On Capabilities of People with Health Limitations in Terms of Industrial Business

O A Denisova\(^1\) and O L Lekhanova\(^1\)

\(^1\)Cherepovets State University, 5 Lunacharsky street, Cherepovets, 162600, Russia

E-mail: denisova@index.ru

Abstract. The Resource Training and Methodical Center (RTMC) for training people with disabilities, based at the Cherepovets State University, presents its experience and research results in terms of identifying the capabilities of people with disabilities as a human resource for industrial business. The authors demonstrate that over the past few years the number of people with disabilities focused on inclusive employment in industry has been increasing. The specifics of careers chosen by people with disabilities and their special needs prove that cooperation between industrial business and a network of Resource Training and Methodical Center for training people with disabilities is a must.

1. Introduction
Over the past few years focus on inclusion of people with health limitations (HL) into every sphere of life of the society has become one of the key trends of governmental initiatives in Russia. Industrial business is no exception. Taking into consideration that ratification of Convention on the Rights of People with Disabilities evoked serious amending of legislative and regulatory framework in our country, issuing of decrees and taking of governmental solutions stimulating businessmen to study the capabilities of people with disabilities more thorough as a source for development of their factories and industries, analyses of the existing experience in terms of professional orientation, education, employment and social involvement of people with disabilities becomes quite relevant. This task becomes even more significant in relation to improvement of management framework of industrial manufacturing and its human resourcing, which is associated with the known controversy between the necessity to meet the governmental requirement for quota arrangement and filling of vacancies with the people with disabilities and the existing labor contraindication at the hazardous and dangerous industrial manufacturing of people with dysfunction of vital functions.

This research has been made as a part of activities of Resource Training and Methodical Center for training people with disabilities based at the Cherepovets State University established by the decree of Ministry of Education and Science of the RF (RTMC NWFD CSU). Such training is implemented at the Universities of the designated area of the North-Western Federal District (Arkhangelsk region, Vologda region, Kaliningrad region, Murmansk region, Novgorod region, Pskov region, Karelia republic, Komi republic) [1, 2]. RTMC NWFD CSU is a member of the Federal network of Resource Training and Methodical Centers (RTMC) for training people with disabilities based at the organizations of higher education (OHE) [3]. The conjoint efforts of RTMC network members is aimed at ensuring the equal rights for education, social and cultural integration and social involvement for the people with disabilities and HL, their inclusion into labor and social relations in the region [4].
This article presents a summary and systematizing of experience and practices of RTMC based at the Cherepovets State University related to identifying the capabilities of people with health limitations as a human resource for industrial business taking into account current data and opinions in the problem field of research [5-9].

2. Objective
To analyze the current status in the sphere of inclusive professional orientation, inclusive education and inclusive employment in the region and to define resources of people with health limitations for the purposes of industrial business.

3. Materials and methods of research
This research was made using methods of comparative analyses, systematizing and learning from the experience of RTMC NWFD CSU and evidence of analytical reports from the center activity for the period of 2017-18. The above mentioned objective was sourced by:
- regional statistics on the number of people with disabilities, including those people who are getting professional education;
- data on the number and proportion of students with disabilities in the Universities and organizations of higher education located at the designated area of North-Western federal district reserved for the RTMC NWFD CSU (Arkhangelsk region, Vologda region, Kaliningrad region, Murmansk region, Novgorod region, Pskov region, Karelia republic, Komi republic);
- data on varieties of health limitations among the students with disabilities in the partners’ Universities of RTMC NWFD CSU;
- list of training programs chosen by the students with disabilities in the Universities of the designated area reserved for RTMC NWFD CSU;
- results of monitoring control among the students with disabilities at the designated area reserved for RTMC NWFD CSU (Arkhangelsk region, Vologda region, Kaliningrad region, Murmansk region, Novgorod region, Pskov region, Karelia republic, Komi republic);
- data on the estimated number of graduates with disabilities at the regional labor market.

