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A Comparative Study of the Qualities of School Teachers and Their Teaching Practice

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Abstract

There is no doubt that the characteristics of the pedagogical community influence the quality of school education: its problems are often associated with the effectiveness of teachers training and their professional growth. On the other hand, the quality of the school environment and the conditions of pedagogical work are important factors for both the positive education of schoolchildren and its real results. In this perspective, the effectiveness of the education system becomes apparent in comparison with similar systems. That is why the data of international empirical studies aimed at studying the quality of education today are extremely important both for the country as a whole and for its different regions. To take measures for the development of the pedagogical community of the Kirov region, we made a comprehensive analysis of the teaching staff of the regional pedagogical community. The concept is based on materials from the third international study Teaching and Learning International Survey (TALIS 2018). The purpose of this article is to compare the qualities of regional school teachers and their pedagogical practice with similar indicators in foreign countries. The author of the article, on the grounds of the comparison of working conditions, professional education and development of teachers, justifies the need for administrative decisions in personnel policy. The leading research methods here are the collection of data, obtained by questioning in maintaining feedback from teachers, analyzing the conditions of pedagogical practices, modeling and statistical processing of research results. As a result of a study conducted in 2018–2019, in which 1025 teachers of secondary schools from the Kirov region took part, the author of the article found: teachers spend, on the average, 44 astronomical hours per week to perform their duties, besides it takes urban teachers 4 hours more to make their work as compared with rural teachers; the teaching load of the younger age group teachers is 1.5 times greater than that of the older age group teachers; foreign teachers spend 6 hours a week less to perform their official duties in comparison with teachers of the Kirov region; teachers spend most of their time on individual planning, preparing for lessons, and on general administrative work, while participating in extracurricular activities and communicating with parents takes the least amount of time in the structure of official duties. The professional knowledge of teachers acquired in the process of their education is estimated below the average level from the level of full preparedness to perform their professional duties; every fifth educator notes a high interest in learning the technologies of individual teaching, teaching children with special needs and class supervision issues. The theoretical significance of the article is due to its contribution to the

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development of scientific ideas about the quality of school teachers in comparison with the national educational systems of other countries. Practical use of the research results allows us to build a trajectory of work with pedagogical staff based on working out and implementing a set of measures for the development of the pedagogical community of the regional educational system.

Key words: quality of teachers, teaching practice, school environment, working conditions of the teacher, TALIS.

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Introduction

The qualities of the teaching staff in many aspects determine the effectiveness of education and the success of graduates of general education organizations. The first studies of the education system effectiveness were conducted in the 1960s (Coleman, 1968), which showed that the school effectiveness is rather limited. External factors largely determine the result of schooling, among them well-being, social capital of families and interaction with peers. However, the results of a generalized assessment of teachers' qualities were presented for the first time among other things. Taking into account the growing interest in the study of teachers' characteristics after the publication of the report and the possibility of direct government influence on these characteristics, scientists today are inclined to believe that the qualities of teachers may explain a significant portion of the variance in the academic results of students, participating in international cognitive tests (Popov, 2018). We should note, that the median literacy of teachers in Russia corresponds to the "average Russian", while in most developed countries, the literacy of teachers exceeds 70% of the population literacy. Taking into account the existing socio-economic conditions that do not allow us to reach the teachers' literacy level of leading countries in the short term, improvement of school education efficiency is possible with the implementation of a set of measures to develop the pedagogical community, the learning environment and the working conditions of teachers. To work out such a set of measures, it is necessary to have the results of an empirical assessment of these parameters with the possibility of their comparison with data on other national education systems. The most developed empirical research is the international TALIS study (Teaching and Learning International Survey) (Ainley & Carstens, 2018). TALIS is an international study that focuses on the learning environment and working conditions for teachers in secondary schools. TALIS survey was conducted for the first time in 2008 in 24 countries. The second cycle of the study was held in 2013 with the participation of 34 countries. Russia participated in the study in 2013. In the third TALIS cycle, our country gave its consent to the participation together with 45 other countries. In 2018, aspects related to professional characteristics and pedagogical practice are considered: teachers' education, initial teachers' training, their professional development, educational and professional practices, self-efficacy and job satisfaction, school management, feedback systems and school climate issues. It is worth noting the studies devoted to the analysis of the activities of the Organization for Economic Cooperation and Development (OECD), which conducts the TALIS study

(Gardinier, 2017). Scientists note the dominance of the OECD in the international discourse of educational policies of developed countries (Berkovich & Benoliel, 2018a). Berkovich and Benoliel (2018b) in their research note that the OECD seeks to gain control over the teachers' quality policy. The OECD uses for this the regulation of the teachers' quality policy, aimed at lobbying ideas of low quality of teachers. Thus, in order to obtain an objective assessment of the qualities of teachers, we made a comprehensive analysis of the teaching staff of the regional pedagogical community. The research concept is based on the adapted materials of the international TALIS study in 2018. Adaptation took place on the basis of highlighting the issues, underlying the administrative decisions in personnel policy. Analysis of the answers of general educational organizations teachers makes it possible to get an assessment of the pedagogical practice conditions, to determine the level of professional education of teachers, to describe the system of professional development and support of teachers, including comparison with foreign national education systems.

