

NATIONAL RESEARCH UNIVERSITY HIGHER SCHOOL OF ECONOMICS
INSTITUTE OF EDUCATION

Katsiaryna M. Kukso

PROFESSIONAL LEADERSHIP DISTRIBUTION
IN GENERAL EDUCATION ORGANIZATIONS

**PhD Dissertation Summary for the purpose of obtaining
Doctor of Philosophy in Education HSE**

**Academic Supervisor:
Professor Konstantin M. Ushakov,
Doctor of Science**

Moscow - 2018

The dissertation was prepared in Institute of Education, National Research University Higher School of Economics. Location: 16 Potapovsky per., Building 10, Moscow, Russia, 101000. Mailing address: 20 Myasnitskaya ul., Moscow, Russia 101000

Publications:

Bysik N., Evstigneeva N., Isaeva N., Kukso K., Harris A., Jones M. A missing link? Contemporary insights into principal preparation and training in Russia // *Asia Pacific Journal of Education*. 2015. Vol. 3. No. 35. P. 331-342.

Ushakov K.M., Kukso K.M. Advantages of Social Network Analysis in Educational Research // *Russian Education and Society*. 2015. Vol. 57. No. 10. P. 871-888.

Kukso K.M. Territorial educational complexes of Moscow: was it possible to create new connections? // *Science and School*. 2017. . 4. P. 122-130.

Conferences:

European Conference of Educational Research (ECER) 2015 Education and Transition - Contributions from Educational Research (Budapest), September 7-11, 2015. Report: Professional Leadership Distribution Patterns (Evidence from Russia).

American Educational Research Association (AERA) 2016 Annual Meeting "Public Scholarship to Educate Diverse Democracies" (Washington), April 7-12 2016. Report: A missing link? Contemporary insights into principal preparation and training in Russia

Autumn Conference 2015, MSSSES (Moscow), September 28-30, 2015. Report: Knowledge distribution in professional networks

XII Annual Conference „Trends in Education Development. Leadership in School and Pre-School Education: Yesterday, Today and Tomorrow” (Moscow), February 19-20, 2015. Report: Professional Influence Distribution within School Management Teams.

XIII Annual Conference " Trends in Education Development: Who is Teaching the Teachers and What?" (Moscow), 18-19, 2016. Report: Educational Complexes: are Teachers Learning More?

Introduction

In the Russian Federation, the period of institutional reforms has been completed at large: the Unified State Exam, per capita financing, and the transition of schools to Federal State Educational Standards were implemented. Over the past decade the substantial growth in financing volumes and large-scale efforts aimed at reforming state educational institutions have led to some growth in the position of Russia in international comparative studies of PISA, TIMMS, PIRLS¹. However, at the moment it is difficult to deny considerable economic restrictions, which do not allow to keep the same high level of public investment into school infrastructure, teachers' human capital and an attractive image of school job positions in the eyes of the most talented university graduates².

Under the economic constraints, it seems important to look for such approaches to school reforms, which would be aimed at improving the quality of teaching and allow achieving a maximum increase in the quality of school education with limited costs. As one of the key factors contributing to the enhancement of the educational system effectiveness, the international comparative study conducted by McKinsey³ sees reforms directed mainly at the improvement of the lesson quality. "No reforms can be implemented until what happens in class changes" (M. Barber). At the same time, costly institutional reforms, necessary for managerial and financial reasons, do not bring a tangible increase in educational outcomes⁴.

One of the possible ways to improve the lesson quality is to use school internal professional resources. The resources of professional structure, or the totality of the relationships of teachers with one another while addressing issues related to teaching, should be referred to such, just to name a few.

One of the key factors of professional development at the expense of internal resources is the distribution of professional leadership within the collective. The distributed professional leadership

¹ Comparative analysis of PISA and TIMSS tests results in Russian and European Countries / . . . Khavenson, Y.D.Kersha; National Research University «High School of Economics», Institute of Education. . . : NRU HSE, 2017. — 32 p.

² Akindinova N. V., Kuzminov Ya., Yasin E. G. Ekonomika Rossii: pered dolgim perekhodom // Voprosy ekonomiki. — 2016. . 6. P. 5-35.

Froumin I. D. et al. Obrazovatel'naya politika i dolgoremennyye tendencii // Social'naya politika v Rossii: dolgosrochnyye tendencii i izmeneniya poslednih let/Otv. red.: YA.I. Kuzminov, L.N. Ovcharova, L.I. Yakobson.—M.: Izdatelskiy dom NRU HSE. 2015. P. 239-289.