4. Research results
The North Western federal district occupies 9.5% of the territory of Russia, the proportion of population is more or less the same. According to the official report the total population of the region makes more than 13 mln people, 71.3% of them belongs to the economically active people. Other 12% is shared by the people with disabilities, of them approximately the third part is made by people of active working age, about 5% of the total number of people with disabilities is shared by the young people aging from 18 to 30 years.

The statistics analyses of the data provided by FKU (Federal public institution) Chief Sociomedical Examination Board in Vologda region belonging to the Ministry of Labor and Social protection of Russia for the period 2017 – 2018 shows the following number of people with disabilities: in 2017 - 101642 people, in 2018 – 97419 people. In2017, 210 people with disabilities aging 18 – 30 years were getting professional education out of the total 3101, in 2018 – 261 people out of the total 2857.

Thus we can see the decrease of the total number of people with disabilities within the period 2017-2018 together with the increase in the number of those who are getting professional education constituting the human resource for industrial business. Special attention shall be paid to the data about people with disabilities who are getting higher education and are the most probable candidates to be granted the disability jobs quota in regard to the vacancies for the specialists of high qualification. See Table 1 for the data on the number of students with disabilities in the partners’ Universities of RTMC NWFD CSU.

Thus the total number of students with disabilities who study in the partner’s Universities located at the designated area of RTMC NWFD CSU is increasing. But apart from growth in the number of students with disabilities, their proportion in the total amount of the students studying at the
Universities is increasing. These data reasonably demonstrate both interest of the young people with disabilities in professional education and necessity of cooperation between industrial business and Universities practicing inclusive education and training the employee pool for inclusive employment.

Table 1. Number of students at the partner’s Universities of RTMC NWFD CSU in 2017-18.

| Students with disabilities | 2017 | 2018 |
|----------------------------|------|------|
| Students with disabilities |      |      |
| Proportion in the total number of students | 0.27% | 0.47% |
| Total in the network of RTMC NWFD CSU | 331  | 425  |

Data analyses on distribution of the students with disabilities of different years of study at the Universities of RTMC NWFD CSU network is as follows: 150 students with disabilities – 1st year; 2nd year – 83, 3rd year – 60, 4th year – 57, 5th year – 15, 6th year – 3 students with disabilities. Consequently the further years shall see almost triple increase in the amount of graduates with disabilities at the regional labor market, which shall be considered by HR services when they address allocation of quotas and filling vacancies designated for the people with disabilities.

Data on nosology of dysfunctions among the students with disabilities in the partner’s Universities of RTMC NWFD CSU see in Figure 1.

As it becomes clear from the picture, most part of the students with disabilities suffer from systematic disease and dysfunctions of the locomotor system; the least number of students have hearing loss and eye disorder. It shall be noted that even inside of one nosological group the list of health limitations of the students with disabilities is non-uniform varying from minor need in special environment for studying and support to the need in continuous tutor’s support and being trained according to the adapted educational program of general professional education. The opinion poll among the students with disabilities which was carried out in 15 universities of NWFD demonstrated that intramural studies together with students who have no dysfunctions is the most in-demand and convenient option (71%). 75% of students with disabilities point out the necessity to modify and adopt training programs so that to consider physical condition. Together with that the largest portion opinion poll participants identified demand in social and psychological support (45%), development of individual training program (18%) and assistance of a certain associate (18%). 79% of respondents mentioned that they don’t need any specialized equipment, 2/3 of them instead pointed out the necessity to get social and psychological support. The available data are valuable as a prospective aspect to facilitate finalizing of the issue related to equipping of special work places and creating the
special labor conditions for graduates with disabilities. When considering employment of the people with disabilities representatives of industrial business shall realize the needs of such applicants, including their need in mentoring and support, which shall be rendered by the people specially trained for cooperation with the people with disabilities and serving their special needs.

