A study of personality factors in inclusive vocational education: The case of Russia

La investigación de los factores personales en la educación profesional inclusiva: el caso de Rusia

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ABSTRACT:
The article is devoted to one of the urgent problems of modern pedagogy – the problem of creating an effective system of vocational training for people with disabilities. The article contains the results of a study focused on the identification of psychological factors that determine the training level of people with disabilities as future competitive professionals. The article presents the results of empirical research conducted on the basis of a number of Russian universities for four years. The total research sample was 1578 students and graduates. Among them, there were 239 people with special educational needs of different nosological groups. According to the empirical research results, the authors come to the conclusion about the need and feasibility of creating special conditions at universities for providing psychological assistance to students with special needs to overcome negative consequences caused by the natural influence of the fact of disability on their personality development.

Keywords: Individual psychological features, students with disabilities, professional training, inclusive environment.

RESUMEN:
El artículo es sobre uno de los problemas actuales de la pedagogía moderna – el problema de la creación del sistema eficaz de capacitación profesional para las personas con discapacidades. El artículo contiene los resultados del estudio orientado a identificar los factores psicológicos que determinan el nivel de formación de las personas con discapacidades como futuros profesionales competitivos. En el artículo se presentan los resultados del estudio empírico realizado sobre la base de una serie de universidades rusas durante cuatro años. La muestra general del estudio fue de 1578 estudiantes y graduados, de los cuales 239 personas con necesidades educativas especiales de diferentes grupos nosológicos. Tras los resultados del estudio empírico, los autores concluyen la necesidad y utilidad de la organización de condiciones especiales en la universidad para prestar asistencia psicológica a los estudiantes con necesidades especiales para superar los efectos negativos resultantes de la influencia natural de la discapacidad en el desarrollo de la persona.

Palabras clave: Características psicológicas individuales, estudiantes con discapacidades, capacitación profesional, entorno inclusivo.

1. Introduction
Education plays an increasingly significant role in the development of modern society (Volchik, & Maslyukova, 2019). The problem of development and scientific substantiation of a vocational training system for people with disabilities and limited health capacities (LHC) has arisen relatively recently, due to the need to ensure access of this category of people to quality and full-fledged vocational education, including higher education.

In Russia, at present, there is a steady tendency to increase both the number of students with disabilities and LHC studying at Russian universities and the number of educational organizations carrying out their professional training. However, the lack of holistic theory of inclusive vocational education of people with disabilities and limited health capacities in modern domestic pedagogy causes the emergence and development of a huge number of problems, the solution of which depends on the effectiveness of the implementation of strategic government objectives. As the most important problems of inclusive higher education in Russia, researchers note:

- The lack of teachers' preparedness to educate people with special educational needs (Votyakova, 2018; Selivanova, & Shchetinina, 2017; Grebennikova, & Nikitina, 2016);
- Low level of skills of educational activity in students with disabilities and LHC (Starobina, 2014; Bonkalo et al., 2015);
- Adverse relationships in an inclusive student group (Besan, & Konovalova, 2016);
- Low level of personal and professional self-determination of people with disabilities and LHC (Bonkalo, & Tsygankova, 2015; Rybalkina, 2016; Khilko, & Philimonyuk, 2018);
- The absence of a unified approach to teaching individuals with disabilities and special needs at a university (Alekhina, & Vachko, 2014; Egorov, 2012).

To develop a holistic system of vocational training of people with disabilities and LHC, making it possible to overcome the problems, contributing to professional and personal development of students with disabilities and LHC, their ability to compete in the labor market on a par with specialists without disabilities or LHC, it is necessary to obtain evidence-based information about psychological factors that determine successful adaptation of people with disabilities and people with LHC, their rehabilitation and integration into the whole university educational process.

In this regard, a study was conducted, the purpose of which was to identify the individual psychological characteristics of students with disabilities and LHC studying at higher education institutions, and the impact of such features on their success in educational and cognitive activities.

The results of the conducted analysis suggest that currently there are some attempts of theoretical and practical understanding and research of problems of inclusive higher education providing vocational training for people with disabilities and LHC as competitive professionals.

The impossibility to define clear and uniform operational guidelines for the implementation of sustainable development policy globally proves the necessity to consider the regional level as the key one in terms of developing and implementing modern models of sustainable development (Mishenin et al., 2018). Thus, the work by Zair-Bek et al. (2016) emphasizes the important role of regional resource centers in the development of the inclusive higher education system; the work by Kashtanova and Kudryavtsev (2017) contains the results of monitoring studies, confirming that there is an increase in the number of students with disabilities at Russian universities, their interest in obtaining higher education and relevant profession.

