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# Professional Training and Professional Deficits of Teachers: a comparative study

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## Abstract

Teachers with similar qualification, experience and other professional characteristics still may teach their pupils with quite different results. It is supposed that there are some connections between the results of teaching and the measures of improving professional conditions of teachers. The aim of the research is to analyze the indices which characterize the quality of teaching staff in order to offer the measures which could help to improve economic and normative regulations of additional training and professional development of teachers. The data analysis is based on the conception of the third Teaching and Learning International Survey. The research was done in 2019–2021 in the Kirov region (a region of the Russian Federation). The work of 1146 teachers from city and village schools was considered in the research. Data collection by means of a questionnaire-based survey of teachers is the leading method of the research. The main need of teachers' professional development is connected with individual teaching, with the issues of individual education of pupils with special needs and with using digital technologies at work. The share of teachers with the basic education on the subject taught by them is 65% in city schools and 51% in village schools. The main trends of developing school education are considered lessening the “bureaucracy” load on teachers by means of taking on additional staff, as well as special support of pupils with special needs and investments in digital technologies.

*Keywords:* professional training, professional deficits of teachers, teacher.

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## **Introduction**

Working out effective measures of improving economic and normative regulations of teachers' work should be based on the analysis of features which characterize the quality of teaching staff. Effective measures of organizing working conditions for teachers are of great importance for improving the quality of education (Sancar, Atal & Deryakulu, 2021).

Teachers' working conditions are connected with specific characteristics of teaching work. So the existing school conditions for teachers should contribute to their professional development. Social environment of teachers, organization requirements to them, social relations between colleague-teachers, as well as many other factors play a very important role here. Still, taking into account that pupils' learning results differ from teacher to teacher in similar conditions, it is possible to presume that there is some connection between the learning-teaching results and the working environment of teachers.

The research considers the quality of teaching staff of city and village schools in comparison with the results of similar researches in other countries.

## **Purpose and objectives of the study**

The research analyzes the features which influence the quality of teaching staff and offers some measures aiming at improving economic and normative regulations of additional training and professional development of teachers. The paper offers a system of indices which characterize teachers' need in professional development, it shows if the teachers' specialization corresponds with the subjects they teach and it also shows the trends of development of the school system.

## **Literature review**

Different aspects are considered in research papers dealing with professional deficits and with the fact if the teachers' specialization corresponds with the subjects they teach. It is connected with the analysis of quality of the teaching staff and effectiveness of the educational system on the whole.

Zabolotska, Zhyliak, Hevchuk, Petrenko, & Alienko (2021) considers the importance of finding the key trends of the educational system so that it could adjust to the conditions of digitalization of the society. Nowadays the main condition of developing the educational system consists in improving and developing teachers' digital competence. Those who use special competences in their teaching practice can achieve good results in teaching-learning process, especially as for pupils with special educational needs (Firestone, Aramburo & Cruz, 2021).

Palermo & Thomson (2019) state that teachers' inner motivation and their beliefs in their ability to further develop professional skills are of great importance for learning results of their pupils. It is also considered that there is a certain connection between professional interest, wish for career progress, and motivation for teaching (Karakis, 2021). The level of professional knowledge and skills of teachers in the subject taught by them can be connected with the age structure of teaching staff (Hamalainen et al., 2021). In the process of young teachers' adaptation to working there appear certain factors which could change practical work of teachers (Molle, 2021). Also the approaches to teaching future teachers differ considerably (Chikunda, 2008). These approaches influence the way the young teachers accept the conditions of their teaching practice. A well-developed structure of future teachers' practice could help to overcome young teachers' possible negative impressions of their working conditions (Barkauskaite & Pečiuliauskienė, 2011; Caldwell, Whewel & Heaton, 2020). Through future teachers' practical activity they get pedagogical experience (Kwatubana & Markbosch, 2019; Yin & Jiang, 2014; Wang, Utemov, Krivonozhkina, Liu, & Galushkin, 2018). There are some papers dealing with combining the approaches to organizing future teachers' practice, for example, with the help of on-line groups (Zheng, Li & Zheng, 2011; Kuojun, Peng, Duyu & Jiali, 2019). There should be developed suitable and sustainable financial mechanisms for improving the quality of future teachers' practical activity (Amollo, Lilian & Boniface, 2018). Zhang and Zhang (2017) ground the connection between the quality of future teachers' teaching practice and the effectiveness of their future teaching work.