Thus, a comparative assessment of the quality of school teachers in the region and their pedagogical practices with similar indicators of foreign national education systems is a prerequisite for working out a set of measures for the development of the pedagogical community of the education system.

Literature review

Studies in the domestic and foreign works on the issue of assessing the quality of the teaching staff are rather scattered.

We can find the analysis of the pedagogical community in the aspect of age heterogeneity in the comparative analysis of the natural development of the pedagogical community age structure. The presented analytics is the basis for forecasting of the pedagogical community development for the regions of the Russian Federation until 2050 (Fedorov, Soloviev, Ilaltdinova, Kondratiev, & Frolova, 2018). However, since analytical data are generalized, there are results of point studies for individual regions that give an assessment of general education organizations pedagogical staff according to age, level of education, subject specialization (Pugach & Utemov, 2016; Utemov & Simonova, 2018).

Oerke and Bogner (2010) in their studies reveal the importance of taking into account age characteristics in the pedagogical team and their influence on the pedagogical process. Some studies describe ideas of structural limitations (age, disability, ethnicity, and gender aspects) that impede teacher career (Wilson, Powney, Hall, & Davidson, 2006; Cau-Bareille, Teiger & Volkoff, 2019).

Taking into account the age characteristics of teachers is a significant component in the management of the teaching staff. So, Zhou et al. (2011) conclude that the motivation for professional development is greatest among middle-aged teachers, the motivation is noticeably reduced with increasing age. The "phenomenon of aging" of teaching staff is also characteristic of higher education. For example, the average age of teachers in French universities is over 49 years.

A number of studies analyze the dependence of the work capacity level on the age group. Thus, it was revealed that 24% of teachers in the younger age group and 49% of teachers in the older age group have a low level of working ability, which indicates the need for measures to improve the working ability of teachers (Freude, Seibt, Pech, & Ullsperger, 2005). On the other hand, work experience of some teachers (correctional schools, vocational training institutions, pre-school education, etc.) plays a significant role in the quality of performed work (Sheridan et al., 2018; Selzer King, Jensen, Jones, & McCarthy, 2018).

TALIS occupies a prevailing position in quality research. TALIS is conducted by the

Organization for Economic Co-operation and Development to collect and compare information about teachers and managers in different countries in key areas: teachers' training and development, assessment of academic results, school management, pedagogical work and teachers practice goals, job satisfaction and confidence in their professional skills (Pinskaya, Lenskaya, Ponomareva, Kosaretsky, & Savelyeva, 2016). The materials of the international study of teaching and learning for 2009, 2013 and 2018 formed the basis of studies in different countries.

Many studies are devoted to studying the satisfaction of teachers with their work depending on various factors. For example, such factors are distributed school headship and professional collaboration (Sun & Xia, 2018; García Torres, 2019); the level of cooperation between teachers (Madero, 2019); level of satisfaction with working conditions and degree of participation in making school decisions (Brezicha, Ikoma, Park, & LeTendre, 2019; Price & Weatherby, 2018); self-efficacy, age, sex, school experience, teacher-student relationship (Gil-Flores, 2017). Researchers also conclude that collaboration between teachers and school culture are key characteristics associated with less dissatisfied teachers (Madero, 2019).

A study, conducted in the United States, is dedicated to an issue of linking teacher assessment experience with overall job satisfaction (Ford, Urick, & Wilson, 2018). Researchers try to answer the question: how should we assess teachers in order to support their professional growth and development as practitioners?

Researchers pay great attention to the issue of teachers' training and their professional development. Doğan and Yurtseven (2018) emphasize that schools are a place of professional training and the formation of collective structures to stimulate the development of teachers. In this regard, scientists analyze the influence of professional learning groups, such as professional development on learning quality, and conclude that professional learning groups and reform-based professional development produce a statistically significant effect on learning quality. A study by Fernández-Fernández, Arias-Blanco, Fernández-Alonso, Burguera-Condon, & Fernández-Raigoso (2016) showed that participation in the educational activities of a reflexive nature contributed to the professional development of the teacher. This activity requires great dedication and intensity from teachers, but also leads to perception of their professional effectiveness and control of the processes of teaching and learning.

