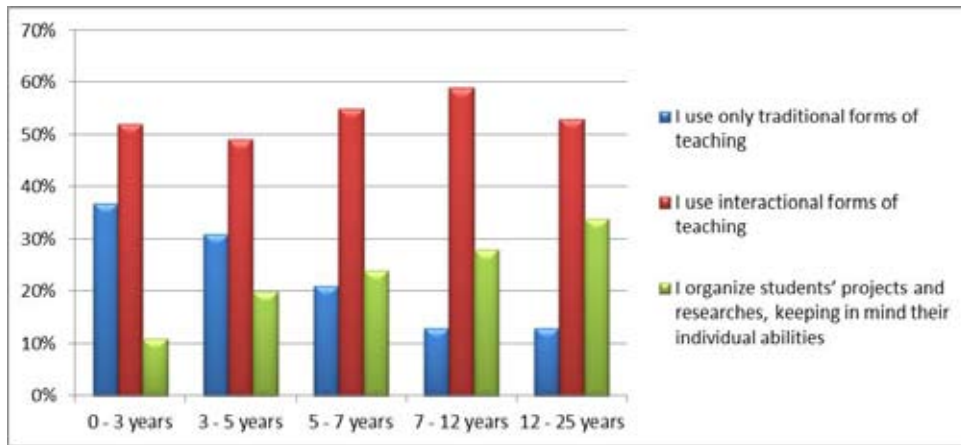


Fig. 10. Ideas about the level of knowing education technologies depending on work experience in the system of education

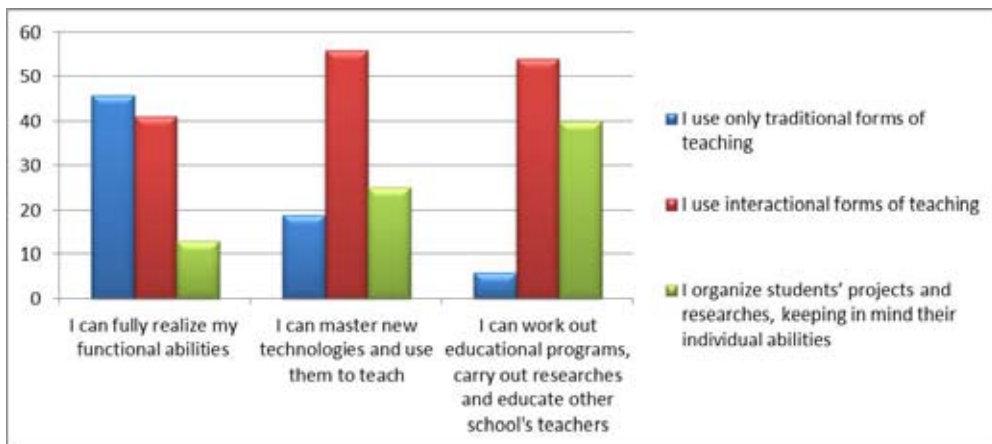


Fig. 11. Ideas about the level of knowing education technologies in accordance with the results expected from professional development courses

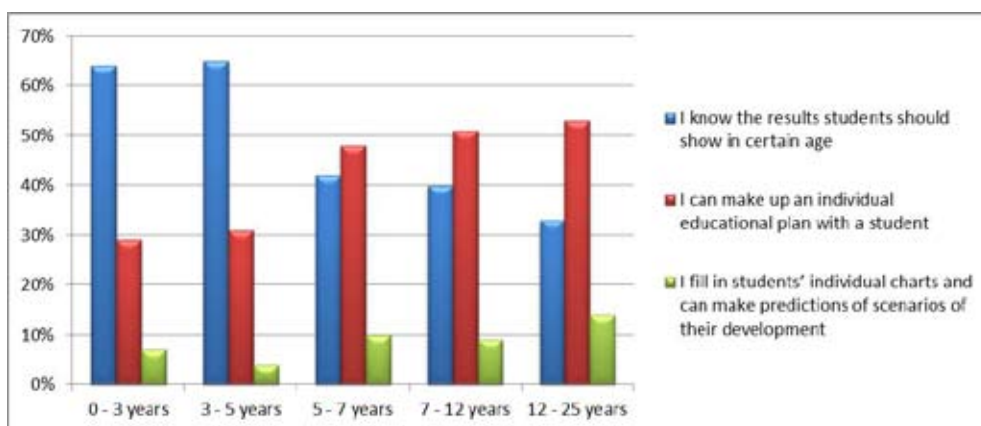


Fig. 12. Ideas of teachers about age and individual peculiarities of pupils depending on work experience