The attempts of theoretical understanding of the problem of vocational training of people with disabilities and LHC as competitive specialists are contained in just a few works – in the studies by Aismontas and Panyukova (2017), Alekhina and Vachko (2014), Akhmetzyanova (2014), Boginskaya (2016), Votyakova (2018), Starobina (2014) and other scientists.

Most researchers agree on the need to create special conditions for individual education of people with disabilities and LHC, create a rehabilitation environment, rehabilitation and developing educational space (Starobina, 2014; Grebennikova et al., 2018). Arefev (2016), considering the problem of competitiveness of disabled people, emphasizes the need to organize comprehensive support for modern inclusive education. In the studies by Boginskaya (2016), Gluzman and Boginskaya (2015), Zaborina (2017), Nikitina et al. (2016) and other researchers, there are descriptions of practices of support for the training process of students with disabilities and LHC.

To date, a number of studies have been conducted, which have considered the problem of competitiveness (definitions, socio-psychological structure, evaluation methodology, some approaches to the preparation of a competitive specialist, etc.). The qualities of a competitive personality include activity, perseverance, determination, will, willingness to cooperate, self-
confidence, and self-efficacy (Lavrentev, & Krylov, 2015; Serdyuk, 2015; Khazova, 2009). The studies by Bordean and Sonea (2018), Dalati and Hamwi (2016), Prakapavičiūtė and Korsakienė (2016) aim to determine the perceived satisfaction of students enrolled in a tourism undergraduate program and to assess the impact that perceived skills have on their intentions regarding future careers.

Thus, the results of the theoretical analysis of scientific and scientific-methodical literature indicate the absence in modern pedagogy of systematic studies on the problem of vocational training of people with disabilities and LHC as competitive professionals, ensuring the formation of their professional competencies, knowledge, skills and qualities of an individual, which enable them to successfully compete with specialists without disability or LHC in the modern labor market.

2. Methods

The study of the specifics of professional training of senior students with disabilities and without disabilities and LHC was carried out using the methods developed by the authors to assess the level of theoretical, practical, and personal preparedness for professional activity of future economists, lawyers, psychologists, teachers, and specialists in adaptive physical culture. The methods include lists of knowledge, skills, abilities, and personal qualities necessary for young professionals to realize their professional functions and solve professional problems. The assessment was carried out by the experts, who were three teachers of universities with experience of scientific and pedagogical activity for more than ten years. Each expert assessed the degree of development of proposed indicators in a graduate on a 10-point scale.

The study also used valid and reliable methods aimed at identifying the level of formation of respondents' individual psychological characteristics and competitive qualities of their personality: the self-efficacy scale by Ralf Schwarzer (Romek, 1999); methods of self-attitude research by Pantileev (1993); the questionnaire "Differential Type of Reflection" by Leontiev (1999); the multilevel personality questionnaire by Maklakov and Chermyanin (2001).

The processing of empirical data was carried out using statistical methods, in particular, the calculation of the arithmetic mean for the group, standard deviation, representative error, percentage distribution, comparative analysis (Student's t-test and χ2-criterion), and correlation analysis (Spearman's correlation coefficient).

3. Results

At the beginning of the empirical study, it was revealed that the average group values of the professional readiness of graduates with disabilities and LHC at a significantly statistical level were lower than those of graduates without LHC (Fig. 1).

Figure 1
Percentage distribution of students with disabilities and LHC and students without disabilities and LHC according to the level of professional training

Most graduate students, both with and without LHC, were characterized by an average level of theoretical, practical and personal preparedness. However, the differences between the two
groups are highlighted by the fact that the number of graduates with LHC having a low level of vocational training was significantly higher than in the group of conditionally healthy respondents. Thus, 34.31% of graduates with disabilities had a low level of theoretical preparedness, while in the control group, the number of such graduates was only 15.76%. The low level of practical training, including methodological and technological readiness to carry out professional activities, characterizes a fairly large number of graduates with disabilities and LHC who participated in the current study (26.36%). In the control group, the low level of practical training was revealed only in 16.65% of graduates. The same can be said about personal preparedness. Professionally important personal qualities that ensure the competitiveness of graduates – future professionals, motivation to work, focus on success in employment and in professional activity – all this is more typical for respondents without disabilities and LHC.

Thus, the results of the percentage distribution of respondents of two research groups according to the level of professional training indicate the relevance of the designated research topic and the existence of serious problems in vocational education of people with disabilities and LHC as competitive professionals.