The research of the character of teachers' work considers effectiveness of the system of education on the whole (Ye & Singh, 2017; Sibgatullina, Utemov, Galushkin, & Zaitseva, 2019). Also the peculiar features of school management are connected the pupils' learning results (Sims, 2019). Teaching practice influences motivation of teachers to stay in the profession (Grant, Jeon. & Buettner, 2019). The character of teachers' work should contribute to their professional advance (Ni, 2012).

Sancar et al. (2021) consider that additional training of teachers is very important for improving their pupils' progress. Woulfin & Jones (2021) agree with the above-mentioned, they also think that additional training is good for teachers' professional adaptation. Wexler (2021) offers models of teachers' learning together with teaching, the process is aiming at professional development. Haug & Mork (2021) generalize the results of researching teachers' professional development. It is considered that teachers are practice-oriented, so professional development should offer the ways which are realizable, applicable in practice, simple, and not time-consuming.

In some papers deficit of teachers is mentioned. For example, Makoelle & Burmistrova (2021) mention that just a few teachers are ready for inclusive education. Some researchers consider the structure of teachers' knowledge on the subjects taught by them.

Rodrigues, Brunheira, & Serrazina (2021) characterize the structure of teachers' knowledge on the processes of mathematic reasoning. The issues of discipline practice and pupils' involvement into it are considered (Dalvi, Silva Mangiante & Wendell, 2021). Specialized knowledge of primary education teachers (Vásquez Ortiz & Alsina, 2019) and of secondary school physical education teachers (Ward., He, Wang & Li, 2018) is analyzed. There are viewpoints that there should be used special methods of facilitation in future teachers' practice. Practice-embedded teachers' learning should take place with teachers-tutors for getting some practice with pupils in the classroom (Gibbons, Lewis, Nieman & Resnick, 2021). Rafiza & Farrah Dina (2014) consider the issues of continuous electronic professional development of teachers. Copur-Gencturk & Thacker (2021) conclude that it is necessary to pay special attention to the criteria used in assessing the results of teachers' training, and that there is no connection between self-reports of teachers and the direct assessment of their knowledge.

Thus the issue of analyzing the quality of teaching staff is topical. Still assessment of professional deficits and analysis of compatibility of teachers' specialization in the subjects taught by them are not complex, so that a comparative research of the issues is up-to-date and topical.

### **Methodology**

The research is based on the conception of third Teaching and Learning International Survey (Teaching and Learning International Survey, TALIS – 2018). Each research block of TALIS touches upon the topics and priorities connected with professional characteristics and teaching practice on both institutional and individual levels (Ainley & Carstens, 2018).

The research deals with the topics which allow characterizing the system of needs in professional development of teachers, compatibility of teachers' basic education with the subjects they teach, and assessing the trends in school development. Thus the approach of the research helps to compare the indices of teaching staff quality with the indices of other national educational systems in order to check if the measures on professional conditions of teachers worked out are well grounded.

Data collection, analysis, and the general conclusion are made in the Kirov region (a region of the RF) for city schools and village schools (2019–2021). The data were collected by means of a questionnaire offered to the teachers. 1146 teachers participated in the research, 59 % teachers from village schools, 41% teachers from city schools. The research results were discussed by the professional community, i. e. by teachers, head-masters/head-mistresses, and representatives of executive power in the sphere of education. So that special measures were worked out aiming at improving economic and normative regulations of additional training and professional development of teachers.

## Results

### 1. A System of Needs in Professional Development of Teachers

In order to monitor the system of needs in teachers' professional development a four point grading scale of importance was offered for thirteen possible groups of needs: no need now, a low degree of need, a moderate degree of need, a high degree of need. For finding out the average point of the need degree all the data acquired were made into a 100-point scale and the integral index was calculated. The results are presented in Figure. 1.

