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MOTIVATIONAL PROFILE FEATURES OF YOUNG SCIENTISTS AND UNIVERSITY PROFESSORS

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Abstract

The study's purpose was to examine the features of the motivational profile of young specialists who are focused on work in the field of science, higher education, and high technologies. The work was carried out within the RFBR grant "Problems of increasing the motivation of young specialists for employment in the field of science, high technologies and higher education in modern Russia." The research methods are based on the author's theory of the motivational complex, and the consistent application of the "Motivation" test, which allows in an automated mode to determine the characteristic features of the respondents' motivational preferences. The results obtained made it possible to question the effectiveness of administrative measures to rejuvenate scientific personnel in modern Russia. The majority of people entering or intending to enter graduate school often only imitate their interest in scientific and innovative activities and, after graduation, do not plan to build a career path in science, higher education, and high technology. Besides, undesirable gender bias in the staff of scientific organizations and higher educational institutions is also actualized. In this regard, the authors have developed a diagnostic system that allows you to identify talented students in the university's junior years and select for them an individual set of incentives, which actualizes their motivational attitudes towards building their career path in science, high technology and higher education.

Keywords: Diagnostics of creative thinking motivational profile, higher school, high technology, human resources, science

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1. Introduction

In the reproduction of Russian universities' personnel potential, two problems have emerged, in our opinion, that have not yet been resolved at the proper theoretical and practical level.

Firstly, it is the search and retention of talented youth concerning this field of activity

's functionality. Secondly, it is the effective motivation of promising young teachers to build their career path in the higher education system over a sufficiently long time.

If these problems do not find their solution, then this can lead to stagnation of higher education, which will negatively affect our country's development as a whole.

This situation is further aggravated by the fact that there are practically no complex and interdisciplinary research aimed at finding a way out of the negative situation that has formed in modern Russia. They are conducted in the subject area of specific sciences: economics (Litvinyuk et al., 2019), law (Maloshonok & Terentev, 2019), sociology (Bednyi & Chuprunov, 2019), psychology (Buravleva & Bogomaz, 2020; Ogorodnikov & Ruppel, 2019) etc. This does not allow developing both theoretical prerequisites for solving the indicated problems and updating scientifically based practical recommendations in this area.

In light of the above, a systematic study of the motivational aspects of attracting and retaining talented young specialists in higher education is quite useful from both a scientific and practical terms.

2. Problem Statement

The ineffectiveness of the modern Russian system of training scientific personnel is an indisputable fact, visible to specialists and "invisible" at the level of state structures that regulate this process. This problem is not purely Russian. Lest we talk about the effectiveness of the reproduction of scientific and scientific-pedagogical personnel in countries where the development of this sphere of activity is paid much more attention than in modern Russia, but they also face very similar problems as our country.

Most foreign researchers believe that the decline in the interest of talented youth in building their career paths in higher education is associated, first of all, with insufficient motivation for such a variant of personal development (Broton & Goldrick-Rab, 2018; Castelló et al., 2017; Perez-Felkner et al., 2020; Shin et al., 2018).

A roughly similar situation is observed in modern Russia. This is indicated by the results of studies conducted by Reznik (Reznik & Chemezov, 2018) and other specialists (Dolzhenko et al., 2019; Ezrokh, 2019). Problems with the attraction of talented young specialists, similar in content, have arisen in a number of other countries that emerged within the territory of the former USSR (Bobkov et al., 2016).

The general result of all the above-mentioned studies is the conclusion that the problems of retaining talented young specialists are mainly of a material nature. For example, Reznik in his article (Reznik & Chemezov, 2018) provides the following data.

Almost all of the young scientists he interviewed (96.6% of the sample size) believe that: the size of the starting salary in a Russian university simply does not make it possible to survive; approximately 91.1% of the interviewed respondents are sure that the professional competences they have acquired in

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postgraduate studies in material terms will be more appreciated in a commercial organization; only 24.4% of the interviewed respondents do not experience significant material problems only thanks to family support.

Similar conclusions are made based on the analysis of the results of their studies Bekova and Jafarova (Bekova & Jafarova, 2019; Gerasimova & Kryachko, 2019).

In many ways, these experts are right. For example, currently the scholarship for a postgraduate student in the Russian Federation is on average from 3120 to 8755 Russian rubbles. per month, and in the USSR, where the training of scientific personnel was carried out at an incomparably higher level, it was in the region of 120 Soviet rubbles per month, which in terms of purchasing power corresponds to approximately 24,000 Russian rubbles. This situation can be left without comment.

