

Implementation of Professional Standards in the System of Higher Education in Russia as a Factor of Innovative Development

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Abstract–The priority goals of the national development of Russia in modern times are associated with technological innovations and digital technologies. To achieve the goals, it is essential to train highly qualified personnel, to raise the level of the country's personnel potential, to develop the national qualifications system, and to implement professional standards, including those in the field of professional education. The international practice shows that introduction of professional standards provides the requirements to the specialist and insures interrelationship between the labor market and the specialist competencies formed by the system of higher and secondary professional education. The science and education sector generates "talents and ideas", which in turn are sources of innovation. The study attempts to define the role of professional standards in innovative development of the country and to investigate the mechanism of their implementation in the system of higher education. To achieve this goal, a number of tasks should be fulfilled: 1) to reveal the importance of professional standards for development of the labor market and enhancement of the competitiveness of national innovation systems; 2) to analyze regulatory, organizational, and methodological aspects of implementation of professional standards; 3) to identify the features of the mechanism for implementation of professional standards in the system of higher education.

Keywords–innovations; national qualification system; professional standards; higher education; employee qualification; generalized labor function; labor function; labor activities

I. INTRODUCTION

Long-term concepts of socio-economic and innovative strategies of the country suggest an increased role of human capital as the main factor of economic growth [1]. One of the indicators is the share of enterprises engaged in technological innovation, which should be at least 40% [2]. In addition, ranking of Russia in top ten countries in quality of general education is the target indicator among other strategic goals, including those focused on development of the national

qualifications system and implementation of professional standards [3, 4].

II. LITERATURE REVIEW

The essence and factors of innovation activities were revealed in studies by many researchers, including J. Schumpeter, J. Yakovets and P. Drucker [5–7], who significantly contributed to these developments. The concepts of national innovation systems were simultaneously developed and reflected in the studies by Christopher Freeman, Brik Lundvall, and Richard Nelson [8–10]. F. Alekserov, I. Egorova, G. Azar, and others considered the issues of innovation development stimulation [11, 12].

The economic literature identifies six components for competitiveness of national innovation systems, namely: "talents and ideas", "commercialization" of ideas and developments, an innovative potential of companies, technological infrastructure and clusters, the demand for innovative products, institutions and public administration.

The priority methods used to stimulate innovation activities are tax and credit instruments, guarantee support, etc. [13, 14]. Human resourcing is crucial for innovation process. In this regard, we share the opinion of experts that "interaction of the spheres of labor and professional education" is based on the mechanism of implementation of "professional qualifications" and professional standards [15].

III. RESULTS

Implementation of professional standards in Russia helps eliminate the inconsistency between the existing characteristics of professions and positions and the requirements to employees imposed by the modern labor market, and improves the quality of educational services and professional mobility of specialists, including teachers. At present, novel mechanism of implementation of professional standards in the labor market generates a need for the system of professional

qualifications. This problem covers legal, organizational and methodological aspects of its implementation.

In our opinion, the most significant problem is implementation of the professional standard for teachers involved in professional training approved by Order of the Ministry of Labor and Social Protection of the Russian Federation dated 08.09.2015 No. 608n. It provides qualification requirements and characteristics of labor functions for the teaching staff of the system of secondary professional and higher education [16].

First, regulatory documents contain ambiguous interpretations of the concepts related to qualifications of employees and functions they perform. According to the Labor Code of the Russian Federation, "qualification includes the level of knowledge, soft skills, professional skills and work experience of an employee" (Art. 195.1 of the Labor Code of the Russian Federation). The Federal Law On Education in the Russian Federation No. 273-FZ dated December 29, 2012 provides the concept of qualification different from that given in the Labor Code of the Russian Federation. It states that "qualification is the level of knowledge, skills and competency that shows the level of proficiency appropriate for a certain type of professional activity" (Par. 5, Art. 2) [17].

The professional standards contain qualification requirements to an employee necessary to perform the labor function in a particular position, profession, specialty based on an employment contract, and labor functions are included in labor activities.

TABLE I. CONTENTS AND INTERRELATION OF THE GENERALIZED LABOR FUNCTION, LABOR FUNCTION AND LABOR ACTIVITY

Term	Definition
Generalized labor function	a set of interrelated labor functions formed as a result of the differentiation of labor in a particular production or (business) process.
Labor function	1) work in the position according to the staff list, professions, specialties with indication of qualification; the specific type of work charged to the worker (Par. 2, Art. 57, the Labor Code of the Russian Federation). 2) a system of labor activities within the generalized labor function, which is an integrated and relatively autonomous set of labor activities specified by the business process, which imply competencies adequate for their implementation.
Labor activity	- the process of interaction of an employee with the subject of labor to achieve a certain goal.