The same conclusion follows from the analysis of the results of empirical research focused on the comparison of the average group indicators of the degree of development of competitive qualities of personality in students with disabilities and LHC and graduate students without disabilities.

It was found that, on average, a higher level of preparedness of conditionally healthy graduate students as competitive professionals, in contrast to graduate students with disabilities and LHC, is largely due to a higher degree of confidence in the effectiveness of their actions, confidence in the possibility of success (Table 1).

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Graduates with LHC</th>
<th>Graduates without LHC</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Efficiency in thoughts</td>
<td>19.33 ± 2.1</td>
<td>30.34 ± 3.4</td>
<td>2.7400</td>
<td>&lt; 0.01</td>
</tr>
<tr>
<td>Efficiency in senses</td>
<td>18.89 ± 2.0</td>
<td>32.64 ± 3.3</td>
<td>3.5622</td>
<td>&lt; 0.01</td>
</tr>
<tr>
<td>Effectiveness of actions</td>
<td>16.74 ± 1.7</td>
<td>34.02 ± 3.4</td>
<td>4.4421</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td>The overall level of efficacy</td>
<td>18.36 ± 1.9</td>
<td>32.04 ± 3.3</td>
<td>3.5905</td>
<td>&lt; 0.01</td>
</tr>
</tbody>
</table>

It is known that self-efficacy is manifested at the level of thinking, emotional state, and behavior. Significant differences between the two study groups were found for all measured indicators, and in the group of graduate students with disabilities and LHC, the average group indicators of confidence in the effectiveness of their actions (t = 4.4421, p < 0.001), feelings (t = 3.5622, p < 0.01) and thoughts (t = 2.7400, p < 0.01) were significantly lower than in the group of conditionally healthy respondents.

During the study, the features of self-attitude of students-graduates with disabilities and LHC were also identified (Fig. 2).

Statistically significant differences were recorded in many indicators identified using the appropriate methodology developed by Pantileev (1993). The average group indicators on the scale of "closeness" (protection) differed at a sufficiently high level of significance (p < 0.001), and in the group of graduate students with disabilities and LHC, this figure was significantly higher than in the control group consisting of graduate students without disabilities and LHC (t = 5.2342, p < 0.001). Based on these results, one can say that the majority of respondents in the main group were characterized by pronounced protective behavior, the desire to be like everyone else, and meet social expectations.

**Table 1**
Results of the comparative analysis of self-efficacy indicators of two research groups students

**Figure. 2**
Profiles of self-attitude of students with disabilities and LHC and conditionally healthy students
Significant differences between the two study groups were found in terms of confidence in the causes of success and failure (t = 3.9756, p < 0.001), self-worth (t = 4.2882, p < 0.001), self-blame (t = 2.3143, p < 0.05), and internal conflicts (t = 5.2552, p < 0.001).

The results of the study of the specifics of development in students from two research groups indicate that the indicators of introspection (t = 3.3320, p < 0.01) and quasi-reflection (t = 3.1795, p < 0.01) dominate in the group of students with disabilities and LHC (Table 2).

Significant differences were also found between the two study groups, and, at a sufficiently high level of significance, in the indicators of neuropsychic stability (t = 2.7531, p < 0.01). In the main group, the average group indicators of communicative abilities were also significantly lower than in the control group (t = 3.0112; p < 0.01). Most of the respondents of the main group were characterized by undeveloped abilities to establish contacts with people around them, which reduced the level of their adaptive abilities. The average group indicators of people with disabilities and LHC moral normativity level was significantly and statistically significantly lower, which reflects their desire to take social roles imposed on them by the social environment (t = 2.7714; p < 0.01). Differences between the groups were not revealed only in terms of the level of development systemic reflection, which necessitates the need and feasibility of organizing at the university special conditions for the development of reflexive abilities of future professionals.

<table>
<thead>
<tr>
<th>The indicator</th>
<th>Graduates with LHC</th>
<th>Graduates without LHC</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Systemic reflection</td>
<td>3.24 ± 0.4</td>
<td>4.22 ± 0.4</td>
<td>1.75</td>
<td>&gt;0.05</td>
</tr>
<tr>
<td>Introspection</td>
<td>7.02 ± 0.7</td>
<td>4.32 ± 0.4</td>
<td>3.33</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Quasi-reflection</td>
<td>6.62 ± 0.6</td>
<td>4.14 ± 0.5</td>
<td>3.18</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Neuro-psychical resistance</td>
<td>4.56 ± 0.5</td>
<td>6.79 ± 0.7</td>
<td>2.75</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Communication skills</td>
<td>4.44 ± 0.4</td>
<td>7.12 ± 0.8</td>
<td>3.01</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Moral normativity</td>
<td>4.02 ± 0.4</td>
<td>5.96 ± 0.6</td>
<td>2.78</td>
<td>&lt;0.01</td>
</tr>
</tbody>
</table>

Further research included the organization and implementation of a correlation analysis of empirical data obtained in a group of graduate students with disabilities and LHC.