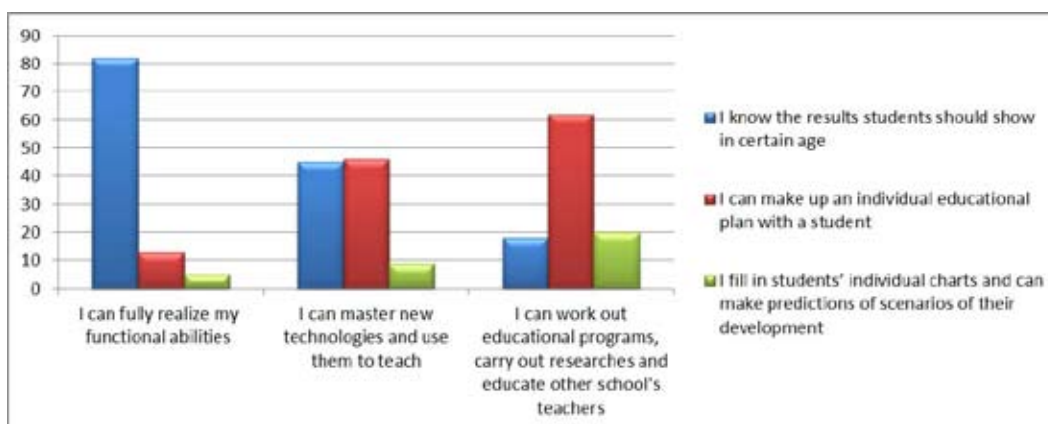


Fig. 13. Ideas of teachers about age and individual peculiarities of pupils in accordance with the results expected from professional development courses

results teachers should demonstrate in this or that age is divided into group from 0 to 5 years and from 5 to 25 years of work experience. A young teacher coming to school is not very confident in his/her knowledge. This confidence appears after 5 years of experience, then it gets lower in the period from 5 to 7 years of experience and then rises again almost until 25 years of work experience. The ability to elaborate an individual plan of work with a pupil develops in accordance with increasing work experience in the profession. The most significant rise here happens in the period from 5 to 7 years. Probably teachers get interested in this field of professional activities, or it may be connected with changes in their own ideas about their own knowledge (feeling lack of them), results of pupils in this or that age. The third line of this parameter is the most unclear one. A teacher does not develop the ability to fill in individual records of a pupil and to forecast a scenario of a pupil's development basing of these records more than 8-12 % according to their own idea independently of work experience (Fig. 13).

The Table and the Fig. show that the part of the matrix that stands for age and individual peculiarities of a pupil is recognizable. We have obtained direct relation during comparison of

answers to the question about age and individual peculiarities of a pupil and results expected from professional development courses.

After analysing answers to the question "How do you assess your level of participation in school management?" we have obtained the following data (Fig. 14).

The relevant level of knowing the standards by each group in accordance with work experience is the level corresponding to the matrix of professionalization described above. The bigger the work experience the more often the idea of a teacher about his/her participation in forming and adapting standards of school life is represented by means of the phrase "I participate in development of school's development programme". A significant amount of answers corresponding to the second line of the matrix (action by the algorithm) "I understand how my activities correspond to the school's development programme" falls on teachers with average work experience in education. The largest percentage (69 %) of answers corresponding to the first line of the matrix (action by the example/in the subject) "I know and observe internal regulations and standards of the school" falls on young teachers. Therefore, we can make a conclusion that the

