
SCIOLOGY OF SCIENCE, EDUCATION, AND YOUTH

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PROVINCIAL FACULTY PROFESSIONAL POTENTIAL*

SUMMARY. This article deals with an insufficiently studied issue of the relationship of human and professional potential. The methodology of the study and measurement technology of professional potential are identified in this article. Professional potential is treated as a form of human potential in the area of labour relations. Substantive characteristics of the professional potential are made up of four interrelated criteria: professional competence, innovation readiness, social development; cultural potential; and moral potential.

Moreover, the article focuses on the problems of aging of the teaching staff in higher education and the specifics of their rotation in different regions of the country. Higher educational establishments in capitals still have the opportunity to recruit talented young scientists and teachers from Russian provinces. Provincial universities are forced on replenishing their human resource capacity only from graduates of regional universities, namely there is a simple reproduction of the existing schools of thought and traditions of vocational and educational activities. That is why the problem of the formation and implementation of the professional potential of young scientists and academic staff today is practically significant.

KEY WORDS. Human resources, professional potential, academic staff, youth, provincial university.

It is only comparatively recently that the concepts “human potential” and “professional potential” have entered into the categorical domain of social sciences. Nowadays the concept “human potential” may be construed in a number of ways. The majority of authors (T.I. Zaslavskaja, O.G. Genisaretskij, I.S. Maslova, B.G. Solnceva, G.L. Smoljan, V.Zh. Kelle) treat it as a characteristic of national society quality, as an agent of social reproduction and development. It is the level of human

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potential development that has the significant influence on society's viability and dynamics whereas other factors determine either the conditions or the results of human potential's realization.

The human potential is considered to comprise: population demographic characteristics, standard of living, education, overriding goals and values of the citizens (A.G. Vishnevskij) [1]; citizens health, readiness to family life and to child-rearing, intelligence and qualification, adaptation to community's social infrastructure, culture and value focus, psychological competence (O.I. Genisaretskij) [2]; community's spiritual development potential, informational, technological and educational potential, activity motivation (B.G. Solnceva, G.L.Smoljan) [3]. The above approaches to singling out characteristics of human potential show that there is no solution to this scientific problem, although it is possible to single out the conceptual core. To our mind, there is a considerable heuristic potential in the viewpoint of T.I. Zaslavskaja [4]. She treats human potential as one of the factors of the society's viability, together with such factors as economic, geopolitical, historical and cultural ones.

According to Zaslavskaja, the social and economic component of human potential shows the level of qualification and professionalism of economically active citizens, society's demand for their labour, the level and structure of employment, the degree of realization of their labour, business and intellectual resources. The social and cultural aspect of human potential is descriptive of socially important citizens' mentality peculiarities associated with the process of socialization in various national, confessional, and social communities, and with the follow-up's nature. The social and cultural aspect reveals itself through the typology of norm and value consciousness, the peculiarities of creeds and convictions, the level of morality and ethics, the structure of motivational complexes and types of behavior.

Social and economic development of contemporary states is increasingly dependent on the way the human potential is shaped and utilized, and it is the human resources that constitute the main renewable resource in the developed economies. Nowadays, the Human Development Index (HDI) is a recognized criterion used to gauge social development dynamics.

Although its assessment is based on several well-known social and demographic indices (median lifespan; population health that is indirectly gauged by the amount of money spent on medical care; citizens' literacy, education level; specific GDP value per capita), HDI objective characteristics are taken into account when working out social development strategy.

Nowadays, a human being is regarded not as workforce, a functional economy element, but as a main source of national wealth.

Under the auspices of UN Development Program at the end of the 1990s, there was a research done [5] to gauge the national wealth of various countries and regions. In order to estimate the national wealth, the following criteria were used as base components: natural resources; industrial infrastructure; human potential. The summary of the project was discussed by the Russian scientists (Table 1).