The results of correlation analysis indicate the presence of significant relationships between the indicators of the level of professional training of students to perform their job functions and the degree of development of their competitive qualities of individuals (Table 3).
### Table 3
Results of the correlation analysis of indicators of the level of professional training of students with disabilities and LHC and the degree of development of their individual competitive qualities

<table>
<thead>
<tr>
<th>Competitive personality qualities</th>
<th>Theoretical preparedness</th>
<th>Practical preparedness</th>
<th>Personal preparedness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-efficacy</td>
<td>0.63678***</td>
<td>0.50153***</td>
<td>0.57875***</td>
</tr>
<tr>
<td>Systemic reflection</td>
<td>0.66601***</td>
<td>0.10898</td>
<td>0.58934***</td>
</tr>
<tr>
<td>Introspection</td>
<td>-0.32362**</td>
<td>-0.61283***</td>
<td>-0.31943**</td>
</tr>
<tr>
<td>Quasi-reflection</td>
<td>-0.16684</td>
<td>-0.17232</td>
<td>-0.36347**</td>
</tr>
<tr>
<td>Mental stability</td>
<td>0.10483</td>
<td>0.22532*</td>
<td>0.44584***</td>
</tr>
<tr>
<td>Communication skills</td>
<td>0.77123***</td>
<td>0.15343</td>
<td>0.11284</td>
</tr>
<tr>
<td>Moral normativity</td>
<td>0.10956</td>
<td>0.21224*</td>
<td>0.114385</td>
</tr>
<tr>
<td>Closeness (self-defense)</td>
<td>-0.11121</td>
<td>-0.31293*</td>
<td>-0.20043*</td>
</tr>
<tr>
<td>Confidence</td>
<td>0.10043</td>
<td>0.10004</td>
<td>0.21856*</td>
</tr>
<tr>
<td>Self-management</td>
<td>0.11434</td>
<td>0.17077</td>
<td>0.27454**</td>
</tr>
<tr>
<td>Reflected self-relation</td>
<td>0.08954</td>
<td>0.06452</td>
<td>0.31842**</td>
</tr>
<tr>
<td>Self-value</td>
<td>0.10328</td>
<td>-0.21202*</td>
<td>0.11484</td>
</tr>
<tr>
<td>Self-acceptance</td>
<td>0.44302***</td>
<td>0.16602</td>
<td>0.29912**</td>
</tr>
<tr>
<td>Self-affection</td>
<td>-0.31332**</td>
<td>-0.30424**</td>
<td>-0.28453**</td>
</tr>
<tr>
<td>Internal conflict</td>
<td>-0.11662</td>
<td>-0.11421</td>
<td>-0.37434***</td>
</tr>
<tr>
<td>Self-blame</td>
<td>-0.11343</td>
<td>-0.10363</td>
<td>-0.30023**</td>
</tr>
</tbody>
</table>

Note: * p < 0.05; ** p < 0.01; *** p < 0.001

Thus, the theoretical preparedness of students with disabilities and LHC is positively correlated with the level of development of their self-efficacy (r = 0.63678, p < 0.001), systemic reflection (r = 0.66601, p < 0.001), communication skills (r = 0.77123, p < 0.001), and self-acceptance, that is, a sense of self-sympathy (r = 0.44302, p < 0.001). The higher the degree of development of desire for self-flagellation and self-criticism, the lower the level of their success in mastering theory of professional activity (r = -0.32362, p < 0.01), and the less effective the process of the formation of practical skills in students with disabilities and LHC (r = -0.61283, p < 0.001) and professionally important qualities of their personalities (r = -0.31943, p < 0.01). The greatest number of interrelations was revealed between the indicators of the level of personal readiness of students-graduates with disability and LHC for future professional activity and the degree of development of competitive providing qualities of their personalities. The level of personal preparedness is positively correlated with the level of self-efficacy development (r = 0.57875, p < 0.001), systemic reflection scale (r = 0.58934, p < 0.001), neuropsychic resistance (r = 0.44584, p < 0.001), confidence (r = 0.21856, p < 0.05), belief in control of their lives (r = 0.27454, p < 0.01), the ability to gain sympathy from other people (r = 0.31842, p < 0.01), the degree of acceptance of themselves and their characteristics (r = 0.29912, p < 0.01). Reluctance to change...
4. Discussion

As a result of research, it was revealed that deeper knowledge, both in general scientific, general professional disciplines and in special ones, is more common for students without disability and LHC. All indicators of the knowledge criterion in the group of respondents with LHC are lower than in the other study group. The revealed differences concern two other criteria of theoretical, practical and personal training of students as competitive specialists.