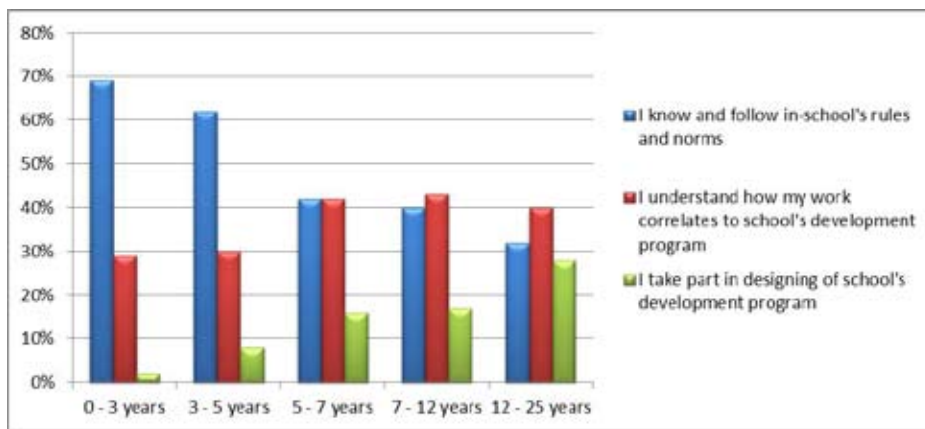


Fig. 14. Level of knowing standards depending on work experience

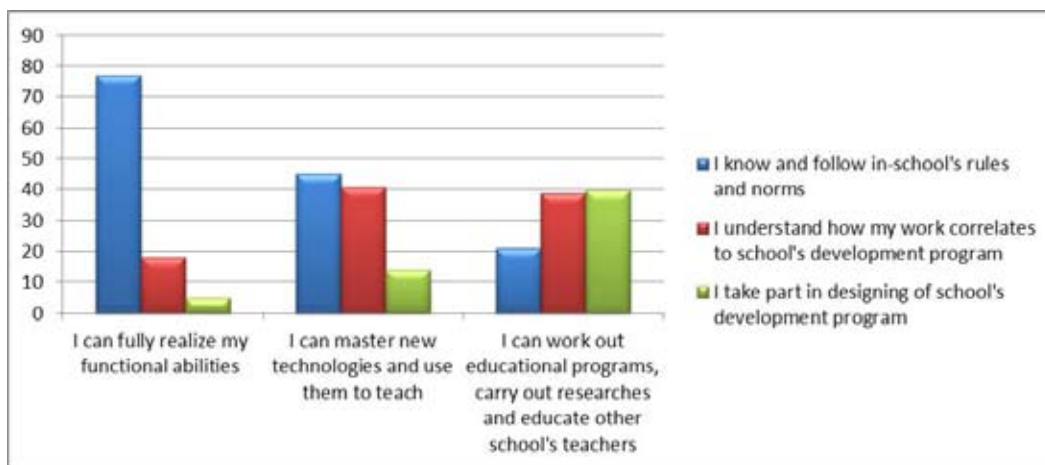


Fig. 15. Level of knowing standards in accordance with the results expected from professional development courses

column of the matrix determining the level of knowing the standards is recognized by teachers and corresponds to their work experience in education (Fig. 15).

The Fig. shows that the part of the matrix, which determines the standards, is recognizable. We obtained direct relation when we compared answers to the question about the standards and expected results from professional development courses.

After comparing answers to the question “What result would you like to have after

attending a professional development course?” we have obtained the following data (Fig. 16).

The main result of professional development courses for teaching staff is learning new methods of work and abilities to apply them within the framework of teaching and extracurricular activities. Independently of work experience in education this result is expected by 60-70 % of all respondents. Ideas about getting such a result from professional development courses as abilities to develop independent programmes, carry out independent research, mentor other teachers