Mu'in, Al-Arief, Amelia, & Fadilla (2018) emphasize that the task of the teacher is not related exclusively to teaching, which implies planning, implementation and evaluation of educational and methodological work. Teachers are also responsible for their professional growth, for the development and improvement of their pedagogical skills, mastering modern teaching methods that meet existing educational needs and developing information and communication technologies.

Choi and Kang (2019) made an analysis of the effectiveness of teachers, correlated with collective professional development. Angnakoon and Allen (2016) explored the nature of the relationship between teacher effectiveness and their degree of collaboration with other school staff. Scientists underlined the importance of this research for development of the teachers' training programs, advanced training courses for teachers and school authorities.

Some studies are devoted to the analysis of complications that arise during the professional development of teachers in the process of professional activity. In particular, scientists note the work schedule, the high cost of professional development activities, family responsibilities, lack of employer support, the unsuitability of the proposed professional development program, and the lack of information about professional development activities (Mu'in et al., 2018).

Much attention is paid to achieving efficiency and improving the school by means of advanced training courses for administrative personnel (Devi & Fernandes, 2019).

In order to examine the relationship between teaching practice and students' academic results, Gil-Izquierdo and Cordero (2018) conducted a study in schools that showed students, whose teachers focused on few teaching methods, got better results than those, who had teachers using greater variety of teaching methods.

There are foreign studies, subjecting to criticism the improvement mechanisms that the TALIS program is based on, analyzing the contradictions existing in the program and contradictions regarding the reform of the teaching profession and teaching (Sørensen & Robertson, 2019).

An additional source of increased interest in this issue is the constant growth in the number of students and teachers in general education institutions (Federal State Statistics Service, 2016; Sheregi, Aref'ev, Konstantinovskii, & Klucharev, 2017). Obviously, this growth can be a source of continuing variability in educational systems.

Thus, we can note the scientific interest in the assessment of the teaching staff, obtained on the basis of a number of indicators comparison. However, the sources, known to the author, study the teachers qualities assessment either one-sidedly (for example, only by age), or highly specialized and generalized, for the needs of educational policies promotion. The modern education system requires working out a set of measures for the development of the pedagogical community of the education system in order to increase its efficiency. Regarding the long-term character of the transformation processes in education, these measures should be based on a comprehensive assessment of the qualities of teachers in a particular regional education system.

Materials and methods

Purpose of the study

At the end of the twentieth century, the evaluation of education effectiveness was based on the model of Mincer (1958). The Mincer model (1958) determines the return (in the form of a wage increase) depending on the number of years spent on education. However, when calculating the return from education, the Mincer model (1958) uses formal educational indicators — the level of basic education and the number of years spent on education. However, to assess the quality of teachers at the international level, these indicators are not sufficient. The content of education and training programs may be completely different in different countries, so it is important to proceed to the assessment of measured knowledge - competency or literacy. Analysis of the research shows that such indicators as education, age and work experience do not explain the effectiveness of the teachers' work. A number of studies look at teachers' quality indicators in the context of the academic results of their students. However, given the fact that it is impossible to assess cross-country differences and effects in such studies, this approach is characterized as highly specialized. Actually, the results of students are not the same even when teachers with equal characteristics teach them. Thus, the basis of our study is the assumption that the traditional indicators of teacher qualities are not decisive in assessing the effectiveness of a teacher. In this regard, the purpose of the study is to compare the qualities of school teachers in the Kirov region and their teaching practice with similar indicators in foreign countries. The study is based on a comparison of data on working conditions, professional education and the development of teachers; the necessity of making administrative decisions in personnel policy is justified. The concept of the research is based on the materials of the international study TALIS 2018 adapted by the author. A survey questionnaire was offered

to collect data from teachers; the results were processed to provide conclusions that would allow working out balanced measures for the development of the pedagogical community of the Kirov region.

Research methods

For a comprehensive analysis of the teaching staff of the of the Kirov region pedagogical community, we used the following methods: collecting empirical data through questioning teachers of general educational organizations of various age and categories, modeling and statistical processing of empirical research results.

Experimental base of research

Collection, analysis and synthesis of research results are carried out on the basis of general education schools of the Kirov region in both urban and rural areas (2018–2019):

- by questioning 1025 teachers of general educational organizations of various age groups (younger, middle and older age groups) and status categories (teachers, administrators and their deputies). The study included general educational organizations of all educational districts of the regions. The questionnaire consisted of 31 questions;

- by analyzing the teaching staff of the pedagogical community through statistical processing of experimental data. The results of the assessment were discussed in the framework of seminars and round tables with the heads of general education schools and representatives of the executive authorities in the field of education at Vyatka State University (over 200 participants);

- in the form of reports and speeches at scientific conferences and seminars of various levels, including international, publications in collections of scientific articles and scientific and methodological periodicals.