³ Barber ., Murshed M. How to reach a stable high quality of school education. Lessons of the analysis of the best systems of school education in the world // Educational Studies (Voprosy Obrazovaniya). 2008. . 3. P. 7-60.

⁴ Ibid

is defined as a practice of constant interaction necessary for solving teaching-related issues within the collective, which is channeled not through the administration, but through informal professional leaders. In the theory of social capital (P. Bourdieu, J. Coleman), the organization is seen not simply as a group of employees, each of whom possesses a certain level of human capital, but as a set of professional ties between them^{5 6}. Each teacher has not only some formal job position, but also a certain social capital, that is (s)he is included into the structure of interactions. In this regard, a question arises as to how these interactions are distributed within the organization, whether it is done evenly and if there are "centers" of these interactions. It becomes necessary to identify teachers who are most active and valuable from the point of view of these interactions and whom we will henceforth refer to as "professional leaders".

However, by now Russian schools rely primarily on formal administration structures, that is professional interaction is built around the administrative vertical axis, the heads of school methodological associations or departments. At the same time, the potential and the resource of leading educators who do not have formal leadership status are virtually not used. In this paper, an attempt is made to examine in detail the formal (that is, reflected in official powers) and informal (that is, reflected in sustainable models of professional interactions) structure of educational organizations, which together represent a real structure of the organization⁷. The school is seen as an organization with multiple leadership, both formal and informal. However, the distribution of informal leadership still remains a subject-matter, which has not been researched enough. The use and management of this resource cannot be effective unless it is given a due scrutiny.

Understanding of the role and characteristics of distributed professional leadership in general education organizations can be a basis for developing of teachers' internal potential through professional exchange of experience. **The problem**, therefore, is in insufficient empirical research and application of the informal leadership potential in the management and development of general education organizations.

⁵ Bourdieu P. The Forms of capital // Economic Sociology. 2002. Vol. 3. . 5. P. 60-75

⁶ Coleman J. S. Social capital in the creation of human capital // American Journal of Sociology. 1988. Vol. 94. . 95-120.

⁷ Ushakov . . Diagnostics of the current structure of educational organization // Educational Studies (Voprosy Obrazovaniya). 2013. . 4. P. 46-60.

Background

Leadership in organization management is one of the most popular topics in management. The central problems of leadership are highlighted in the works of R. Beyls, W. Bennis, M. Weber, P. Drucker, A. Zaleznik, K. Levin, R. Mann, R. Stogdill, F. Fiedler, M. Follet, K. Hollander. This topic has been dealt with by such Russian researchers as S.A. Alifanov, G.K. Ashin, T.Y. Bazarov, I.P.Volkov, N.V. Lomova, R.L. Krichevsky, B.D. Parygin and others.

A separate group of research is represented by the scholars who describe the role of leadership in the educational context. In the Russian academic environment, the subject-matter of leadership in school management was presented in the writings of V. V. Davydov, A. G. Kasprzhak, V. Y. Krichevsky, L. D. Kudryashova, V. S. Lazarev, A.M. Moiseev, S.D. Neverkovich, A.I. Panarin, M.M. Potashnik, L.I. Umansky, K.M. Ushakov, P.V. Khudominsky, T.I. Shamova, and others.

Among the most significant foreign authors we should mention M. Barber, B. Bass, T. Bush, C. Day, K. Leithwood, R. Marzano, B. Evolio, A. Harris, F. Hellinger, R. Heck, and others.

Understanding of leadership is very diverse in theoretical and empirical work. In this study, we focus on a narrow aspect of professional instructional (or methodical) leadership. The foundations of this approach are laid down in the works of M. Barber, K. Leithwood, E. Hargreaves, M. Fullan, and others. Leadership practice as a professional support of teachers is positively correlated with teaching quality in school (K. Day, P. Sammons, D. Hopkins and others).

An equally important aspect of the analysis of organizational leadership is articulated in the question about research methods most suitable for specific situations of leadership. Methodological problems of leadership research are discussed in the works of J. Spillane, K. Leithwood, A. Harris, C. Bonacich.

The next methodological problem is that the research conducted in Russia is focusing primarily at the principals' attitudes about their managerial style. At the same time, real practices of teachers' interaction remain underexplored. This contradiction can be removed by using the social network analysis method to research professional interactions. Social network analysis allows to investigate existing practices of interaction - and as a consequence, to identify informal professional leaders. As the main works, which are using network methodology for the analysis of distributed leadership, it is possible to name the studies of K. Leana, N. Molenaar, U. Penuel, J. Spillane, C. Frank, and others; In Russia, the methodology of network analysis applied to education is used in the research of D.A. Alexandrov, M.M. Yudkevich and others.

