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**PROMOTING THE NONLINEAR MODEL OF HIGHER**  
**EDUCATION IN RUSSIAN UNIVERSITIES**

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*Abstract*

In modern Russia the system of higher education is actively transforming. The management of the education is centralized in Russia. Reformation policies are formed by the government in accordance with global trends. However, these often turn out to be controversial with current regional demands as the changes in the universities are determined by officials. The issue here is that the educational communities' potential is not always taken into consideration by the university management. The main aim of this research is to characterize representatives of an academic community from the universities of the Ural macroregion who are able to perceive the transformations and to participate in them. The study presents the results of a survey of professors (n=810) of the Ural where 51 universities are located. The authors have established that professors and researchers of the Ural universities who are ready to take part in institutional management differ from those who are not ready to do so in various types of professional activity and social participation. The academic community of the Ural universities are shown to be ready to participate in university management are oriented to public forms of discussion of managerial problems.

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**Keywords:** University reform, social and civic participation of teachers, non-linear model of higher education, university management.



## 1. Introduction

In modern Russia, as in many different countries, the system of higher education is actively transforming. In Russia, the management of higher education is centralized and the reformative policies are formed by the government in accordance with all the global trends and perspectives. The global tendencies lead to formation of new organs of universities modelled after organs of commercial companies which appear ubiquitously. These newly formed organs have become a subject for the researches from the position of university management effectiveness (Kozien & Kozien, 2017). The resources aimed at the development of Russian universities are formed on the federal level by the government. Within the borders of separated areas called macro-regions (federal districts) a real request for human capital and resources necessary for the local labor market is formed. Within the boundaries of federal districts universities interact with potential employers for their students.

All-Russian policy in the field of the higher education development often conflict with the current demands of regions because of the fact that changes in the universities are determined by officials. In other countries as well the combined external and domestic pressures affect higher education institutions in multiple and sometimes contradictory ways. Ultimately, the announced diversification of higher education institutions (HEIs) appears as a longer-term process whose outcome remains uncertain (Dakowska, 2017). In university management, the potential of educational communities is often not taken into account by the government. By this potential we mean the willingness and opportunities of professors and rest of the academic community to affect the rules, the conditions, the norms and the results of their activities in the university. What needs to be demonstrated is the success of the professors and scientists in their jobs, conducting effective training of young scientific-pedagogical specialists, becoming competitive at the world level (Karnaukh, 2015). In Russian universities requirements for the professors have become more and more stringent and professional competition is escalating (Ilina et al., 2018).

Russian teachers and scientists in the universities are not always able to join the competitive fight and new market relations in the higher education sector. Researchers have established the opportunistic behavior of Russian university professors in the current period of reforms which are connected with a sharp change in the organization of their labor (Abramov, Gruzdeev, & Terentiev, 2016; Kurbatova & Kagan, 2016). Dissatisfaction caused by the logic and intermediate results of universities' reformation is a global problem, which appears in different countries (Sahraoui, Hedibel, & Zerrouk, 2017).

In transformational conditions, the topic of harsh resistance to the innovational changes may well be raised. Managerial decisions which transform the university's environment, affect the academic culture, the established order and the traditional relationships, are not accepted by an academic community. Under such circumstances, international and local research outcomes should be taken into account in terms of university management. It is also essential to diagnose the issue of the transformation of higher education within national and regional boundaries of major regions in Russia.

## 2. Problem Statement

The problem of the higher education's effective transformation is a relevant global concern in recent years which is being analyzed by sociologists and economists who have developed theories and conceptions

regarding these issues. The external context of reformation, namely, the effect of globalization as a factor of the marketization of education in the spirit of the ‘economics of knowledge’ is being studied (Robertson & Dale, 2015). The subject of the study is the usage of global benchmarks by individual countries in the national interest (Steiner-Khamsi, 2010). Klark’s concept (1998) is rather interesting and promising, as within its framework the strategic directions of relevant university changes are highlighted, namely: an enhanced directing core of management capable of promptly coordinating new managerial values with academic values and traditions; the expanded periphery of development; flexible educational and scientific structures that implement a project interdisciplinary approach and interact with key stakeholders; diversified funding base – attraction of funds from commercial companies of customers and scientific foundations; stimulated academic stronghold; integrated entrepreneurial culture – change of university culture, cultivation of institutional identity and special reputation (Klark, 1998).