Stages of research

The study was conducted in four stages.

The first stage identified the state of the investigated problem in the theory and practice of assessing the qualities of school teachers and their pedagogical practice. For this purpose, we studied and analyzed economic, psychological, pedagogical and methodological literature on the problem of research; observed and analyzed the experience of international studies concerning assessment of teaching and education.

At the second stage, methodological approaches were developed for the comprehensive analysis of the teaching staff of the pedagogical community, and indicators for assessing the pedagogical community were determined. The discussion of generalization results was carried out in the course of presentations at conferences and seminars on management in education.

The third stage was implemented in parallel with the second one, during which the questionnaire was sent out to teachers of educational institutions. General education schools were asked to answer a questionnaire consisting of 31 questions. We recommended that at least five school employees, including a representative of the administration, a young teacher and an experience teacher, answered the questions.

At the fourth stage, a comprehensive analysis of the teaching staff of the pedagogical community was made by means of statistical processing of experimental data. The selected data are necessary to justify the need for administrative decisions in the personnel policy of the education system.

Results

Differences in the character of work among teachers

To identify the character of work activity distribution among teachers, we constructed a

corresponding diagram taking into account the age group and place of work (see Fig. 1). In order to compare the character of working time distribution, the number of weekly academic hours, we have grouped the data into three age groups:

- Younger age group - up to 35 years;
- Middle age group - 35–55 years;
- Older age group - 55 years and older.

The diagram shows the number of weekly academic hours, which, according to teachers, they spend on their activity:

- teaching;
- not related to direct teaching (classroom management, documentation, training schoolchildren for competitions, working with laggards, etc.);
- administrative.

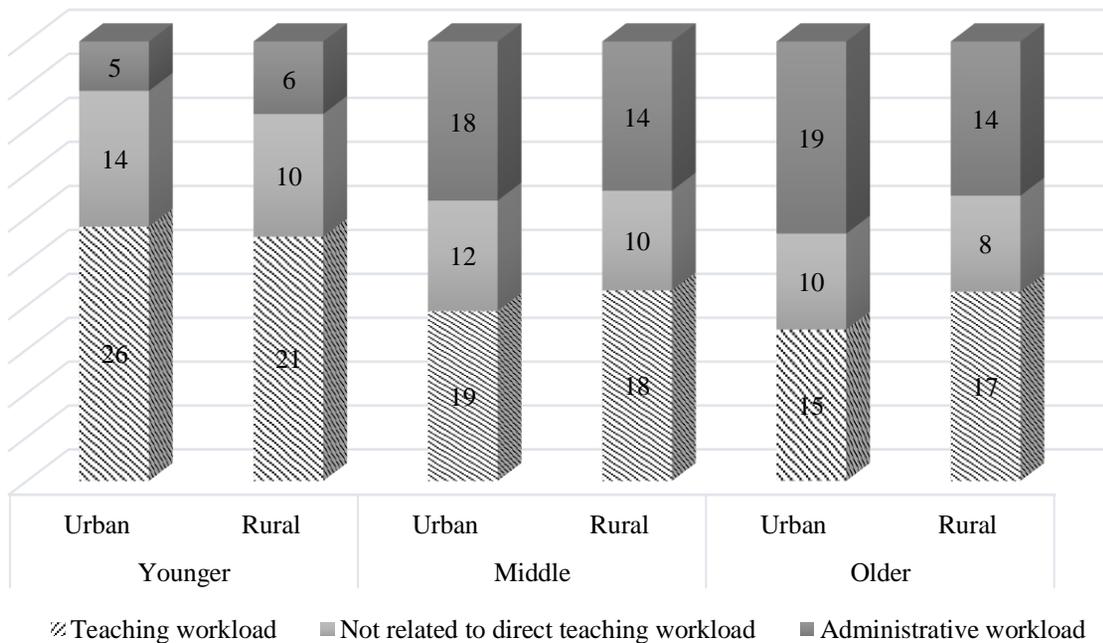


Fig.1. Differences in the character of teachers' work (hours)

We should note that there are differences in the teachers' workload structure, depending on the location of the school. For example, the average teaching load for urban teachers is 20 hours per week, for rural teachers - 19 hours per week. The average workload for administrative activities is 15 hours for the urban sample, and it is 13 hours for the rural sample. The average load for the rest of the work in the city was 12 hours, in the village - 10 hours. Thus, urban teachers have a greater amount of work compared to rural teachers.

The teaching load of teachers in the younger age group is 1.5 times greater than that of teachers in the older age group (23 hours and 16 hours, respectively).

On the contrary, the load connected with administrative activities for teachers of the younger age group is 2.5 times less than for teachers in the older age group (6 hours and 16 hours, respectively). Thus,

with age, teachers experience a partial redistribution of work from teaching to administrative.