Despite a thorough theoretical elaboration of various issues of leadership in educational organizations, at present *there are no Russian empirical studies* that would help solve the problem of informal professional leadership in schools. As a rule, the word "leader" is seen in reference to only the formal head of the organization. Although in theory the concepts of leadership and management are presented as not being the same, the empirical research focuses only on principals⁸.

The dissertation pays more attention to the methodology of research of professional informal leadership and offers detailed empirical data on the material of Russian schools.

Research Questions

This study aims to answer following questions:

How is professional leadership distributed among representatives of the formal and informal structure of educational organizations?

Which role in teachers' professional development do different levels of formal structure play?

What are the main barriers in using the resource of professional leadership for teachers' assistance and support?

What are the opportunities for developing in-school structures of professional support for teachers through the distribution of leadership?

Research Purpose and Objectives

The purpose of the research is to investigate informal leadership distribution structure in educational organizations using social network analysis.

The objectives of the research are as follows:

⁸ As examples we can specify:

Kasprzhak A. G., Isaeva N. V. Pochemu direktora avtoritarny i chto iz etogo sleduet? // Narodnoe obrazovanie. 2015. 8. P. 52-66.

Pinskaya M. A., Lenskaya E. A., Ponomareva A.A., Brun I. V., Kosaretskii S. G., Saveleva M. B. Chto my uznali o nashikh uchiteliakh i direktorakh? Rezultaty mezhdunarodnogo sravnitel'nogo issledovaniia TALIS-2013 // Narodnoe obrazovanie. 2015. 6. P. 34-46.

Farkhatdinov N. G., Evstigneeva N.V., urakin D. Y. Modeli upravleniia obshcheobrazovatelnoi organizatsiei v usloviakh reform: opyt sotsiologicheskogo analiza // Educational Studies (Voprosy Obrazovaniya). 2015. 2. P. 196-219.

to adapt the application of the network analysis method to the study of the informal professional leadership in Russian general education organizations;

to compare the structures of formal administration and informal professional leadership in general education organizations;

to assess the existing difficulties of professional support for teachers within the organization

to evaluate the possibilities of using the resource of informal leadership for the development of organizations.

Theoretical Framework

The works in the field of leadership in organization management, distributed leadership, the methodology of the network analysis formed **the theoretical and methodological background**. In the course of the research, the methods of theoretical analysis, empirical methods (questionnaire), network analysis method, as well as statistical methods (comparison of means, Kruskal-Wallis test) were used.

It is worthwhile to clarify that the network analysis originated as one of the methods of mathematical data processing. However, the bulk of empirical works contributed to the expansion of our understanding of the network analysis: a conceptual apparatus was formed, as well as an extensive theoretical base⁹. In the framework of the methodology of the network analysis, organizations are seen as social networks, in this paper – as a set of professional relationships between employees¹⁰. This approach enables us to consider the organization holistically and at the same time to receive data about each employee and his/her professional role in the collective.

One of the main indicators of leadership in social networks is the indicator of centrality of each of the network participants (or nodes). Centrality is a group of metrics that allow us to

⁹ Hanneman R., Riddle M. Introduction to social network methods // Network. University of California, 2005. Vol. 46, 7. P. 5128–5130.

¹⁰ Ushakov . . . , uks . . . N. Potential of the network analysis for research in education // Narodnoe Obrazovanie. 2015. 3. P. 79-88.

determine the level of significance of every node¹¹. For example, in this paper we use the centrality index by degree, that is by the number of professional links with other teachers in the organization¹².

Research Methodology

Process

One of the key features of this study is that it uses the data of the consulting project "The Social Capital of Educational Organizations", conducted by the Publishing Company "September". School principals can initiate this research in their teams and receive an automated report on the school. The report contains general information about respondents' answers, visualization of school networks of professional and personal interactions, and some consulting recommendations on data interpretation. All responses are collected in a common database, which became the basis for the study.

The respondents were asked to fill in the questionnaire form via the online service developed by the research group. All the school staff took part in the research, apart from the technical workers. The questionnaire consisted of three parts: the first part specified the portrait of the respondents (gender, age, the length of service, the job position, the subject area, etc.), the second part asked the questions directly about the interactions within the school (the frequency of class attendance, the participation in school groups or teams, conflict resolution, the level of trust, etc.). And in the third part, with the help of sociometric questions, professional and personal interactions in the collective were revealed.