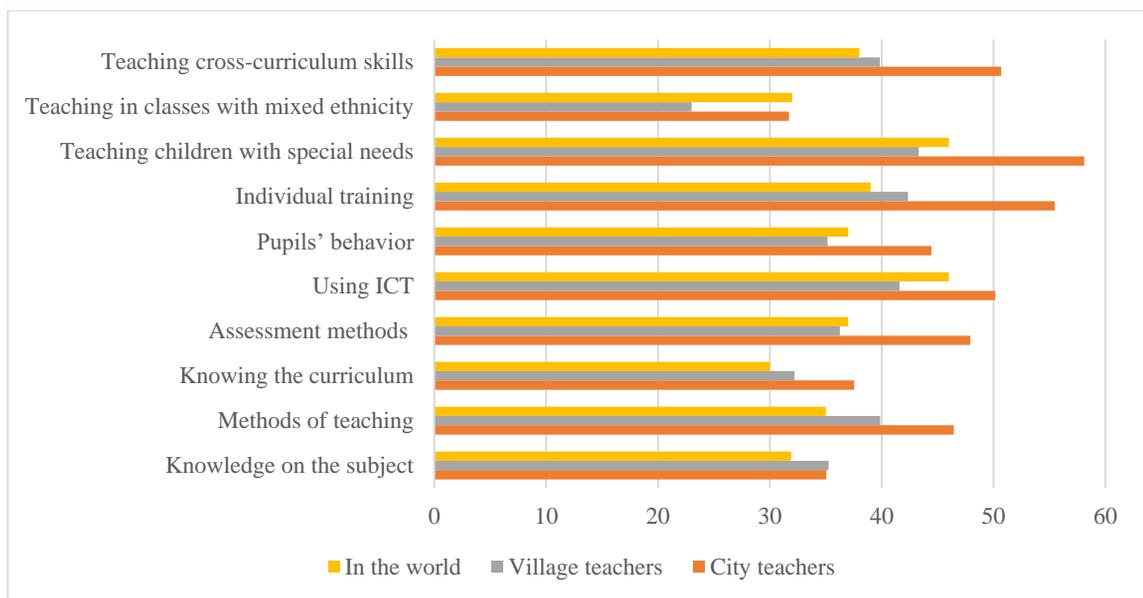


Figure 1. The general indices of need in teachers' professional development trends, %

The highest integral indices are characteristic of the following needs: "individual training", "teaching children with special needs", and "information and communication technologies (ICT)". The lowest integral index is characteristic of the need "teaching in classes with mixed ethnicity". Village teachers' index of need in teachers' professional development is 36%, while the same index of city teachers is 46%. On the average in the world this index is 38%, still in countries with the most successfully developed educational system it is about 70% (OECD, 2014). In the world's major economies the need in professional development is the highest (a high index of the need in professional development is characteristic only of 10% teachers of the Kirov region, while in the world's major economies a high index of the need is characteristic of 51%). On the whole effectiveness of the educational system correlates with teachers' need in professional development.

### 2. Correspondence of teachers' basic education with the subjects they teach

A one more important aspect of the data collected in the research is the analysis of correspondence of teachers' basic education with the subjects they teach at school. From 11 groups of subjects it was offered to choose the subjects taught by the teacher. It was necessary to state if they were included in the basic higher education curriculum of the teacher. The results are shown in Figure 2. The results of the comparative analysis of city and village teachers are presented in Figure 3. Basic higher education means here not only basic higher pedagogical education, but also additional training.