To obtain information on the overall workload of teachers, the study included an analysis of the weekly number of hours spent on the performance of all official duties. A comparison of the weekly number of astronomical hours is shown in Fig. 2. Note that on average, teachers spend 44 astronomical hours a week on their official duties, and urban teachers work 4 hours more than teachers from rural areas (46 and 42 hours, respectively).

It is noteworthy that the direct teaching in the workload structure of a teacher takes 51% of the work time.

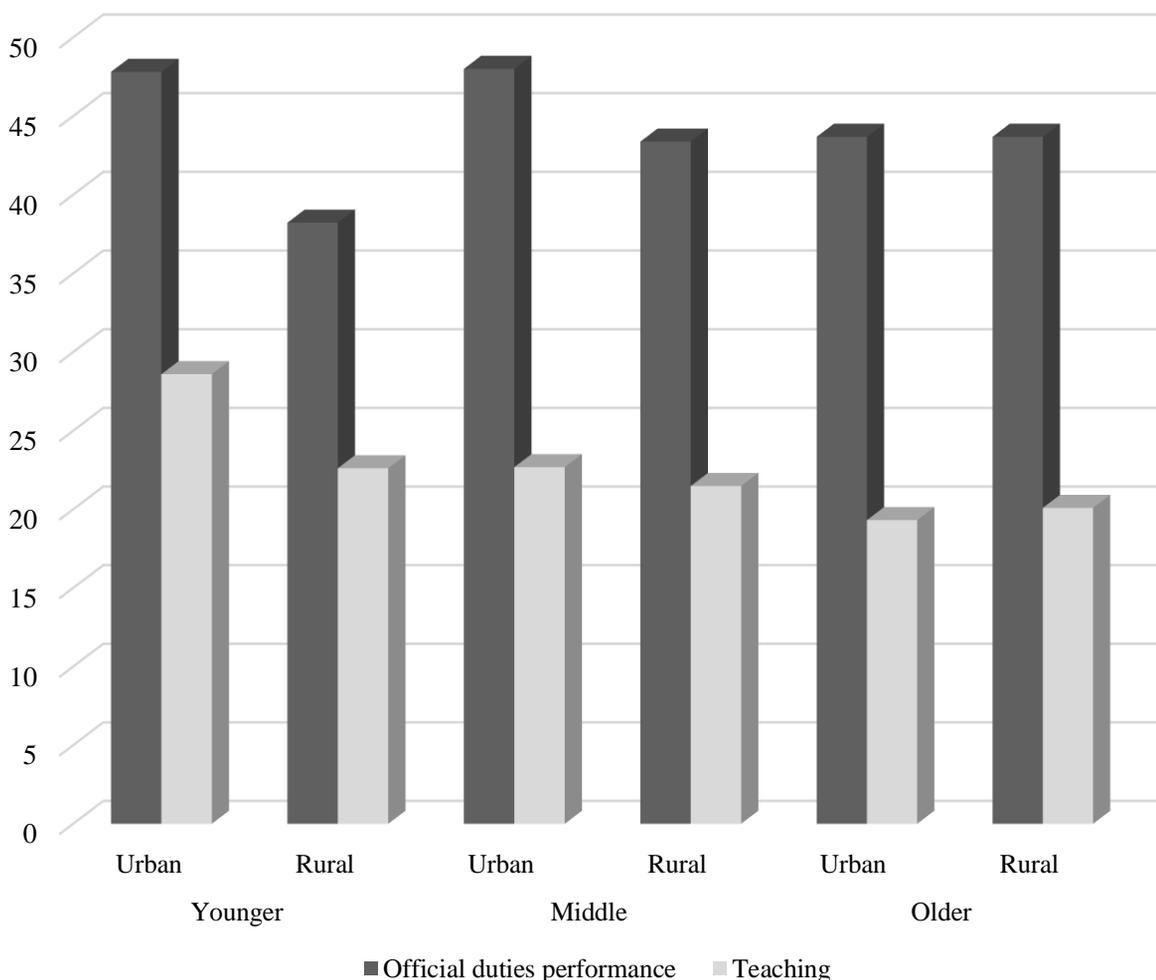


Fig.2. Number of weekly hours for the performance of official teachers ' duties

The distribution of teachers' workload, other than teaching, is shown in Fig. 3. We should note that most of the time teachers devote to individual planning and preparation for lessons (23%), as well as to general administrative work (21%). On the other hand, participation in extracurricular activities (5%) and

communication with parents and guardians (5%) take the smallest amount of time in the structure of official duties.

The distribution of time for activities in teaching suggests that, on average, 80% of the lesson time is devoted to actual learning, 10% is spent on maintaining discipline and organizational tasks (including registration of attendance and distribution of information materials).