The consulting approach determines the nature of the dissertation study: it is aimed both at an empirical analysis of general trends and on the further consulting recommendations for school heads.

Research Sample

The research sample was formed voluntarily. Pre-school and vocational education organizations also participated in the study, but these data were excluded from consideration. In

¹¹ Bonacich P. Power and centrality: A family of measures // American Journal of Sociology. 1987. Vol. 92. . 5. P. 1170-1182.

¹² Freeman L. Centrality in social networks conceptual clarification // Soc. Networks. 1979. Vol. 1. 1968. P. 215–239.

addition, schools with less than 21 employees were excluded from the analysis. Organizations that did not fill 80% of the staff filled the questionnaire in the final database. Thus, the total number of participants in the study was 34,596 respondents from 715 schools in Russia. The return rate was 97.8%, which is probably due to the consulting nature of the research and the personal interest of the schools heads in precise results.

The sample was further divided into eight subgroups depending on the geography. Seven subgroups are regional projects, when a significant number of schools from a specific territory participated in the study (Sverdlovsk, Tyumen, Yaroslavl, Ulyanovsk regions, the Republic of Tatarstan, the Yamalo-Nenets autonomous region, TIANO of the Moscow region). The eighth subgroup are schools from all other regions that participated in the project separately.

We can not talk about the representativeness of the sample for the Russian Federation. However, it was representative for some regions (for example, the Tyumen Region, the Republic of Tatarstan), and it can be assumed that the results will be similar in regions that are in a similar socio-economic situation. In addition, a significant amount of collected data allows us to talk about some general trends that can be found on the territory of the Russian Federation.

The organization of the research

The classic metric for informal leadership in similar research (for example, J. Spillane, E. Camburn)¹³ is “indegree centrality” that reflects the number of professional ties of each participant in school interactions.

However, in addition to the indicator of indegree centrality, several other metrics have been proposed in this research:

First, the number of reciprocal ties for all respondents was analyzed. Within the framework of this research, one of the key factors for professional growth within the school is a high level of social capital (M. Fullan, E. Hargreaves, K. Leana) which is based on mutual interest of teachers to each other. Reciprocal ties are more stable and less likely to decay over time (J. Spillane, M. Fullan). The indegree centrality is rather an indicator of prestige, the availability of resources (for example, managerial ones), while a high number of reciprocal ties testifies the presence of outgoing

¹³ Spillane J. P., Kim C. M. An exploratory analysis of formal school leaders' positioning in instructional advice and information networks in elementary schools //American Journal of Education. 2012. Vol. 119. . 1. P. 73-102.

Spillane J. P. et al. Taking a distributed perspective: Epistemological and methodological tradeoffs in operationalizing the leader-plus aspect //Journal of Educational Administration. 2008. Vol. 46. . 2. P. 189-213.

interest, willingness to support professional exchange. Thus, professional leaders within the framework of this dissertation are those employees who can maintain stable mutual relations with their colleagues.

Secondly, for the analysis of professional leadership, two slightly different sociometric questions were used, as well as the sum of both matrices. This allows us to view professional leadership as a complex phenomenon. So, all employees were asked to indicate no more than five colleagues for each of the following issues. The addition of the matrices was used to expand the choice of up to 10 employees, reduce the potential errors of random choices, and present a generalized indicator of professional leadership.

When facing professional problems, which of your colleagues do you consult, whose assistance do you seek?

Name the colleagues, whose classes for various reasons (help, acquaintance with others' experience, etc.) do you attend at present?

The question base was formed in the framework of the study "Social Capital of Educational Organizations" ⁷. Based on the answers, network matrices were formed, as shown in the example below (see Table 1). Numbers from 1 to 10 in the headings correspond to the school employees, number 1 in the table rows stands for the outgoing connections (or outdegree centrality). The sum of incoming connections (or indegree centrality) for each employee is calculated as the sum of positive responses.