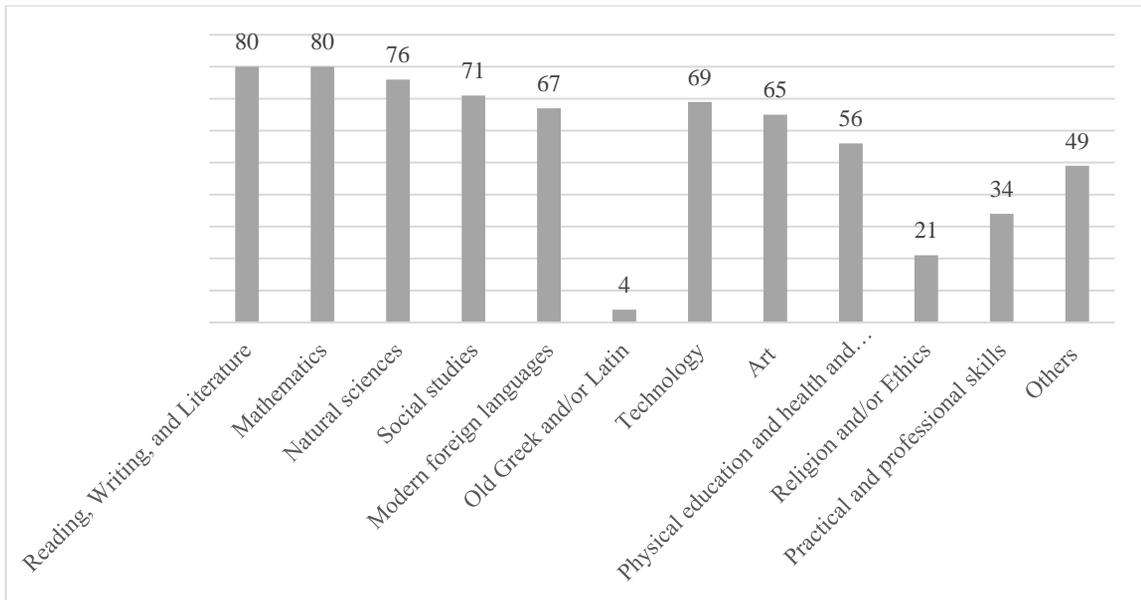


Figure 2. The share of teachers with basic higher education, %

The share of teachers with basic higher education on the subject they teach is 65% in city schools and 51% in village schools. 38% teachers of foreign language, 29% teachers of natural sciences, 36% teachers of social studies, 37% teachers of technology, 44% teachers of physical education and health and safety training course lack basic higher education on the subject, which is quite an issue.