Table 1

World Regions Wealth Structure (per capita)

World Regions	Total (thousand S)	Industrial Potential	Nature Potential	Human Potential
North America	326	62 (19%)	16 (5%)	249 (76%)
Western Europe	237	55 (23%)	6 (2%)	177 (74%)
Near East	150	27 (18%)	58 (39%)	65 (43%)
South America	95	16 (9%)	9 (9%)	70 (74%)
East Asia	47	7 (15%)	4 (8%)	36 (77%)
Russia	2500	7-10%	83-88%	5-7%
World en Masse	100%	16%	20%	64%

The research was originally performed in 1997, therefore today some figures differ, nevertheless the trend sustains itself. 64% of the total wealth there is in the world falls to the share of the human potential. The natural and industrial and technological resources make up only one third of the wealth resources. For present-day Russia who is in possession of the most natural resources it is a priority to actualize development and employment of human potential, it is as indispensable as updating technologies, manufacturing infrastructure.

Only in the middle of 2000s Russia joined the countries with a high level of human potential development, its index in 2011 equaled 0.755. The number of regions with HDI ranking at the level of the developed countries soared from 4 in 2004 up to 12 in 2006, Moscow passing the threshold of 0.900 leaving Central European countries behind. Today, the Tyumen Region holds the second best position after Moscow.

The human potential is one of the most inert societal characteristics, it is built up of and takes shape through physical and spiritual qualities of people, most of which depend on the country's gene pool, new generations' socialization and national culture peculiarities. It takes not only a considerable effort, but also quite a long time for society's structure characteristics to trigger human potential growth.

The problem of human and professional potential harbours a considerable not fully comprehended factor of sociology development.

The novelty of research into human and professional potential is that studying conditions and factors of their development does not help find the solution to the problem. Another part of the researcher's task is to study the means and implementation of human and professional potential, that is activity and self-actualization of a person in their society. The foregoing defines a wide scope of new problems in traditional research areas.

The concept «professional potential» has everything to do with the «human potential» concept, but at the same time they are not identical. At present, in the Russian sociology, there is no research on professional potential as comprehensive in compilation as studies dealing with the concept of human potential. It is a new research task to develop contents and criteria of professional potential assessment.

We base our research on the hypothesis that *the professional potential is a form the human potential takes in the sphere of labor relations. The professional potential contents comprises four interconnected characteristics:*

- *professional competence, aptitude for innovation;*
- *social potential;*
- *cultural potential;*
- *ethical potential.*

The professional potential value cannot be basically reduced to quantitative estimation only, as there are no direct methods to measure possibilities. In order to understand professional potential phenomenon it is important to take into consideration not only its formally calculated value but also social life and economic climate quality assessment influencing development and self-actualization of a person in labor, social and cultural spheres.

In HDI calculation, the level of population education is one of the most important markers having everything to do with human capital assets. Education expenditures in themselves do not ensure human capital gains; investing in education offers only potential benefits in the future under the condition of professional potential development and employment.

The basic social institution maintaining and developing nation's intellectual potential is still education institution, especially that of higher professional education. Hence, it is worthwhile to consider the main entity shaping professional potential of the coming generations, in other words the higher education faculty members.

Such problems as aging of academic personnel, complications with their rotation vary considerably in different regions of Russia.

Metropolitan higher educational establishments still have the opportunity to recruit talented young scientists and teachers from Russian provinces. Provincial universities are forced on replenishing their human resource capacity only from graduates of regional universities, namely there is a simple reproduction of the existing schools of thought and traditions of vocational and educational activities. Whereupon experience has proven that now it is second-best graduates who take up teaching in institutions of higher learning, and the young scientists who acquire the necessary qualification quit teaching.

Maximum risk group comprises young academic staff who have worked 5 to 7 years in regional higher education establishments. This is the reason why the problem of building up and employing professional potential of young academic personnel is important nowadays.

The crisis of science as social institution manifests itself as lagging behind in high technology development and implementation, which, in its turn, has an adverse effect on high technology products export to the world market. Russia's share in this type of export makes only 0.3%, high technology products - 2%.

In this regard, Russia is behind not only developed European countries and USA, but also rapidly developing economies (China and South Korea). Cuts in spending on research and development in recent decades have lead to decrease in those employed

in Russian science by 28%. At present, the number of the employed in this sphere is 761.3 thousand, researchers proper 375.8 thousand. At the same time the number of personnel performing scientific researchers in Germany has grown by 8%, in Great Britain - by 21%, in Korea - by 77%, in the USA - by 38%. [6; 60]. Russia's low involvement rate in international scientific and technological exchange is conditioned not only by social and economic crises aggravated by the want of adequate research and development policies and effective mechanisms of government regulation in the sphere of science and innovation, but also by the lack of new generation expertise independent in their judgment, possessing leadership potential, highly motivated for creative work and innovation.