Table 1 – Network Data Sample

	1	2	3	4	5	6	7	8	9	10	Outdegree Centrality
1		0	0	0	0	0	0	0	0	0	0
2	0		1	0	0	1	0	0	0	0	2
3	1	1		0	1	0	0	0	0	0	3
4	0	0	0		0	0	1	0	0	1	2
5	0	1	1	0		1	0	0	1	0	4
6	1	1	0	0	1		0	0	1	0	4
7	1	1	0	1	0	0		0	1	1	5
8	1	1	0	0	0	0	0		0	0	2
9	0	1	0	0	0	1	0	0		0	1
10	0	0	0	0	0	0	0	0	0		0
Indegree Centrality	4	6	2	1	2	3	1	0	3	2	

Based on the answers to both the questions, first the indicator of the indegree centrality of all the employees for each question was calculated separately. Then the aggregate index was calculated

on the basis of network matrices addition. When adding, the binary system was used: if both the matrices had “0”, then in the total matrix the zero index was left. If there was 1 in either or both the matrices, the matrix also had 1. Then, based on the matrices, the visualization of professional networks was designed (see Figure 1). Although all the calculations are based on data from network matrices, the visualization of the school network can be used by the school’s management team to analyze the current situation in the organization and plan professional development models⁸.

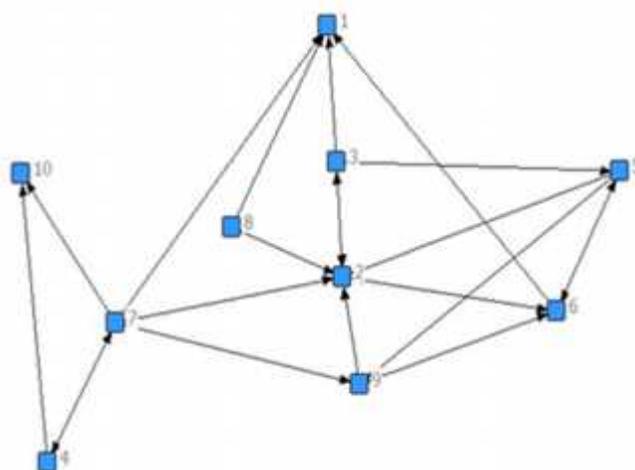


Figure 1. An example of professional interactions visualization¹⁴

Third, apart from the networks of current professional leadership, the networks of potential professional leadership were also analyzed. Their role is to find internal resources and potential leaders in the organization. The level of potential professional leadership was determined based on the answers given to these questions:

Which colleague would you like to see in a newly formed group aimed at solving some problem in the field of teaching and upbringing?

Which colleague do you see as a useful guest at your classes, lessons and events?

Research Findings

The structures of formal and informal leadership were compared, and the following data were obtained during the analysis:

Expectedly, the members of the management team demonstrate a higher level of current and potential professional leadership. The table below shows the aggregate leadership level based on the

¹⁴ The visualizations were designed by means of software UCINET: Borgatti, S.P., Everett, M.G. and Freeman, L.C. 2002. Ucinet 6 for Windows: Software for Social Network Analysis. Harvard, MA: Analytic Technologies

two indicators, depending on the position: the average level of the indegree centrality and the average number of reciprocal ties.

Table 2 – Average indices of the indegree centrality based on the actual leadership questions¹⁵

Position	Number of respondents	Average indegree centrality (standard deviation)	Average number of reciprocal ties (standard deviation)
Principal	715	11,6* (6,6)	2,9* (2,0)
Deputy principal	2981	10,1* (7,6)	2,5* (2,2)
Teacher	30900	4,2* (4,3)	1,1* (1,3)

Note. The Kolmogorov-Smirnov test for all indicators of centrality and mutual relations showed that the distribution is abnormal. Therefore, here and below, the Kraskel-Wallis test is used to calculate the statistical significance of the differences in the mean values.

The study revealed a high level of hierarchy in the organizational structure. Employees with a high formal status (headmasters and their deputies) prevail in the network of informal interactions. For example, on average 10-12 employees turn to principals or their deputies, whereas to teachers – around 4. In other words, professional networks are largely centered on administration. In this case there is a risk of the management team’s overwork: a large number of managers do not conduct pedagogical work or have a low pedagogical workload and mention a high level of administrative responsibilities. It is noteworthy that the number of reciprocal ties is about four times lower for all positions. At the same time, the gap between the administration and teachers is quite comparable with the indicators of the indegree centrality.

Despite a high level of hierarchy, real professional and formal structures of general education organizations differ significantly. In each of the groups (principals, deputies, teachers) a high degree

¹⁵ *- p<0,01, 2 degrees of freedom, chi-square is 3837,5 and 1665,0

of standard deviation from the average index is observed (for example, with an average number of current professional incoming ties of 4.2, the standard deviation level was 4.3). Thus, the formal role of a leader does not a priori suppose any informal professional leadership. And vice versa - in professional networks one can find a significant number of teacher-leaders who do not have any formal leadership position. For all the positions, a high level of dispersion of professional recognition is characteristic.