The proposed directions can be implemented in practice only under certain conditions, when university management characterizes a certain degree of flexibility and a sufficiently serious degree of freedom and variability in the actions of educational actors (researchers, teachers, students). The current management can be considered as a linearly built system which includes educational organizations and educational communities, subordinated to directive management at different levels. The key role in the development of Russian higher education has traditionally been management, since the real state of affairs in Russian universities depends primarily on it (Zborovsky, Shuklina & Ambarova, 2016).

In the current scheme for the development of higher education, educational policy predetermines the linear logic of the development of the whole system. Thus, for the effectiveness of university reform in our country, there is an obvious need for nonlinearity, which can be expressed in three aspects. Firstly, in expanding the variability of the conditions for choosing development strategies for all institutional subjects involving individual trajectories of the educational and professional activities of students and teachers. Secondly, it is connected with the deepening of intra- and inter-institutional ties of higher education involving the development of full-fledged networking interactions of higher education with stakeholders. Thirdly, it is extremely important to achieve a balance between the management vertical and network links as a source of self-development. As a result, it is the non-linearity in the theoretical plan as specific configurations and interrelationships between universities, educational communities (teachers, students, researchers), management (national, regional, organizational levels) that ensure its organic, adaptive and functional under social and economic uncertainty.

For an organic change in the education system, it is necessary to change management within certain universities, increasing the involvement of interested actors; to intensify not only international network interaction of universities and international academic mobility, but also build networks and mobility within the country's macro regions; develop the potential for the reproduction of innovation (material base, human capital, etc.); to build and to activate a new type of relations with employers in the macro-region.

In the logic of non-linearity, we are talking about the ‘stimulated academic stronghold’, singled out by Klark (1998). The traditional research and educational base of universities is not only classical educational programs and organizational structures (departments, faculties), but also full-time teachers, as well as university researchers. The success of transformation, according to the sociologist, depends on whether these people accept the transformations, oppose sharply or show indifference to what is happening.

In order to overcome internal barriers when promoting change in universities, it is necessary for the active part of the academic community to be allowed to make and influence managerial decisions, to interact with educational managers and communicate ideas to the community by modifying the value system and sustainable views in the academic community.

### **3. Research Questions**

What are the social and professional characteristics of members of the academic community of Russian universities who are ready to perceive the transformation of higher education in the logic of its non-linear development? What social, professional and civic characteristics do those who are willing to join in the management of their institution have? What characterizes their activity?

### **4. Purpose of the Study**

The purpose of the study is to characterize those actors and representatives of the academic community from the universities of the Ural macro-region, capable of perceiving transformational transformations and participating in them.

### **5. Research Methods**

#### **5.1. Description of samples**

This research presents the results of a mass survey of teachers from the Russian macro-region called the Ural Federal District where 51 universities are located. The respondents list included teachers from 17 universities totaling 810 people. The sample was formed on the basis of statistical data on university academics in the regions of Sverdlovsk, Chelyabinsk, Tyumen, and Kurgan. Interviewed academics work in the fields of engineering, science, humanitarian and socio-economic faculties.

For the study, a sub-sample consisting of 578 people was formed. Those respondents who found it difficult to answer the question: "How would you evaluate your personal readiness to participate in the management of your institution?" were excluded from the sample. In this subsample two groups of respondents were singled out. The first group includes 208 researchers and teachers (36%) who are not ready to participate in university management. The second group comprised 370 researchers and teachers (64%) who declared their willingness to participate in the management of the university.

Significant statistical differences between the two communities in terms of demographic characteristics are identified only by the variable of gender. The study found that men were more likely than women to declare their readiness to take part in the management of the university ( $F=1.140$ ;  $p<.01$ ). Among the men, 70% of respondents declared their readiness, while women only 60% responded positively.

#### **5.2. Methods**

A questionnaire was used to obtain the necessary data to answer the research questions and to highlight the dominant social and professional characteristics of teachers who are ready to take part in the

management of their institution. We identified preferable forms of interaction between teachers, researchers and managers as an effective participation in governance. We also highlighted the relationship between willingness to participate in governance and willingness to network interaction between universities, teachers and researchers of universities in the macro-region.