3. Research Questions

In the context of the above, it makes sense to explore the following two questions:

- what are the features of the motivational profile of successful scientists and university professors;
- to what extent young specialists entering graduate school correspond to this reference motivational profile.

The answers to these questions make it possible to assess human resources' main changes in Russian science and higher education.

4. Purpose of the Study

To identify the level of professional suitability of young specialists entering graduate school, we calculated the average impact on their organizational behaviour of five groups of motives identified in the author's theory of the motivational complex.

The working hypothesis was that for effective work in science and higher education, it is necessary to have a low level of energy saving motives and a high satisfaction motive. The respondents were 600 teachers, researchers, graduate students and students working or studying at universities located in the cities: Moscow, Volgograd, Kemerovo and Smolensk.

5. Research Methods

In modern HR management, many classifications of motives of labor behaviour and algorithms are used that allow to identify the structure of motivation and predict the actions and orientations of personnel in the workplace with various options for changes in the system of stimulating their professional activity. The most well-known scientific literature approach to solving the problem of analysing labor behaviour is the well-known Expectancy theory by Vroom (1964). However, in real scientific research, the basic provisions of the expectation theory are difficult to use. They inevitably require the calculation of correct valence and expectation indicators, which are simple and understandable in meaning, but it is very difficult to interpret them quantitatively.

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Research carried out by us in the early 90s of the XX century made it possible to substantiate and propose a new classification of motives, which, as practice has shown, is quite effective for solving issues related to management and predicting the labor behaviour of personnel (Litvinyuk et al., 2019). They are grouped into five basic categories:

- Acquisition Motive (MA) - Personnel's choice of a work option that provides maximum material benefits for achieving its results;
- Motives of satisfaction (ME) - The choice by personnel of a work option that ensures the appearance of positively emotions from the process and (or) the result of work;
- Security motives (MS) - Orientation of personnel towards such a variant of work activity, which makes it possible to avoid the actualization of undesirable consequences for its poor results;
- Motives of subordination to common interests (MD) - Personnel's choice of a work option based not on personal interests, but in accordance with role prescriptions and group norms of behaviour that are meaningful to the individual;
- Motives for saving internal energy (MP) - Personnel orientation towards such a way of working activity, which makes it possible to maximize the ratio of its expected result to the energy consumption required to achieve it

One of the variants of the methodology of Professor Litvinyuk was used as a tool for this study (Litvinyuk et al., 2019). adapted to the specifics of work in the studied field of activity.

6. Findings

Calculations of average motivational profiles, made according to the method f Litvinyuk, are given (table 1) Litvinyuk et al. (2019).

Table 1. Average motivational profiles of respondents

(Conditional points. Average level is zero)

The name of the basic groups of motives	Successful professors and scientists	Young professors and scientists	Senior students who have expressed a desire to learn in graduate school
Acquisition Motives (MA)	+2	+3	+5
Motives of satisfaction (ME)	+6	+6	+3
Security motives (MS)	0	+4	+3
Motives of subordination to common interests (MD)	-1	0	+1
Motives for saving internal energy (MP)	-5	-2	-1

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What do obtained results mean in accordance with the main provisions of the author's Theory of the motivational complex?

Firstly, younger professionals are much less creative than mature professors and scientists.

Secondly, the lower the age of the specialists, the stronger the dependence of their organizational behaviour on the amount of material rewards they receive for the results of their work.

Thirdly, a decrease in the age of specialists does not contribute to an increase in the level of satisfaction from their work in science and higher education, but paradoxically reduces this indicator.

Fourthly, mature scientists and professors are less inclined to comply with work regulations if they hinder their effective work.

Fifthly, the main target motivational indicators favouring effective scientific and teaching activities are:

- low level of motives for saving internal energy (MP);
- high level of motives of satisfaction (ME);
- optimal level of motives Security motives (MS).

7. Conclusion

The state policy of modern Russia, associated with the intensification of the inflow of youth cadres into science, is mainly based on this process's quantitative parameters, without taking into account its qualitative aspect. One of the important target motivational characteristics of young people who come today to work in the organization of science and higher education should be the need to realize their creative potential, the desire to receive satisfaction from the work process itself, rather than from its result, expressed in material rewards.

In our opinion, it is necessary not so much to pay increased attention to the creation of additional jobs in the studied sphere of labor activity, but to take into account the motivation and creative potential of the labor resources involved. For the latter, it makes sense to develop a system for early diagnosis of young talents, identify them in junior university courses and purposefully motivate them to study in graduate school and build their professional career in the fields of science and higher education. Their purpose motivational features were formulated by us above.

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