Analyses of monitoring data acquired from the students with disabilities at the designated area reserved for RTMC NWFD CSU (Arkhangelsk region, Vologda region, Kaliningrad region, Murmansk region, Novgorod region, Pskov region, Karelia republic, Komi republic) demonstrated that the largest portion of University applicants select the University at the maximum proximity to the place of their residence. Most of the people with disabilities address to opinion of their parents and teachers, fields of interest and hobby, data available at the official web-sites of the Universities as the ground for selection of educational program and major. Almost none of the respondents with disabilities defined their physical condition and recommendations provided by the Sociomedical Examination board as the basis for selection of the future profession. Rare is the judgment that the regional labor market and availability of vacancies to be employed for shall be accounted for while selecting the major. Monitoring of the educational needs of University applicants with disabilities demonstrated that only half of the high schoolers with disabilities (53 %) have clear understanding on the profession which they would like to be trained for. Third portion of respondents (32 %) have doubts on selecting the future careers. Alongside with that 46 % of the applicants say they don’t need any assistance of employment counsellor. This means that University applicants with disabilities have just a vague idea on their future careers. In general, the acquired data reflect the regional tendency for disbalance between the socio-professional and value-based orientation of the population and structure of demand for the highly qualified jobs.

Data analyses on the selection of the future careers indicated that over half of the existing 98 training programs, being covered by the students with disabilities refer to professions intended for industrial business. The list of majors (specialities) mostly demanded among the students with disabilities at the Universities of the designated area reserved for RTMC NWFD in terms of their potential to be applied further in industrial business is shown in Figure 2.

![Figure 2. Top of majors (specialities) mostly demanded by students with disabilities focused at the industrial business in the partners’ Universities of RTMC NWFD CSU (% of the total selected amount).](image)

With that said the top of most demanded training programs (specialities) among the people with disabilities is the following: construction, information systems and technologies, applied informatics, economics, management, legal education, pedagogy education, psycho-pedagogy education, specialized (defectology) education, medical care). These training programs refer to the Extended groups of majors (training programs) "Engineering, technologies and technical sciences", "Social sciences", "Education and pedagogy sciences", "Health care and medical sciences" which shall be
taken into account when making a forecast for employment of people with disabilities at the regional labor market.

5. Conclusion and Summary
Practical experience of RTMC NWFD CSU and research results indicate that currently the portion of people with disabilities who are getting professional education with a focus at the inclusive employment is demonstrably increasing. Demanding mentoring and support at the workplace is notably varying among the graduates with disabilities and tend to have prominent individual character. As a whole there is a need for building an integrated system to coordinate activities of educational organizations, employers (including industrial business), social welfare institutions and labor authorities in terms of professional orientation, education, employment of people with disabilities and their adaptation at the workplace.

Addressing to the people with disabilities and HL as human resource for industrial business will be efficient under condition that a complex of interrelated data on inclusive professional orientation, inclusive education and inclusive employment is taken into account.

It appears that cooperation between industrial business and educational organizations which practice professional training of the students with disabilities and HL, also as a part of federal project of RTMC network activities will allow to:
- make real the employment of people with disabilities at the work positions for specialists of higher qualification limited by quotas;
- plan and reduce costs on equipping of specialized workspaces for people with disabilities and HL;
- improve the image of organizations and enterprises being socially focused;
- generate new competencies with their employees in terms of cooperation with people with disabilities and mentoring of their labor;
- increase the level of corporate culture including the issues related to generation of its inclusive aspect.

References
[1] Afanasiev D V, Denisova O A and Lekhanova O L 2018 Developing inclusive higher education: the Network approach (Moscow: MGPPU) pp 72–82.
[2] Denisova O A and Lekhanova O L 2017 Psychological Science and Education 1 119–129
[3] Margolis A A, Rubtsov V V and Serebriannikova O A 2017 Psychological Science and Education 1 10–17
[4] Rubtsov V V 2016 Psychological Science and Education 1 87–93
[5] Bikbulatova A A, Soldatov A A and Nevskaya M V 2015 Vestnik UGUES. Science, education, economics. Series: Economics 3 36-40
[6] Bryantseva M V 2011 Social Policy and Sociology 10 82–88
[7] Natsun L N 2017 Bulletin of UrFU. Series: Economics and Management 4 663–680
[8] Nenakhova Yu S 2018 Population 3 96–108
[9] Shabunova A A and Fakhradova L N 2016 Economic and social changes: facts, trends, forecast 6 126–142.