Although the dominance of the formal structure can be considered predictable, there are several more unexpected results:

in the networks of current attendance of the classes teachers without a formal status have the highest share of the incoming connections (2,5 connections) compared to 1,4 shown by headmasters and 2,1 – by deputy headmasters who conduct lessons;

Table 3 – Average indices of the indegree centrality in the questions about classes attendance for the central positions¹⁶

Position	Number of respondents	Average indegree centrality (standard deviation)	Average number of reciprocal ties (standard deviation)
Principal	420	1,3 (2,3)	0,2 (0,5)
Deputy principal	2273	1,9 (2,2)	0,3 (0,6)
Teacher	28873	2,2 (1,9)	0,5 (0,8)

Note. Only those respondents who conduct teaching activities were considered.

Thus, if we recognize that the key process in school is teaching, and the main task of professional growth is to improve the quality of lessons, it turns out that the management team is less involved in the processes of mutual monitoring and analysis of lessons. Principals and deputies are more likely to play the role of "resource holders", but the existing stereotype that the principal is a "teacher of teachers" is not supported by this study .

¹⁶ *- p<0,01, 2 degrees of freedom, chi-square is 251,5 and 165,0

Further, the role of heads of methodical associations, departments or laboratories was analyzed, since we assumed that they had the function of professional support as an official job. The study showed that the leaders of the school methodological association (hereinafter - SMA) are more similar to teachers without a formal status than to the administration. So, on average, every formal leader with such status has 5.1 professional ties, the average indicator of mutual ties is 1.7.

The complexities and risks of the existing system of professional support of teachers within general education organizations were analyzed:

The study revealed a high level of professional isolation of teachers. So, for example, in the aggregate network of actual leadership, more than 38% of teachers do not have reciprocal ties. In networks of potential leadership, this indicator is 46%. For networks of classroom visits (both up-to-date and potential), this indicator is more than 66%. In other words, 2/3 of teachers are not involved in the practice of mutual classroom observations, which can lead to emotional burnout and professional stagnation.

Low involvement of SMAs in the instructional support of teachers. On average, there are 5-6 teachers per SMA head, who belong to a specific methodical association. At the same time, the average number of actual professional reciprocal ties for this category of employees is 1.7. The reciprocal links for classroom observations are 0.6. Thus, work on joint improvement of lessons may seem not the key direction of the work of methodological associations.

The role of teachers who have no administrative status was analyzed. The study revealed that teachers without a formal status have a high leadership potential. Although the average measures indicate a high level of hierarchy and centrality of interactions around the administration, in teachers' professional networks one can find a large number of "starring" teachers. That is, those professionals whose lessons and professional experience are important to their colleagues. Moreover, in the network of classes attendance by teaching staff members, which reflects a real exchange of experience, teachers with no formal status dominate (the average number of incoming connections is 2.2, with average indices for headmasters and their deputies being 1.3 and 1.9, respectively).

It was suggested that teachers who have three or more reciprocal professional ties possess leadership potential. With the emergence of "star" network configurations, further development of

sustainable professional groups is possible. As a next step, the number of employees with the leadership potential was calculated at each of the positions.

Among professional leaders, teachers who do not have a formal status are statistically significant than administrators and managers. For example, among school leaders with a number of incoming connections of 10 or about 10, 45% are teachers, not administrators. This situation shows that in general education organizations there is an essential resource for the development of the internal potential of the collective through the targeted use of pedagogical leadership.

Table 4 – The number of potential professional leaders taking various job positions

Position	Number of employees with 3 and more reciprocal ties (proportion)	Total number of respondents	Share of the total number of representatives
Principals	392 (6,6%)	715	54,8%
Deputies	1276 (21,5%)	2981	42,8%
Teachers	4276 (71,9%)	30900	13,8%
Total	5944	34596	17,2%

On the one hand, the proposed table confirms the above: an administrative team is much more influential than teachers. On the other hand, almost every sixth teacher has a leadership potential. Given that the workload of senior managers is much higher and they do not always lead the teaching, the resource of informal leadership is very significant. In addition, teacher-leaders in absolute numbers are more than administrators (72% compared to 28%).