The Labor Code of the Russian Federation and Order of the Ministry of Labor and Social Protection of the Russian Federation On Approval of Guidelines for Developing a Professional Standard No. 170-n dated April 29, 2013 provide different interpretations of the concept "labor function". The Labor Code of the Russian Federation (Par. 2, Art. 57) interprets the labor function as "work in the position according to the staff list, professions, specialties with indication of qualification; the specific type of work charged to the worker" [17]. Methodological Recommendations for the development of

professional standards specify the labor function as "the system of labor activities as part of the generalized labor function" [18].

A distinctive feature of professional standards is that this document is intended not for a specific position or profession, but for a specific type of professional activity. It shows the interrelation of generalized labor functions of similar character, results and working conditions, and labor functions and labor activities [18]. The content and relationship of basic terms related to the professional standard are presented in Table I.

In practice, there are problems concerned with the correlation of qualification levels stated in the order of the Ministry of Labor and Social Protection of the Russian Federation No. 148-n of 12.04.2013 [19] and the labor functions of the employee, which must be specified in the employment contract.

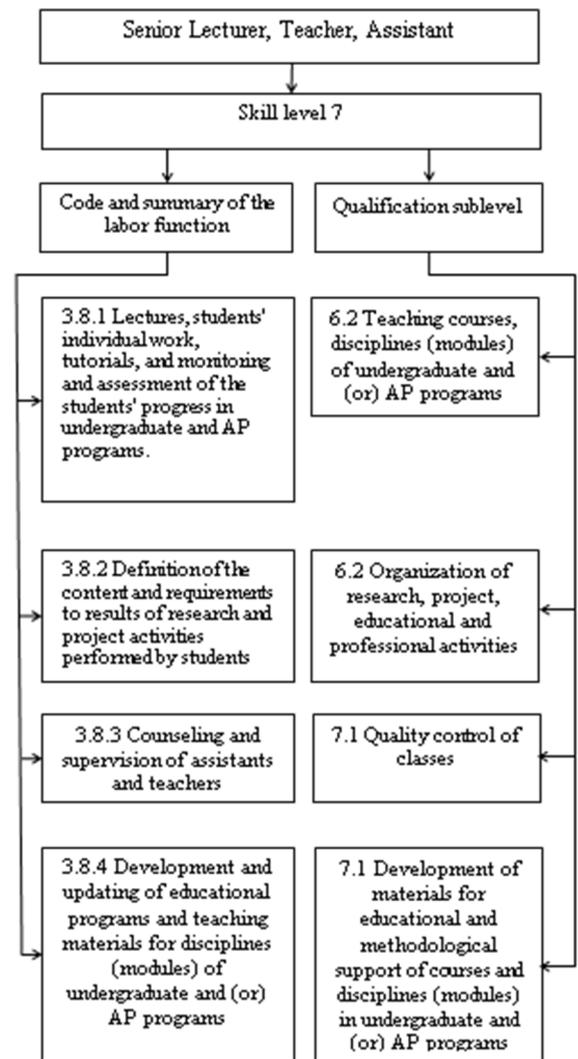


Fig. 1. Labor functions and qualification sublevels for positions of senior teacher, teacher, and assistant.

According to the professional standard Teacher of Professional Training, Professional Education and Additional Professional Education, the correspondence of qualification

levels to positions and labor functions of teachers of higher education is represented by three levels: seventh, eighth and ninth [16].

The seventh qualification level of the professional standard in the system of higher education includes the positions of a senior teacher, teacher, and assistant, and corresponds to the labor functions presented in Fig. 1.

Associate Professor, one of the most extensive and popular position in higher education, is referred to the eighth qualification level. Its labor functions and sublevel are indicated in Fig. 2.

The ninth qualification level of the professional standard reveals the functional positions represented by Professorship, which corresponds to the sublevels and labor functions presented in Fig. 3.

Thirdly, implementation of professional standards is of high relevance. In accordance with the Letter of the Ministry of Labor and Social Protection of the Russian Federation No. 14-0/10/B-2253 of 04.04.2016 [20], professional standards are essential in case:

- the titles of positions, professions, specialties and their qualification requirements correspond to the titles and requirements specified in qualification reference books or professional standards, if, in accordance with the Labor Code of the Russian Federation or other federal laws, these positions, professions and specialties are associated with compensation and benefits or restrictions (Part 2, Art. 57 of the Labor Code of the Russian Federation);

- requirements for the qualifications provided in professional standards are mandatory for the employer, if they are established by the Labor Code of the Russian Federation, other federal laws, and other regulatory legal acts of the Russian Federation (Art. 195.3 of the Labor Code of the Russian Federation).