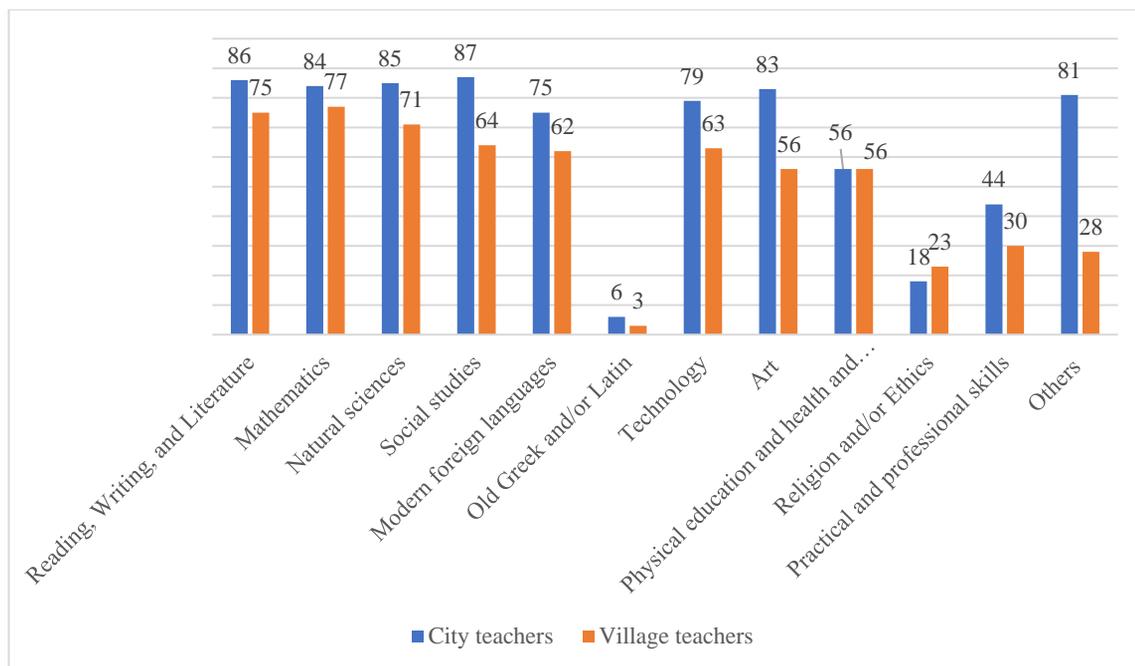


Figure 3. The share of city and village teachers in the Kirov region with basic higher education, %

### 3. Assessing the trends of development of the educational organization

Teachers' reflective assessment of the possible way of their school development was a one more object of research. The trend of the school's development offered by the teacher is connected with one's professional involvement, thus it allows to give an extra assessment of professional deficits. Assessing the trends of development of the educational organization by the teachers who work there is represented by answering a complex question on the possible cost items, in case the school's budgeting were increased by 5%. The respondents were to range nine cost items according to their importance (See the table).

Table 1. Assessing the trends of development of the educational organization, %

Items of cost	City school	Village school
Lessening the "bureaucracy" load on teachers by means of taking on additional staff	96	97
Support of pupils with special needs	88	86

Investment in ICT	86	85
Raise in teachers' wages	84	83
Support of children in troubled family situations	76	80
Teachers' professional development	75	73
Improvement of school buildings	61	32
Decreasing the number of pupils in a class by means of taking on additional teaching staff	51	57

So of highest priority are such items as lessening the “bureaucracy” load on teachers by means of taking on additional staff, support of pupils with special needs, and investment in ICT. The results are connected with the pointed out professional deficits of teachers. Teachers from city and village schools showed sameness of views. The only difference they showed was in the item “improvement of school buildings”, which was low estimated by village teachers, which is explainable by difference in professional ambitions of city and village teachers.

## Discussion

In 2019–2021 as a result of researching points of view of 1146 teachers from Central Russia it was found out that the most important teachers' need in professional development is connected with issues of individual training, with teaching pupils with special needs, and with using digital technologies. The share of teachers with basic higher education on the subject they teach is 65% in city schools and 51% in village schools. Lessening the “bureaucracy” load on teachers by means of taking on additional staff, support of pupils with special needs, and investment in ICT are considered to be the trends of the highest priority in school development. The trend “improvement of school buildings” was lower estimated by teachers of village schools, as compared with teachers of city schools.

Effective measures in organizing working conditions for teachers, including advanced training of teachers, are of vital importance for achieving a higher quality of education. The research results allow recommending to educational executive power bodies to work out measures of improving economic and normative regulations of school teachers' working conditions.

Schools mostly take into account the interests of the territories where they are situated. So it is discussable whether it is necessary to control and standardize the level of professional ambitions of teachers in city and village schools.

## Conclusion

Thus the level of village teachers' need in additional training and professional development is low and the index of lacking special basic training in the subject they teach is high. There is also difference between the level of professional ambitions of teachers in city and village schools. The research also shows that Russian teachers' level of need in professional development is not high enough as compared with that of the countries where the educational system is successfully developing.

The trends stated by the research are possible to overcome, for example, by means of working out and taking the measures of improving economic and normative regulations of additional training and professional development of teachers in accordance with needs of certain educational organizations, including village territories. The measures could include:

- 1) Working out and accepting regional programs on teachers' corporate professional development, the programs are to be oriented to school needs (teachers' training at school, supervision by a specialist in teachers' training, professional development guiding);
- 2) Courses of teachers' additional training and professional development, which should be announced and planned for the purpose of increasing education quality;
- 3) Working out and putting in practice short-terms programs of teachers' retraining together with universities and institutes for advanced studies of the region, the programs should prepare them for taking in the profession within a reasonable period of time.

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