However, the study revealed a contradiction between the high potential of informal leaders and the current attitudes of teachers:

Teachers demonstrate low request for feedback from colleagues. When answering the question about the teachers whom the respondents would like to see at their lessons, most of them choose in favor of the administration (an average, 7 answers given), and not teachers of the same status (on average, 2 answers). It can be assumed that managers are resource holders, and this makes interaction with them more prestigious and meaningful, which is not necessarily related to professional growth. Such a situation can lead to an even greater centralization of interactions and

information flows around managers and a reduction in horizontal professional exchange. Although the previous conclusion points at the availability of the resource of teachers-leaders, this remains unnoticed within the collectives.

However, at the same time we can conclude that at the moment this resource is used only to some extent. In this regard, we can offer the heads of general education organizations the following **recommendations on professional development of pedagogical collectives:**

To build management, considering their organization as a network of professional interactions, since such an approach makes it possible to identify and use the resource of teachers-leaders who are not members of the management team, that is, to consider social capital as an object of management;

To reduce the influence of the high hierarchy and develop horizontal interactions in the organization, which will bring a more complete implementation of the potential of informal pedagogical leaders in the school through continuous in-house training based on mutual classes attendance;

To develop formal structure of the organization for horizontal

To develop social capital not only quantitatively (for example, the creation of dyads), but also qualitatively: to build up interactions around the issues of teaching and upbringing;

To create stable professional communications in a team based on triads and a clique with reciprocal connections among all the participants, since such a network configuration is maximally resistant and stable in the course of time;

To focus on classes attendance by teaching staff as a form of sharing experience. The findings of the research show that at present this process is built hierarchically, the control function prevails, and young employees are involved in attending their colleagues' lessons very little, although monitoring colleagues is one of the most effective forms of newcomers' integration.

The practical importance of the work can be defined at different levels of the educational system.

At the level of a particular school: making school administration realize the structures of current and potential professional leadership can help in planning the school development system.

At the level of the vocational education system: the results of this research can be used by the Education development institutes and other similar structures involved in training specialists who could most effectively assume the role of pedagogical leaders. The findings of the studies performed in specific schools can be used for educational consulting.

Possible continuation of the research is related to the use of a larger sample, which could be representative of the whole Russian Federation, the organization of qualitative research aimed at determining the motives and factors of professional leadership in schools, the study of the relationship between professional leadership and educational outcomes, and comparative analysis of similar problems with other educational systems, as well as the search for managerial solutions for the development of distributed leadership in general education organizations.

Main References

1. Akindinova N.V., Kuzminov Ya.I., Yasin E.G. *Ekonomika Rossii: pered dolgim perekhodom* / N.V. Akindinova, YA.I. Kuz'minov, E.G. Yasin // *Voprosy ekonomiki*. – 2016. – . 6. – P. 5-35.
2. Barber M., Mourshed M. *Kak dobitsya stabilnogo vysokogo kachestva obucheniya v shkolah. Uroki analiza luchshih sistem shkolnogo obrazovaniya mira* / M. Barber, M. Murshed // *Voprosy obrazovaniya*. – 2008. – . 3. - P. 7-60.
3. Bonacich P. *Power and centrality: A family of measures* / P. Bonacich // *American journal of sociology*. – 1987. – Vol. 92. – . 5. – P. 1170-1182.
4. Bourdieu P. *Formy kapitala* / P. Bourdieu // *Ekonomicheskaya sociologiya*. – 2002. – T. 3. – . 5. – P. 60-75.
5. Bysik N. et al. *missing link? Contemporary insights into principal preparation and training in Russia* / N. Bysik et al. // *Asia Pacific Journal of Education*. – 2015. – Vol. 3. – No. 35. – P. 331-342.
6. Coleman J.S. *Social capital in the creation of human capital* / J. Coleman // *American Journal of Sociology*. – 1988. – Vol. 94. – . 95-120.
7. Farkhatdinov N.G., Evstigneeva N.V., Kurakin D.Yu. *Modeli upravleniya obshcheobrazovatelnoy organizatsiy v usloviyah reform: opyt sociologicheskogo analiza* / N.G. Farkhatdinov, N.V. Evstigneeva, D.Yu. Kurakin // *Voprosy obrazovaniya*. – 2015. – . 2. – P. 196-219.
8. Freeman L. *Centrality in social networks conceptual clarification* / L. Freeman // *Soc. Networks*. – 1979. – Vol. 1. – 1968. – P. 215–239.
9. Froumin I.D. et al. *Obrazovatel'naya politika i dolgovremennye tendentsii* / I.D. Froumin et al. - *Social'naya politika v Rossii: dolgosrochnye tendentsii i izmeneniya poslednih let* // M. : Izdatel'skiy dom NIU VSHE, 2015. – S. 239-289.
10. Gradoselskaya G.V. *Analiz socialnyh setey : avtoreferat diss. na soisk. uch. step. kand. sociol. n.: 22.00.01* / Galina Galina Vital'evna – M., 2001. - 16 p.
11. Hallinger P., Heck R.H. *Exploring the principal's contribution to school effectiveness: 1980 1995* / P. Hallinger, R.H. Heck // *School effectiveness and school improvement*. – 1998. – Vol. 9. – . 2. – P. 157-191.
12. Hanneman R., Riddle M. *Introduction to Social Network Methods* / R. Hanneman, M. Riddle // *Network*. University of California. – 2005. – Vol. 46.– 7 – P. 5128–5130

