

Improving Psychological and Educational Support of University Students with Disabilities in Kazakhstan

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ABSTRACT: Inclusive education in Kazakhstan faces challenges, as many institutions lack the necessary infrastructure, trained personnel, and resources to fully support students with disabilities. These barriers hinder the professional development of such students, highlighting the need for improved educational practices and support systems. The study aimed to investigate the psychological and pedagogical conditions for the effective education process of students with disabilities (SWD) as well as to examine the definite features of psychological and pedagogical support for SWD. The paper employed quasi experimental methods, surveys among the students with disabilities and comparative analysis of specialized scholarly literature. The quasi-experiment was conducted among two groups: the first group students trained in special classrooms by teachers who had studied foreign experience and had been trained to master the competencies of creating psychological and pedagogical conditions to support SWD, and the second control group of the students studying without special conditions with teachers who had not been trained abroad. As a result, we have identified the primary forms and methods of inclusive education skills training. To add more, we have summarized the experience of creating psychological and pedagogical conditions to support SWD in their professional development. The key psychological support mechanisms for SWD were determined, including psychological diagnostics, psychological counseling, group activities, and psychological and pedagogical support. We have offered summarized suggestions for teaching SWD, covering the adaptation of teaching material, expanding the range of audiovisual aids, and providing psychological support to participants in the educational process.

Keywords: inclusive education, students with disabilities, teachers, psychological and pedagogical support, socialization.

I. INTRODUCTION

The latest educational trends recognize equal access to higher education for students with disabilities, which is a priority for universities. Along with architectural accessibility and special audiovisual facilities, there is the issue of psychological and pedagogical support for university students with disabilities (SWD), starting from the first day at university, and their adaptation and socialization in the new educational environment [1].

The development of educational services for SWD in higher education is one of the most important preconditions for their successful socialization and full participation in social life, effective self-realization, and self-development in all professional and social activities. For this reason, the inclusive education process greatly

facilitates their further integration into society, as it assumes joint education of people with disabilities with other students. Nevertheless, integrating students with different health conditions into the educational environment does not guarantee equal access to education for its participants, as some may have specific educational needs [2]. To overcome this disadvantage, measures need to be introduced to ensure full inclusion of SWD in the university educational process.

II. RELATED WORK

As some researchers define [1], inclusion is a special education system that stipulates an individual approach to students of all nosologies based on their educational needs.

The United Nations Convention on the Rights of Persons with Disabilities [3] (Article 24) reads: "States Parties recognize the right of persons with disabilities to education. With a view to realizing this right without discrimination and on the basis of equal opportunity, States Parties shall ensure an inclusive education system at all levels and lifelong learning". Supporting learners with SWD in their professional development is also a priority in countries that adhere to sustainable development principles, including the Republic of Kazakhstan. Graduates of specialized schools can now receive high school diplomas with marks on curriculum features that allow them to obtain the necessary vocational training in colleges, universities, and institutes. The Order of the Ministry of Science and Higher Education of the Republic of Kazakhstan "On approval of the Concept of higher education and science development in the Republic of Kazakhstan for 2023-2029" of March 28, 2023, No. 248 [4] emphasizes incomplete coverage by inclusive education.

People with SWD can receive higher education in Kazakhstan by entering regular education institutions, where inclusion can be realized by creating special or inclusive groups, into which students with disabilities are included and to the education conditions of which much attention is paid. The peculiarity of teaching SWD in an inclusive educational environment is that when perceived as equals, they are subject to the same requirements as other students. For example, in an inclusive group, it is not acceptable to slow down the pace of the lecture, reduce the number of classes and their duration, or simplify or reduce the amount of learning material for the sake of a student with a disability, as this compromises the quality of vocational training [5].

Inclusion demands for changes at all levels of education and creating a barrier-free educational environment. Therefore, before accepting SWD, universities, or any other inclusive institutions, should introduce several organizational measures, including [6,7]:

- to create a specialized material and technical base and a barrier-free educational environment in which facilities, information, technical equipment, and teaching material are accessible to all students;
- to provide opportunities to choose the form of education: full-time, part-time, distance, or mixed;
- to bring educational services closer to the places of residence of low-mobility students (branches, distance education centers);
- to prepare adapted educational and methodological support for students with different nosologies (audio, video, tactile, and electronic materials);
- to provide conditions for teachers' retraining and introduce special information and pedagogical technologies;
- to adapt teachers, students, and their parents to the inclusive educational environment;
- to systematically foster a tolerant attitude and understanding of the problems of people with SWD among the staff;
- to organize psychological support for participants in the educational process and create conditions for social, medical, and rehabilitation assistance, socialization, self-determination, and self-realization;
- to organize extracurricular activities to ensure the professional adaptation of SWD and their preparation for employment and career planning.