The compliance with the above conditions implies mandatory implementation of professional standards. In other cases, the use of professional standards can be non-regulatory.

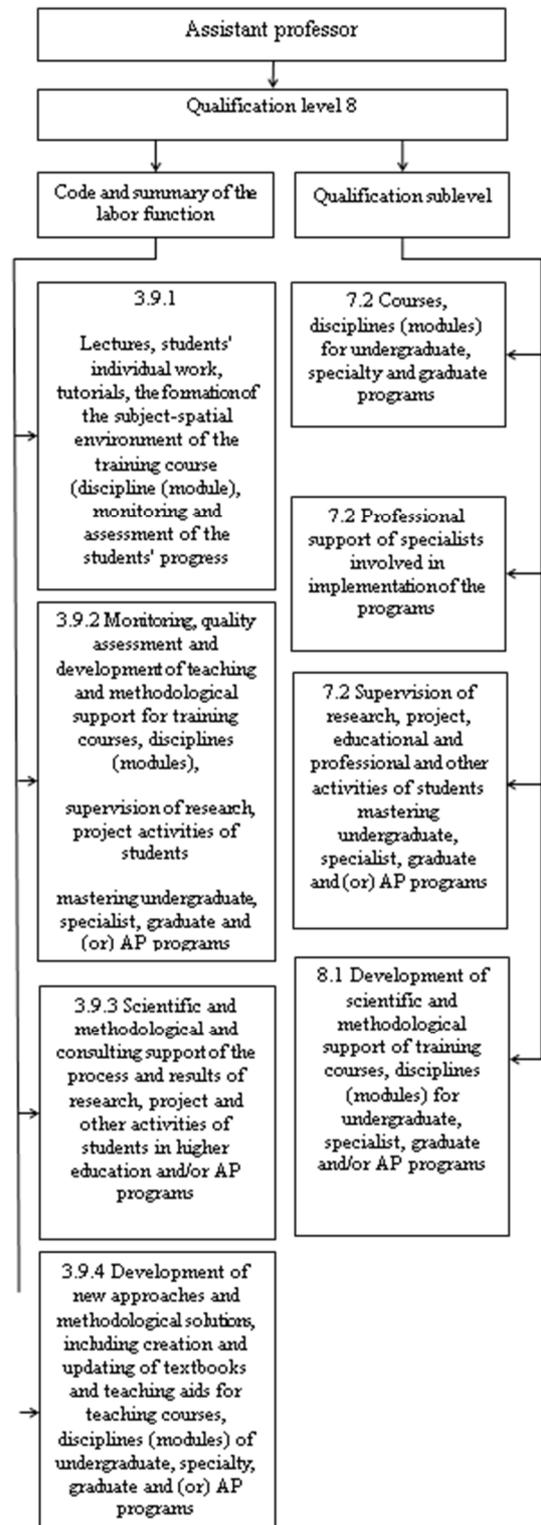


Fig.2. Labor functions and qualification sublevel for position of associate professor.