Total number and age distribution of the core group of personnel working in research and academic establishments as well as in high technology enterprises (divided into categories), total number of young researchers are represented in the following distribution [7; 63]. At the same time the statistical data show there is a large talent pool in the region (see Table 2).

*Table 2***The Total Number and Age Distribution of Researchers and Research and Educational Personnel of the Region***

Age	Total Number of Employees	Researchers	Academics and Professors	Managers of All Levels	Other
up to 30	2180	80	658	61	1301
31-40	2510	67	1156	136	1091
41-50	1905	40	489	171	1002
51-60	2050	52	681	182	1036
60-70	845	20	396	68	367
Over 70	300	13	182	16	82

It is mainly professional environment and proper motivation that determine effectivity of development and implementation of human resources' scientific potential.

In 2012-2013, Tyumen State Oil and Gas University sociologists undertook an empirical investigation into the region young faculty professional potential. The basic methods of the empirical studies are expert and mass surveys, focus group interviews. The author worked with young faculty from higher education institutions in Tyumen, Shadrinsk, Yekaterinburg, Nizhnevartovsk. 208 persons were interviewed. Taking into consideration that such social group as young higher school teachers, young academics, is not in itself wide, the above stated selection size seems sufficient to yield representative data. The questionnaire consisted of several parts and included 53 questions designed to assess the environment and utilization possibilities of young faculty's potential in science and teaching. The author administered expert surveys

* Human resources potential of research and academic personnel as reported by the Department for Education and Science of the Tyumen Region; the personnel total number is 9790.

and focus group interviews in 2013. The experts are heads of research and teaching teams, heads of university departments, laboratory chiefs. All in all, there were 50 experts interviewed in the city of Tyumen. Teachers from the most universities of Tyumen took part in the focus groups. These universities are: Tyumen State University, Tyumen State Oil and Gas University, Tyumen State Medical Academy, Tyumen Academy of Culture, Arts and Social Technologies. Analysis of the research materials allows the following interpretation.

First, the group of young scientist of the region is quite homogeneous in terms of lifestyle, value system, leisure pursuits, economic status. As far as the social attitudes are concerned, the young scientists are likely to be creative and they advance their career, show significant responsibility and strive to develop their knowledge and skills.

All in all, the achievement motivation is predominant, yet there is differentiation in relation to professional perspectives and teaching prospects. Young scientists holding the Candidate of Sciences degree make up the main body of the group under study as they hold a more stable social and professional position in the structure of their institutions, they have socially significant characteristics (family, children, owner-occupied dwelling), and their motivation leads them to continue their scientific and teaching activities.

There is another tendency among young faculty and postgraduate students not holding any post graduate degrees. This group realizes their scientific potential not being in demand, and there is no way they could continue and advance their career in the higher school. Such a position has a negative influence upon the young identifying themselves with the scientific community, inadequate reproduction of social and professional standards, ambiguity of social attitudes, rise of apathy in the society, which blur the structure of social and professional group of young scientists.

The respondents named the following motives as the most influential in their choice of profession: interest in their profession or occupation - 71.2%; flexible work hours - 39.0%; interesting work environment - 33.7%; followed by social motives: scientific career standing - 22.9%; hopes of situation easing in science - 22.9%; being a scientific school member - 14.6%.

According to the survey, the leading factor for the young scientists to take up scientific and teaching career is an interest in their occupation and flexible working hours. In this case flexible working hours imply creative self-expression, a requirement for pursuing science and professional growth, freedom from uncreative conventional work. In this case such factors as "Scientific Career Standing", "Hopes of Situation Easing in Science", "Scientific School Member" are deemed important but not overriding, less than a quarter of respondents named them.

The answers to open-ended questions of the survey and the characteristics provided by focus-groups support this idea.