Not every educational institution (college, university, institute) cannot supply SWD with the necessary psychological and pedagogical conditions to contribute to professional development of specialists-to-be. According to research findings [8,9], there are the following main problems:

1. There is a shortage of special equipment to organize the space to train SWD. Organizations of higher vocational education need to create the organizational, methodological, household, psychological, and pedagogical conditions needed by SWD. First and foremost, this implies an appropriate educational and material base for the activity of SWD. Of utmost importance is the presence of a medical unit, an isolation room, a dining room, and toilets;
2. University personnel lack the competencies to create the psychological and pedagogical conditions to support SWD in their professional development. Teachers have been found to have insufficient knowledge

of training SWD and developing their professional competencies. Instructors also lack a clear understanding of how to organize favorable psychological and pedagogical conditions that would promote the development of students' professional potential. Therefore, of relevance in today's vocational education system is training personnel with SWD. Universities need to accommodate the growing number of SWD and create the conditions necessary for them to receive vocational training.

At present, many researchers explored the training and support of SWD and the methods of their organization in universities. The theoretical foundations of inclusive university education were studied by Isaevskaia, Kolyvnova [10] and Alekhina [11], who referred to inclusive education as the primary and most effective form of education for people with SWD. Mironov [11] and Artemeva [12] paid great attention to psychological and pedagogical education in an inclusively organized system that should focus on developing all components of the personal potential of each subject in the educational process regardless of their abilities. The specific features of adaptation to learning in SWD were characterized by Dontsov et al. [13] and Skamianova [14].

The process of inclusive education, the interaction of SWD with their peers and teachers, and support of their learning were considered by Skamianova [15]. Skamianova suggested that support for the education of SWD is a system of measures ensuring equal access to learning, aiming to destroy or minimize the problems experienced by SWD. Akhmetzianova et al. [16], Bairamov et al. [17], Denisova and Lekhanova [18] examined the primary objectives of psychological, pedagogical, and social support, suggesting that:

Pedagogical support focuses on adapting teaching materials and methods to meet the needs of SWD, relying heavily on teachers' skills and inclusive preparation. Psychological support addresses the individual psychological needs of students, helping them maintain mental health, adapt to the educational environment, and develop personally. Social support facilitates the socialization and integration of SWD into all aspects of life, working to reduce their isolation and improve their social status.

When implementing a system to support the learning of SWD, universities should consider the psychophysical characteristics and learning challenges of students with different nosologies, their needs for compensation of sensory deficits that hinder the perception of educational material, socio-psychological factors that complicate students' integration into universities, physical rehabilitation needs, etc. [19].

Research outlines psychological and pedagogical support for SWD in the educational process and proposes components that complement psychological, pedagogical, and social support in inclusive education [20]. Professional adaptation and rehabilitation of SWD is achieved by giving them a specialty as part of vocational training, through their involvement in student academic research and production units, student scientific societies, and scientific clubs [21], through industrial practice, and by offering these students assistance in employment [14].

An important component of psychological and pedagogical support is psychological adaptation, especially during the first year, where the main objective is to create a system of measures to develop the individual's ability to adapt to social requirements and criteria by appropriating its norms and values. However, the issue of optimal psychological and pedagogical conditions for the development of professional competencies and socialization of SWD remains unaddressed.

Thus, the purpose of this study was to determine the effectiveness of teachers' implementation of psychological and pedagogical conditions to support SWD in the development of professional competencies, the level of professional competencies, and socialization among SWD. Participants of the study were informed that their data will be collected anonymously and presented in a generalized way.

III. MATERIAL AND METHOD

1. RESEARCH DESIGN

To achieve the objective of the current study, we primarily employed a quasi-experimental method as well as comparative analysis of scholarly literature on the topic, survey method and statistical analysis when processing the results of two surveys conducted.

2. RESEARCH STAGES

In the first preparatory stage we conducted the analysis of psychological and pedagogical scientific and methodological literature to outline the issues existing in creating educational space and conditions for SWD.

In the second stage we conducted data collection via online survey of faculty members and 120 SWD in Toraighyrov University to determine the importance of studying foreign experience in the creation of psychological and pedagogical conditions to support SWD in their professional development and to establish the

current psychological and pedagogical conditions for the development of professional skills among SWD. The survey was developed and carried out on Google forms.

In the third stage several faculty members of Toraighyrov University traveled to the city of Olomouc (Czech Republic) to study foreign experience in creating psychological and pedagogical conditions to support SWD. The faculty members paid attention especially to those problems which had been defined in the second stage of the study in the sphere of creation inclusive education. After traveling the faculty strived to use their new skills among the students of Toraighyrov University.

In the fourth stage focus was centered around experimental verification of the effectiveness of studying foreign experience in creating psychological and pedagogical conditions to support SWD in their professional development. The primary research method was a pedagogical quasi-experiment conducted throughout 2023 at Toraighyrov University, Pavlodar region. The gender parameter was not applied in the sampling.