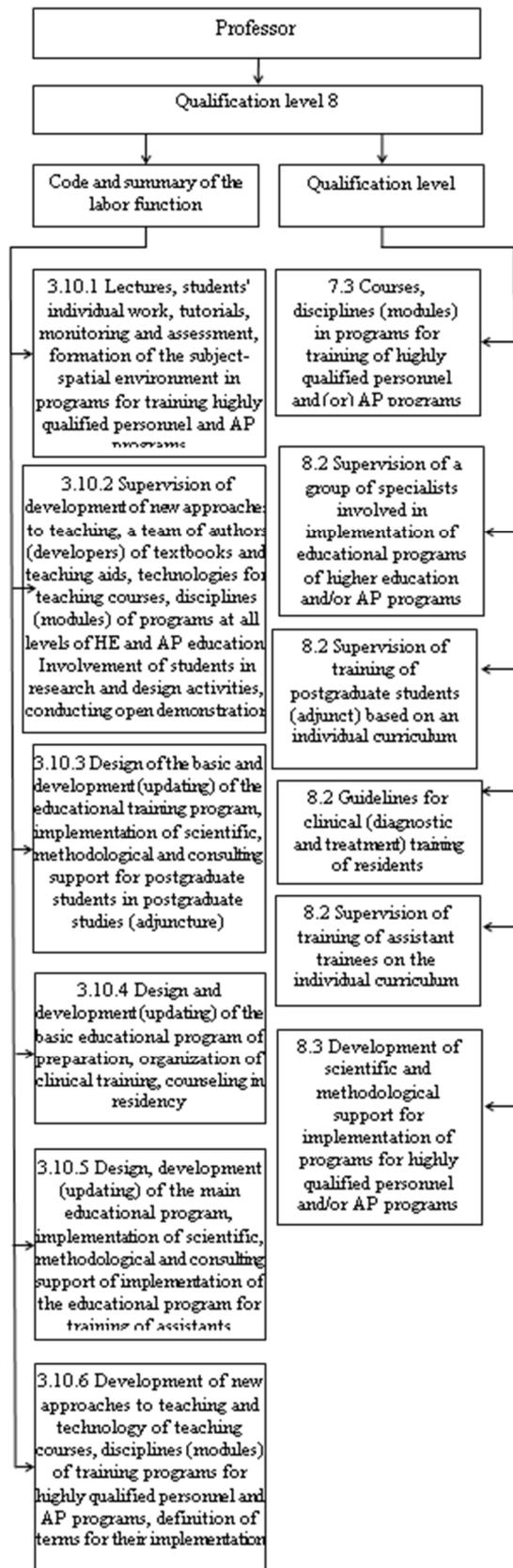


Fig. 3. Labor functions and qualification sublevel for position of Professor

IV. DISCUSSION

At the same time, many issues related to the application of the professional standard are ambiguous.

Letter of the Ministry of Education and Science No. 09-PG-MON-814 of 12.02.2016 clarifies the need for the professional standard to determine the specific labor functions of a teacher [21]. Part 1, Art. 46 of the Federal Law dated December 29, 2012 of the Federal Law On Education in the Russian Federation states the requirements to future employees in the system of secondary professional or higher education. "Part 1, Art. 46 of the Federal Law dated December 29, 2012 of the Federal Law On Education in the Russian Federation states that the position in teaching activities is granted to a person with secondary professional or higher education who meets the qualification requirements specified in the qualification guides and/or professional standards, therefore, it can be concluded that obligatory application of professional standards to define official duties of an employee depending on the educational program is not established".

It can be assumed that an employer can apply both professional standards and qualification guides of the Unified Qualification Directory of Managers, Specialists and Employees to determine official duties of employees. "Unified Qualification Directory of managers, specialists, employees

For "state-dependent" organizations (until January 1, 2020), the Resolution of the Government of the Russian Federation No. 584 dated June 27, 2016 [22] approved a strategy for phased transition to compulsory use of professional standards. According to the strategy, plans for implementation of professional standards should be approved by organizations with due regard to the views of representative bodies of workers, including:

- list of professional standards to be applied;
- data on the need for professional education, professional training and (or) additional professional education of employees, which is based on the analysis of qualification requirements specified in professional standards and the personnel of organizations, as well as data on relevant education and training activities;
- stages of implementation of professional standards;
- list of local regulations and other documents of organizations, including those on accreditation, certification and other forms of assessment of the qualification of employees that should be changed with regard to the professional standards to be applied.

V. CONCLUSION

Implementation of professional standards in the system of higher education is specific, and it is performed according to the following mechanism:

Firstly, the qualification of employees should be analyzed for compliance with the requirements of the professional standard Teacher of Professional Training, Professional Education and Additional Professional Education, and the need for additional professional education (hereinafter, APE) in the

form of advanced training or professional retraining of teachers should be identified.

Secondly, the APE for teachers should be organized in favorable conditions, which falls within the competence of educational organization (Par. 5, Part 3, Art. 28 of Federal Law No. 273-FZ) [23]. The creation of conditions for the APE of teachers includes not only organizational but also financial issues directly related to additional professional education, including the provision of guarantees and compensations established by labor legislation and other regulatory legal acts containing labor law norms, a collective agreement, agreements, local regulations, and an employment contract.

Thirdly, local acts of an educational organization are to be updated, for example, a collective agreement, due to implementation of professional standards (if necessary). In addition, official duties and additional agreements with an employee are to be developed and implemented due to changes in labor functions.

Fourthly, in the transition to an effective contract, the labor function of an employee, indicators and criteria used to evaluate the effectiveness of his labor activity, the amount of remuneration and the amount of incentives in support of achievement of collective labor results should be clarified and specified.

Since the professional standard provides labor functions, it can be used as a methodical document to develop indicators and criteria of employee performance, that is, to correlate the labor functions and labor activities of the professional standard with the indicators and performance criteria of a teacher.