Though positively motivated and socially conscious, the respondents admit there is a great number of negative factors and implications for professional growth and

for their development as scientists. The respondents point out several groups of negative factors, and it is the financial problems (one should have an additional income to make the living) that top this list. This is stated by 55.3% of the respondents. The social problems hard to solve rank second on the list. These include issues with housing accommodations, state support of the young families, obtaining childcare, etc. — 51.9%. Almost a half of respondents (47.1%) suggest deterioration of higher education quality as a negative factor. About a quarter of respondents (24.0%) consider the state agencies policy in the sphere of education innovations to be inconsistent, incongruous and incoherent.

Among the least supported policies there are higher education reorganization, joining the Bologna process. Only 5% of respondents believe this process to be positive. Only 8.9% of respondents approve strict government policies in the sphere of education. There is some weariness in regard to the reforms in the modern Russian society [8]. Young scientists consider the problem of emigration acute; 41.3% of respondents are worried by “brain drain”. Among which 27.4% indicate the issue of talented youth leaving science for business and 13.9% believe external migration to be a problem. These assessments are indicative of the local character: metropolitan academics are more preoccupied with emigration, and with the question of how to apply their creative potential in foreign laboratories and scientific centers.

Among the respondents, there is a high level of satisfaction with their choice of profession. 64.4% of young faculty would agree to become again higher school teachers and scientists. Only 12.5% (every eighth respondent) would refuse to make the same choice again. At the same time almost every fourth respondent (23.1%) hesitated.

As we stated at the beginning of our research, the professional potential goes close to social and sociocultural characteristics of a personality.

Young faculty belong to the age range of starting a family, bearing children. Yet, our research shows that less than a half of respondents are married (45.2%). It is considerably later in life, that the young scientist may have a family and children. The low reproductive activity of those involved in science may be influenced by reluctance to have children due to postgraduate learning, writing theses, want of a job with good prospects in the specialty, low income, want of a private dwelling, etc.

The social security system of young faculty may be characterized as weak. The following are the characteristics of low social security: work compensation inadequate to the modern social and economical standards; pending housing issues; vulnerability of legal rights, incomplete and fragmentary nature of legal basis in the areas of social and economical support; low level of labor prestige and of moral and psychological health. To compensate young faculty are allowed to combine jobs, thus, many specialists work in two, three or more colleges. This leads to fatigue, lack of time and motivation for scientific research, skill advancement, and professional ties development. Unreliable social guarantees, their optional implementation by the government, increase in the social, economical, and legal instability, low social status may lead to a further fall in the prestige of scientific and teaching work, and may damage the

motivation of professional development and implementation of young faculty's professional potential.

The analysis of the survey questions devoted to the cultural potential and academic assets attests to the fact that there is a relatively high level of the young faculty involvement into the cultural environment of the city. At the same time "outdoor and summer "dacha" recreation" obviously prevails over the necessity to attend cultural public places in the structure of leisure activities. It is important to note that our study data prove the well-known fact of leveling sociocultural differences between generations [9]. Nevertheless some peculiarities for the young faculty group have been identified [10]. Specific features of the cultural demand in this group: most respondents do not rely on television and prefer using it as a recreative tool, and not the information source. Art forms preferred by the respondents are music and cinema. Interest in pictorial arts and architecture was demonstrated at a rather low level. As for the preferences in literature, these are formed under the influence of their profession: overwhelming majority of the respondents read mostly scientific literature. The subcultural context of the youth leasuretime is very important as well as its peculiarities in the sphere of young scientific and creative professionals [11].

Qualitative research is necessary to reveal deeper content-related features of young teachers' cultural potential, estimate their potential and a possibility to employ such potential in the modern social and cultural environment. Appraisal of regional aspect's influence upon the cultural potential and respondents' potential also requires additional research.

Educational system may become one of the main factors of preservation and development of human potential in Russia. To solve this problem, the quality and level of Russian society intellectualization should be adjusted in accordance with the challenges of XXI century, which requires:

— an increase in the quality of professional higher education in accordance with the requirements of fundamental science and primary trends in science development;

— innovative support and development of the educational system, determination and implementation of the social demands (e.g. social, business, and government needs) in the preparation of highly qualified professionals;

— reinstatement of upbringing in the higher schools. A higher school should bring up patriots and citizens who realize personal responsibility for the fate of their country. Solution to this problem for Russia is not a humanitarian goal, but a national survival issue.

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