Correlation analysis was used in the study. Firstly, a relationship of the variable ‘willingness to participate in the management of the university’ with variables which fix different types of professional, scientific, educational and public activities of teachers of Ural universities is given. Secondly, to describe a new type of relationship between researchers, teachers and managers, the relationship between the variable ‘willingness to participate in the management of the university’ and the variable ‘effective forms of discussion of management problems in the university’ is analyzed. Thirdly, the relationship between the variable ‘willingness to participate in the management of the university’ and variables which characterize the respondents' assessments of the readiness of their institution, colleagues and themselves to develop educational programs with other higher education institutions of the macro-region is analyzed.

### **5.3. Hypotheses of the study**

H 1. Teachers and researchers of the Ural universities who are ready to participate in university management differ from those who are not ready to be included in the management of their institution by various types of professional activity and social participation.

H 2. Teachers and researchers of Ural universities who are ready to participate in university management are different from those who are not ready to be included in the management of their institution by orientation to public forms of discussion of management problems at their university.

H 3. The willingness to participate in university management is interlinked with the personal interest of teachers in networking with colleagues from other universities in the macro-region.

## **6. Findings**

### **6.1. Portrait of teachers and researchers of the Ural macro-region's universities who are ready to be involved in university management**

To test the first hypothesis, the respondents' elections were analyzed for two compared groups of 22 types of professional, educational and public activities that they had to deal with during the past year. Statistically significant differences were identified by six variables: “additional education, courses”, “independent travel within the country”, “visiting sports sections and clubs”, “participation in scientific conferences in other Russian cities”, “participation in the activities of public structures and non-profit organization”, “Participation in business events” (table 01).

**Table 01.** Types of professional, scientific, educational and public activities of teachers at Ural universities, whether they are ready or not ready to participate in university management (% of positive answers in the group)

Activity type	Willingness to participate in university management		Evaluation method
	Yes (1 group)	No (2 group)	
Receiving additional education, doing specific courses (driving, language, computer, etc.)	53	38	Fisher's exact test - .141. p< .001
Independent travelling within the country	44	34	Fisher's exact test - .117. p< .02
Visiting sports sections, fitness centres, swimming pools and doing exercises in the fresh air	46	35	Fisher's exact test - .119. p< .008
Taking part in scientific and practical conferences in other cities or countries	40	29	Fisher's exact test - .120. p< .009
Participating in the activities of public councils and expert groups in the government	20	10	Fisher's exact test - .121 p< .003
Participating in business seminars, specialized conferences and business forums	23	9	Fisher's exact test - .171. p< .000

The findings prove that Russian university academics working in the Urals macro-region who are willing to participate in the management of their university differ both in their professional, public and private lives from those teachers and researchers who do not want to be included in the management of the university where they work. They are more focused on receiving additional education, more often independently travel within their own country, are more athletic and take care of their health. They are more active in scientific communications, take part in scientific and practical conferences in other cities and countries, more often interact with business, are better acquainted with the regional labor market as they participate in business seminars, specialized conferences and business forums. They are more often involved in interaction with authorities and participate in the management of local communities.

According to the data analysis, the respondents' preferences were analyzed in accordance with the types of activities that they are involved with at the university. The study gives an assessment of the two groups of respondents' answers for dichotomous questions, allowing to evaluate the orientation toward scientific activity, teaching, or a combination of these activities. Those who are ready to participate in university management are less focused only on teaching (F-.175, p<000). In the first group, there were 45% of such respondents; in the second group there were 65% of respondents who are oriented in their professional activities only for teaching. The willingness to participate in management is related to the abilities and preferences of academics to combine their teaching and research activities (F-.270, p<000).

Among those who are ready to join the management are more respondents who try to combine educational and scientific activities (50%). In the second group of such respondents, only 30%.

To test the second hypothesis, the respondents' answers to the question: 'In what ways are you personally ready to discuss the management problems of your university with the management and colleagues?' were analyzed. We analyzed the respondents' selection from 7 alternatives: 'on the corporate network or closed forums on the university's website', 'in public discussions', 'in the social network among their colleagues', 'when initiative groups meet with management', 'in the discussions initiated by the union', 'at a meeting of the working collective', 'at informal public meetings with the rector'. All alternatives were analyzed as dichotomous variables. Statistically significant differences were identified by 4 alternatives (table 02).