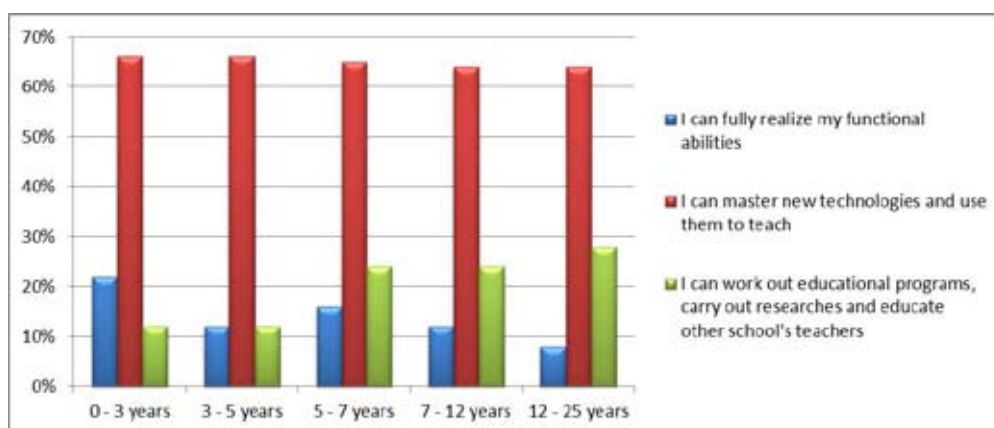


Fig. 16. Ideas about the results expected from professional development courses depending on work experience in education

increases correspondingly with the increase of work experience in the field. Therefore, this result can be obtained when a teacher possesses significant work experience in education. The lower line in the matrix is characterized according to the Fig. above as such a result of professional development courses as the ability to cope with duties within the activities' sphere and as we can see from the diagram, such results are expected less by the teachers, who have bigger work experience in the field.

Conclusions

Movement in the problem field of professionalization, in the contemporary state of the system of education and taking into account international experience, is possible only if we consider teachers' professional development as a technology of education management. Referring to international experience here means that all innovations in education in the world are fulfilled, first of all, from the position of management.

The work of a modern teacher includes a variable list of different activities from a home tutor to an education manager, from a developer of new educational content to a specialist in realization of educational projects, from

a developer and technologist of educational tests to a specialist in realization of individual programmes connected with specific abilities of a child. In order to have a successful career in education it is not enough for a modern teacher to know the subject. He/she needs to get to know new positions and types of activities beyond class activities and try to combine different forms of professional activities, including research, developments, management, individual approach, work with children with specific needs and with talented children, mentoring (i.e. work with other teachers). Getting of the second, third and sometime even fourth specialization allows a modern teacher to become more competitive, work in different organization, correspond to requirements of the time.

The mechanism of "transformation", movement of professionalization can be built on the basis of current educational infrastructure of the Territory for solving different tasks. Then it becomes possible to set (from management point of view) and build (from the point of view of professionalization of groups of teachers, in the logics of individualization) patterns of professionalization from a trainee to a mentor.

It is worth noting that education like any other practice with several exceptions is always open at the professional level. A person who has worked to the level not lower than average will

be in this or that way distinguishable, active in more than one place and will have admirers, and may be followers. This tendency is natural in pedagogics, education and arts.

Процессы профессионализации педагогов как технология управления качеством образования

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В статье приводятся результаты исследования эффективности институтов профессионализации работников образования Красноярского края, проведенного в 2009–2010 гг. межрегиональной группой исследователей из Красноярска, Москвы, Хабаровска, Ставропольского края по инициативе Красноярского краевого института повышения квалификации работников образования, министерства образования и науки Красноярского края. Основной целью исследования стало выявление основных факторов, институтов и технологий, влияющих на профессиональное развитие педагогических работников для возможного описания нормативной модели профессионального развития учителя.

В ходе проведения исследования авторами была получена матрица профессионализации, в которую вписывается большинство возможных профессиональных задач, которые решает педагог в своей деятельности. Разработанная матрица может служить основанием для описания динамики профессионального развития педагогов, последовательности возникающих противоречий, имеющих свою логику разворачивания в профессиональной деятельности, и смены способа решения ситуативных педагогических задач. Управленческий аспект использования матрицы профессионализации заключается в постановке задачи на разработку инструментов для оценки квалификации работников образования нового типа, основанного на выявлении уровней, ступеней квалификации внутри сферы профессиональной деятельности.

Ключевые слова: профессионализация, повышение квалификации, управление.