Finally, it is necessary to take into account that if an employer does not follow the requirements of the professional standard, he can be fined from 30 thousand rubles to 70 thousand rubles (Art. 5.27 of the Administrative Code of the Russian Federation) [24].

The analysis performed shows that implementation of professional standards in the education system requires adherence to a specific mechanism specified in the strategy of phased transition to mandatory implementation of professional standards, and adherence to legal procedures. Otherwise, this may cause labor disputes between an employee and an employer.

We believe that the labor market should create favorable conditions for innovation activities. This requires highly qualified specialists not only in the field of high-tech production, but also in the education system to increase the competitiveness of the national innovation system.

References

- [1] Concept of long-term socio-economic development of the Russian Federation for the period up to 2020, No. 1662-p. Approved by the Government of the Russian Federation, 17.11.2008
- [2] Strategy of innovative development of the Russian Federation for the period until 2020 No. 2227-p. Approved by the Government of the Russian Federation, 08.12. 2011.
- [3] Decree of the President of the Russian Federation dated May 7, 2012 No. 597 "On measures on realization of state social policy".
- [4] Decree of the President of the Russian Federation from 07.05.2018 No. 204 "On the national goals and strategic objectives for development of the Russian Federation for the period up to 2024".
- [5] J.A. Schumpeter, "Business cycle. A theoretical, historical and statistical analysis of the capitalist process," New York, Toronto, London: McGraw-Hill Book Company, 1939.
- [6] Y. Yakovets, "Global Economic Transformation of the 21st Century," LAP Lambert Academic Publishing, 2014.
- [7] P.F. Drucker, "Innovation and entrepreneurship: Practice and principles," London: Pan Books, 1986.
- [8] C. Freeman, "Technology Policy and Economic Performance," London, 1987.
- [9] B.A. Lundval, "National innovation system: Towards a theory of innovation and interactive learning," Pinter, London, 1992.
- [10] R.R. Nelson, "National Innovation Systems. A Comparative Analysis," New York/Oxford: Oxford University Press, 1993.
- [11] F. Aleskerov, L. Egorova, L. Gokhberg, A. Myachin and G. Sagieva, "Pattern Analysis in the Study of Science, Education and Innovative Activity in Russian Regions," Computer Science Proceedings, vol. 17, pp. 687–694, May 2017.
- [12] G. Azar and F. Ciabuschi, "Organizational innovation, technological innovation, and export performance: The effects of innovation radicalness and extensiveness," International Business Review, vol. 26, Iss. 2, pp. 2574–2580, April 2017.
- [13] G. Khokhlova and D. Okladnikova, "Classification of Factors as Grounds for Analysis of Innovative-investment Activity of Small and Medium Businesses," Middle-East Journal of Scientific Research, vol. 12, pp. 36–41, Russia, 2014.
- [14] K.R. Bibarsov, N.V. Kretova and E.Yu. Popova, "Improvement of Innovative Forms as a Tool for Effective Development of Small Business," European Research Studies Journal, vol. 20, pp. 98–110, Greece, 2017.
- [15] A.V. Murychev, D. K. Mashtakeeva and P. N. Novikov, "Development of the system of professional qualifications of the Russian financial market," Money, credit, banks, vol. 8, pp.18–25, Russia, 2017.
- [16] Order of the Ministry of labor of Russia dated 08.09.2015 N 608n "On approval of the professional standard Teacher of Professional Training, Professional Education and Additional Professional Education"(Registered by the Ministry of Justice of Russia, 24.09.2015 N 38993)
- [17] Labor code of the Russian Federation dated 30.12.2001 N 197-FZ (as amended on 27.12.2018).
- [18] Order of the Ministry of Russia dated 29.04.2013 170H N "On approval of methodological recommendations for the development of professional standards".
- [19] Order of the Ministry of labor of Russia dated 12.04.2013 No. 148-n "On approval of qualification levels in order to develop draft professional standards".
- [20] Letter of the Ministry of labor of Russia of 04.04.2016 N 14-0/10/V-2253 "Answers to standard questions on application of professional standards" (together with "Information of the Ministry of labor and social protection of the Russian Federation concerning application of professional standards").
- [21] Letter of the Ministry of education dated 12.02.2016 No. 09-PG-mon-814 "On consideration of the appeal".
- [22] Resolution of the Government of the Russian Federation of 27.06.2016 No. 584.
- [23] Federal law "On education in the Russian Federation" of 29.12.2012 N 273-FZ (as amended on 06.03.2009 N 17-FZ)
- [24] Code of the Russian Federation on administrative offences dated 30.12.2001 N 195-FZ (as amended on 18.03.2019) (with amendments and additions, with effect from 29.03.2019).