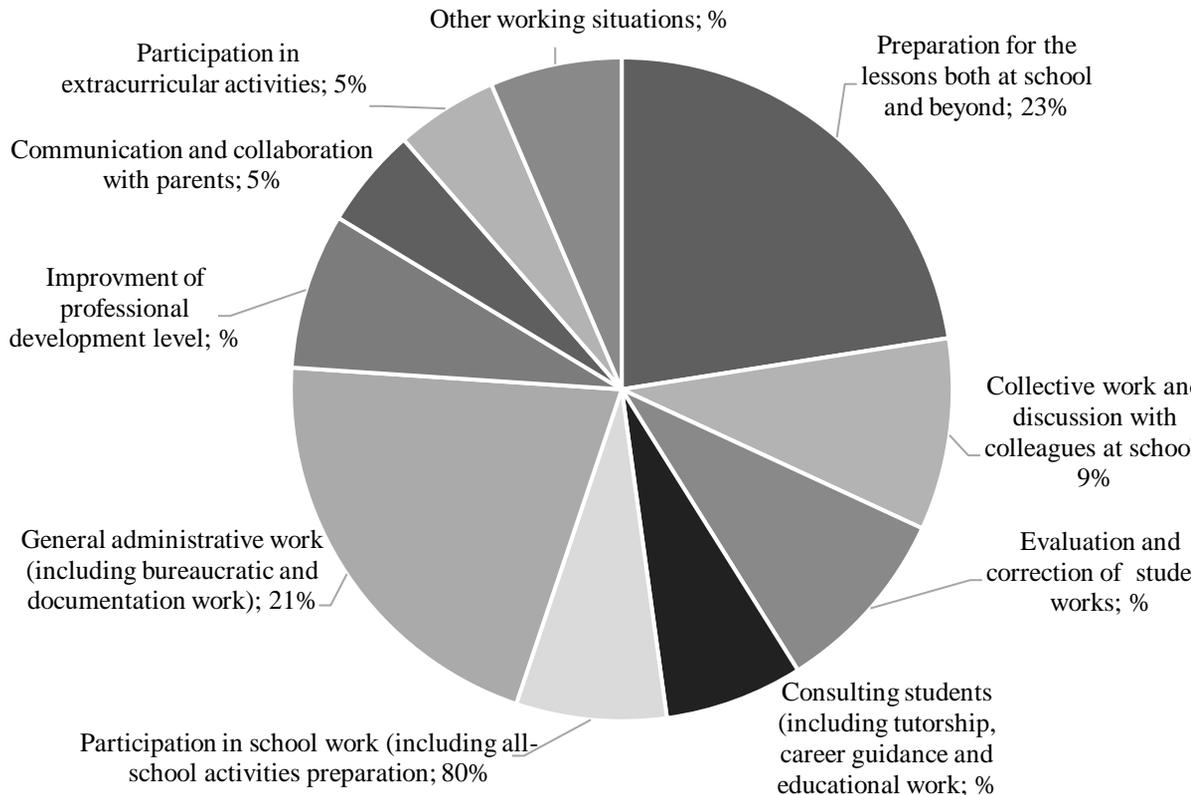


Fig.3. Teachers' workload distribution

If we use the results of the international TALIS 2013 study to compare them with the obtained data, then we will find that on average teachers in other countries spend on their official duties 6 hours a week less than teachers in the Kirov region (38 and 44 hours, respectively). In the Kirov region, teachers spend 2.5 hours a week more on direct teaching than teachers in other countries (22 and 19.5 hours, respectively). Among the individual duties, a significant difference is observed in the number of hours devoted to general administrative work, including work with documentation and bureaucratic work (in the Kirov region, teachers spend 12 hours a week, in other countries - 3 hours).

The structure of working teachers' education

Another important aspect of analytics is the possibility to define the elements included in the education of working teachers, and to characterize the level of the teacher's training on these elements at the time of graduation (see Fig. 4).

Note that, according to the following elements of education, almost all teachers report on studying these issues when they receive their education, but they estimate their training level after completing their studies as average:

- the content of some or all of the subjects that I teach;
- methodology of some or all of the subjects that I teach;
- issues of general pedagogy, theory of training and education;
- pedagogical practice in some or all of the subjects that I teach.

Most of the teachers mark the following elements as the issues they did not study in the course their education, and, accordingly, they feel their insufficient preparation for teaching activities:

- teaching in the classroom with different levels of children's development, including inclusive education;
- teaching in multinational and multilingual classes.