13. Hargreaves A., Fullan M. Professional capital: Transforming teaching in every school / A. Hargreaves, M. Fullan // New York : Teachers College Press, 2012. – 240 p.
14. Harris A. Distributed leadership and school improvement: leading or misleading? / A. Harris // Educational Management Administration & Leadership. – 2004. – Vol. 32. . 1. – P. 11-24.
15. Ivaniushina V.A., Alexandrov D.A. Anti-school attitudes, school culture and friendship networks / V.A. Ivaniushina, D.A. Alexandrov // British Journal of Sociology of Education. – 2018. – Vol. 39. – No. 5. – P. 698-716.
16. Kasprzhak A. G., Isaeva N. V. Pochemu direktora avtoritarny i chto iz etogo sleduet? / A.G. Kasprzhak, N.V. Isaeva // Narodnoe obrazovanie. – 2015. – 8. –P. 52-66.
17. Krackhardt D. The ties that torture: Simmelian tie analysis in organizations / D. Krackhardt // Research in the Sociology of Organizations. – 1999. – Vol. 16. – P. 183–210.
18. Leana C.R., Pil F.K. Social capital and organizational performance: Evidence from urban public schools / C.R. Leans, F.K. Pil // Organization Science. – 2006. – Vol. 17. – . 3. – P. 353-366.
19. Leithwood K., Jantzi D. The relative effects of principal and teacher sources of leadership on student engagement with school / K. Leithwood, D. Jantzi // Educational administration quarterly. – 1999. – Vol. 35. – . 5. – P. 679-706
20. Parygin B.D. Rukovodstvo i liderstvo / B.D. Parygin // L. : LGPI, 1973. – 144 p.
21. Patarakin E.D., Yarmahov B.B. Analiz sovместnoy setevoy deyatel'nosti uchastnikov obrazovatelnoy organizatsii / E.D. Patarakin, B.B. Yarmahov // Obrazovatelnye tekhnologii. – 2016. – 2. – S. 51–65.
22. Pinskaya M.A. et al Chto my uznali o nashih uchitelyah i direktorah? Rezultaty mezhdunarodnogo sravnitel'nogo issledovaniya TALIS-2013 / M.A. Pinskaya et al. // Narodnoe obrazovanie. – 2015. – 6. – P. 34-47.
23. Spillane J. P. et al. Taking a distributed perspective: Epistemological and methodological tradeoffs in operationalizing the leader-plus aspect / J.P. Spillane et al. //Journal of Educational Administration. – 2008. – Vol. 46. – . 2. – P. 189-213.
24. Spillane J.P., Kim C.M. An exploratory analysis of formal school leaders' positioning in instructional advice and information networks in elementary schools / J.P. Spillane, C.M. Kim // American Journal of Education. – 2012. – Vol. 119. – . 1. – P. 73-102.
25. Sravnitel'nyy analiz rezultatov testov PISA i TIMSS v Rossii i stranah Evropy / Pod. red. T. E. Havenson, YU. D. Kersha // M. : NRU HSE, 2017. — 32 p.

26. Ushakov K.M. Diagnostika realnoy struktury obrazovatelnoy organizatsii / K.M. Ushakov // Voprosy obrazovaniya. – 2013. – . 4. – P. 46-60.
27. Ushakov K.M., Kukso K.M. Vozmozhnosti setevogo analiza dlya issledovaniy v obrazovanii / K.M. Ushakov, K.M. Kukso // Narodnoe obrazovanie. – 2015. – 3. – P. 79-88.
28. Ushakov K.M., Kukso K.M. Advantages of Social Network Analysis in Educational Research / K.M. Ushakov, K.M. Kukso - Translation from Russian // Russian Education and Society. – 2015. –Vol. 57. – No. 10. – P. 871-888.