According to the results of the study, one can say that many graduate students with disabilities and LHC are characterized by reduced motivation for actions, especially if such actions do not bring a rapid positive effect. In any difficult situation, such students quickly and emotionally react negatively to the failure or explain any failure by external, but not internal reasons. Insufficient self-efficacy, identified in the group of graduate students with disabilities and LHC, can be caused by quite frequent situations of failure, especially in their educational activities. In this regard, to increase the level of self-efficacy, which leads to a higher level of general professional readiness for employment, it is necessary to organize the educational process in such a way when situations of success are created in the classroom as often as possible.

The results of a comparative analysis of the average group indicators of self-attitude indicate that many students with disabilities and LHC believe that they are not able to cause sympathy in others, that they can cause only condemnation, disgust, and censure. This results in a protective response, reflecting their desire through the manifestation of pride to appreciate themselves, not looking at others. As a result, relatively high average group indicators on the scale of self-worth were recorded in the group of graduate students with disabilities and LHC. However, confidence in their uniqueness, their potential is combined in people with disabilities and LHC with a low level of self-acceptance, reflecting their internal disagreement with the position they occupy. In the case of internal rejection of themselves, their status and their position, fairly high average indicators on the scale of "self-affection" were recorded in the group of graduate students with disabilities and LHC, which indicates their relatively low desire to change themselves, a fairly rigid "I-concept", which cannot but interfere with the possibility of self-development and self-improvement. The imbalance between their own capabilities and compensatory desires causes a tense internal state of many graduate students with disabilities and LHC.

Introspection, as a predominant type of reflection, was found in 35.71% of graduate students with disabilities and LHC who participated in the current study. With all the formal and largely superficial understanding of self-critical trends, their presence in students with disabilities and LHC, their desire to analyze their actions, achievements and failures, the prevalence of this type of reflection reflects, in fact, the egocentric features of their personality, their inability to distance themselves from their own experiences and feelings. Most graduate students with disabilities and LHC are characterized by a fairly low level of behavioral regulation, a tendency to nervous breakdowns, lack of adequacy of self-esteem and real perception of reality.

The results of the study indicate the need to include in the process of vocational training of people with disabilities and LHC such pedagogical technologies and techniques that would contribute to the development of their systemic reflection as a professionally important and competitive quality of their personalities.

It should be noted that the use of such teaching methods in the educational process is also useful for students without disabilities and LHC, as evidenced by positive and negative relationships between the indicators of interest. Pedagogical conditions for improving the quality of vocational education of people with disabilities and LHC should be:

- Creating situations of success and personal achievements of students in classrooms and during extracurricular activities, which is achieved through special organization of the educational process, where active teaching methods are important components;
- Involvement of students with disabilities and LHC in student self-government, volunteer activities, and development of a mentoring system at university, where mentors are also people with disabilities and LHC, which helps to improve the level of development of reflexive abilities, self-efficacy, and self-confidence;
- Organization of the educational process based on the principles of inclusion (refusal of grouping students on the basis of presence or absence of disability and LHC), congruence (refusal of fawning or expression of emotions of pity and sympathy), optimism...
5. Conclusions
The results of the study suggest that the success of vocational training of people with disabilities and LHC is largely reduced due to the presence of certain individual psychological characteristics determined by the social situations of their development and social consequences of their disabilities. These features include lack of self-confidence, a low level of self-efficacy, low or compensatory self-esteem, a low level of reflexive-volitional regulation, due to their orientation to the state and tendency to fix on their experiences, inability to realize their intentions, really perceive reality, their strengths and weaknesses.

Based on empirically revealed facts, it should be said that one of the directions of improving the system of vocational training of people with disabilities and LHC as future specialists of different profiles should be the formation of their self-confidence, the ability to realize their intentions and their goals, build real-life plans and find ways to implement them. The process of such formation should be included in the pedagogical system and educational environment of the university, without allocation of students with special educational needs in separate groups, even with the organization of special extracurricular group classes. It is very important that the correction of individual psychological characteristics of students with disabilities and LHC is carried out in latent ways, through the inclusion of a student group in the process.

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