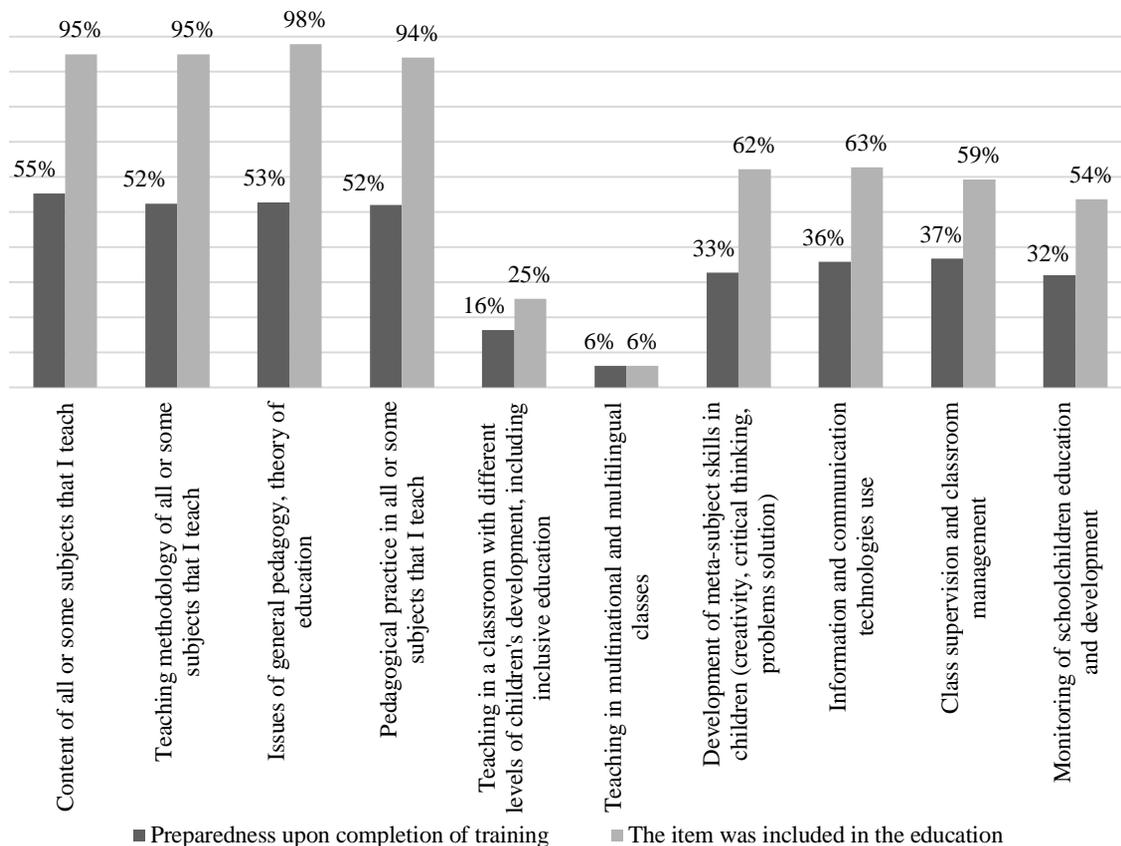


Fig. 4. Working teachers' education structure

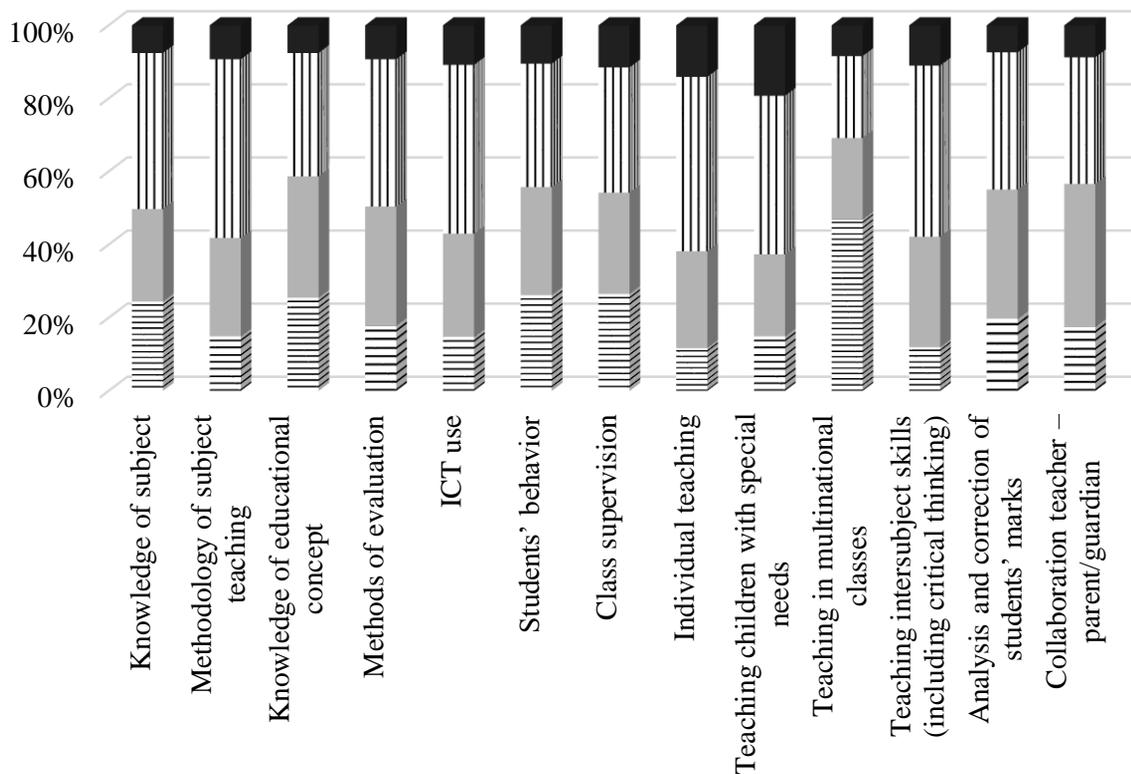
It is worth mentioning that teachers estimate the completeness of their knowledge upon graduation at the level of 38% of the required level for performing their professional duties. We should note that only 13% of teachers report a lack of professional education, hence one can judge about the average level of teachers' training in the system of professional and higher education.