**Table 02.** Preferable forms of managerial problems discussion by teachers of Ural universities, whether they are ready or not ready to participate in university management (% of positive answers in the group)

Forms of interaction with university managers	Willingness to participate in university management		Evaluation method
	Yes (1 group)	No (2 group)	
Within public discussions	46	28	Fisher's exact test – 0.181, p< .000
When initiative groups meet with management	53	36	Fisher's exact test - .0201, p< .000
At informal public meetings with the rector	36	24	Fisher's exact test - .0117, p< .002
In the social network among their colleagues	14	25	Fisher's exact test - .0181, p< .000

The survey data shows that Russian university academics working in the Urals macro-region who are willing to participate in the management of their university are more oriented towards public forms of discussing managerial problems at their university with both colleagues and management. In their group, 46% are ready for public meetings and discussions, 53% of the respondents of the group are positive about the meetings of the initiative groups with the management and 36% are ready for informal meetings with the rector. At the same time, teachers and researchers who are not ready to take part in university management are more prone to a closed discussion of management problems within their community. In their group, 25% are ready to discuss the problems of the university in social networks among their colleagues.

### **6.3. The interest of teachers who are ready to join university management in network interaction with colleagues from Russian universities in the macro-region.**

To test the last hypothesis, the responses of the two compared groups' respondents to questions in which they were asked to rate on a 5-point scale 'their university's readiness to develop joint educational programs with other higher education institutions of the macro-region', 'readiness of the closest colleagues to develop such programs with colleagues from other universities of the Urals Federal District' and 'their personal readiness for such kind of work' were analyzed. Statistically significant differences were revealed in the respondents' assessments of the two groups compared only with respect to their personal readiness for this form of network interaction. If in the group of Ural universities academics who are not ready to participate in university management the average score of assessing their readiness for network interaction within the macro-region is 3.7 points, in the second group compared the average assessment of personal readiness was significantly lower -2.4 points.

## **7. Conclusion**

Changes in universities are inevitable, as economic reforms, scientific and technological progress, cultural, social and political changes in different countries require this. The development of communication technologies has a significant impact on the internal educational environment and the external interaction of universities. At the same time, the demand of the labor market for specialists with higher education is changing. The needs of those who come to receive university education are also changing nowadays. Following this logic, university professors should also change. They must be open to new knowledge and new educational technologies; they also must be ready to conduct research in their field of specialization. A new type of interpersonal, group and organizational interaction in the scientific and educational environment is in demand. However, the introduction of managerial innovations can only become effective if there are high involvement in these processes not only of university managers, but also of academics connected with the educational activities and scientific projects of universities. This research shows that in the universities of one of the largest macro-regions of Russia almost every second (47%) academic is ready to participate in university management. It can be concluded that this portion of the university academic staff has higher potential for scientific, social and professional activity than those who are not ready to join the university administration.

The survey data proves that Russian university academics working in the Urals macro-region, who are ready to participate in the management of their university, are distinguished by communicative activity. They often interact with colleagues in the scientific field, attending conferences, forums and seminars. They often interact with local officials, taking part in local government as experts and consultants. They have more links to the real labor market, as they attend business seminars, professional and specialized forums. This group of Russian university academics is focused on combining the professional sphere of educational and scientific activity. They not only have intentions, but also realize the importance of such integration of activities.

This study proves that Ural university academics who are ready to participate in university management are more public oriented. They are inclined to open forms of interaction with the managers of



their higher education institutions, they can and want to openly discuss the problems of their universities, their development and transformation.

The data of the survey prove that it is the part of the teachers and researchers who are ready to participate in university management who show interest in cooperation with colleagues from other universities in the macro-region. Despite the low assessment of their universities' readiness to implement such projects, they assess their personal readiness to develop joint network educational programs quite highly. Of course, the position and activity of academics as actors, capable of accepting and reproducing positive changes, is of great importance. However, both the university environment and management should be socially oriented and sensitive to the needs of those territories that cover the area of their activities. It seems to us that the nonlinear model of higher education has similarities with the type of a complex university. The complex university is part of and respectful of diverse ecosystems. It creates new frameworks to understand the world and, in that way, supports social transformations (Guzman-Valenzuela, 2018).

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