To get a full picture of teachers' training level at the time of their graduation, we asked them a

question about the knowledge that were to be obtained independently, because they did not receive it in the learning process. The largest number of questioned teachers (19%) independently obtained the knowledge necessary to prepare schoolchildren for State Exams. In addition, common practice was the independent education in the field of school documentation keeping (15%), work with students with disabilities (13%), participation of schoolchildren in competitions (13%), use of ICT in education (12%). Taking into account that the average age of respondents was 45 years old, we can talk about the difficulties that have arisen for teachers in areas of knowledge related to the innovations in the modern education system.

The structure of teachers' professional development needs

To identify the character of the professional development needs, we analyzed the degree of needs urgency in the areas of professional development (see Fig. 5).



□ Do not need at present ■ Low level of need ▨ Moderate level of need ■ High level of need

Fig. 5. Degree of urgency in the professional development needs

In most areas of professional development, the prevalence of the share of teachers with a moderate level of need for knowledge in these areas is characteristic. It should be noted that almost one in five expresses a high interest in learning the technologies of individual education, teaching children with special needs (including children with disabilities and gifted children), as well as issues of class supervision.

According to teachers, it is necessary for them to gain additional knowledge and experience in the

following areas: working with students with disabilities (19.8%), preparing schoolchildren for State Exams (16.1%) and working with gifted schoolchildren (15.7%). This conclusion correlates with the deficit of education received by teachers, which was mentioned above.

If we use the results of the international study TALIS 2013 to compare with the obtained data, it can be noted that, on average, foreign teachers indicate similar professional needs for professional development. However, in the most developed countries, teachers note a significantly higher degree of professional development need (a high level of need for professional development is noted by about 10% of teachers in the Kirov region, while over 51% of teachers in the most developed countries state a high level of need).

Discussions

Note that the discussed aspect in the study is comparison of the obtained results with the results of the international TALIS 2013 study. On the one hand, the similarity of the questions suggests a general basis for comparing the obtained data. On the other hand, the comparison results do not allow us to take into account the existing national socio-economic conditions.

At the same time, particular conclusions allow us to identify the fundamental differences of pedagogical practice in the Kirov region. For example, the increased volume of workload and the volume of general administrative work allow us to explain rapid professional burnout of teachers in the region. Rather low degree of need for professional development in comparison with the leading countries may indicate a lower level of critical thinking of teachers in the Kirov region or a lack of information about the opportunities for high quality professional development.

Conclusion

As a result of a study conducted in 2018–2019, in which 1025 teachers of secondary schools from the Kirov region took part, the author of the article found: on the average, teachers spend 44 astronomical hours per week on their official duties, and urban teachers work 4 hours more than rural teachers; the teaching load of the younger age group teachers is 1.5 times greater than that of the older age group teachers; foreign teachers spend 6 hours per week less to perform their official duties than teachers of the Kirov region; teachers spend most of their time on individual planning and preparation for lessons (23%), as well as on general administrative work (21%), while participating in extracurricular activities (5%) and communication with parents and guardians (5%) takes the least part of their time; professional knowledge of teachers acquired in the process of their education is estimated at 38% of the level of full preparedness for performing professional duties; every fifth educator notes a high interest in learning the technologies of individual teaching, teaching children with special needs and issues of class supervision. The research results allow us to work out a valid set of measures for the development of the pedagogical community of the regional education system.

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