In the course of the pedagogical quasi-experiment, the experimental group (EG, 60 people) was taught in special classrooms by teachers who had studied foreign experience and were trained to master the competencies of creating psychological and pedagogical conditions to support SWD. The control group (CG, 60 people) studied without special conditions with teachers who had not undergone special training.

In the fifth validatory stage upon completion of the pedagogical experiment, we conducted a survey (among the same students who took part in the first survey) which included questions addressing the conditions for the development of professional competencies by SWD and their socialization.

IV. DATA ANALYSIS

Further processing of the results was carried out through mathematical statistics methods. The objective was to establish differences in the distribution of certain parameters when comparing two empirical distributions. The analysis employed Pearson's χ^2 test.

Null hypothesis H_0 : the CG and EG have no differences in the development of professional competencies by SWD and their socialization.

V. RESULTS

To show the need for special skills of teaching SWD among the faculty members at Toraighyrov University, we conducted a preliminary survey addressing the psychological and pedagogical conditions for the development of professional competencies in SWD are presented in Figure 1. The questions were created according to those problems which are regularly mentioned in thematic scholarly literature.

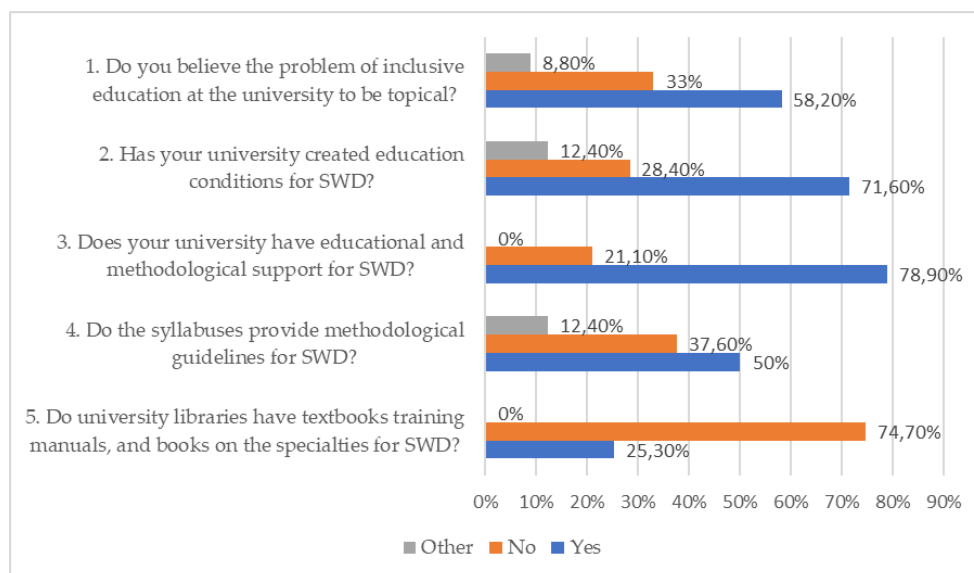


FIGURE 1. Results of the preliminary questionnaire on creating psychological and pedagogical conditions for the development of professional competencies in SWD. Question 2 has three answer options, "other" – university

administration partially solves the problems of inclusive education; question 5 has three answer options, "other" – "in small numbers".

According to the survey results, 74.7% of the respondents answered affirmatively to the question of whether the problem of inclusive university education is topical. This indicates their awareness of the problem.

The question about the conditions created at the university for students with disabilities sheds light on the current level of accessibility in educational institutions. Importantly, 50% suggested that educational institutions create adequate conditions for disabled students. 37.6% report that the required conditions are not provided, and only 12.4% note that university administration partially solves the problems of inclusive education. Analysis of the obtained responses suggests that some unresolved problems remain.

To the question "Does your university have educational and methodological support (syllabuses, training manuals, textbooks, methodical guides) for SWD?", an affirmative answer was given by 78.9%, and 21.1% answered negatively. This result indicates that one-fifth of higher education institutions do not adjust teaching materials and do not adapt them to SWD. In the next question, connected to the former, 71.6% reported that the available syllabuses do provide methodical recommendations for SWD.

To the question "Do university libraries have textbooks, training manuals, and books on the specialties for SWD?", 58.2% answered affirmatively, 33% gave a negative answer, and 8.8% responded: "in small numbers". Based on these responses, we can note a shortage of alternative information sources to read. Students with SWD need to have appropriate literature and information sources, because they are the critical foundation of vocational training.

Importantly, the survey indicates that the conditions for inclusive education in Kazakh universities are satisfactory. In addition, our data demonstrate that universities do not have many problems in the sphere of inclusive education, although some issues remain unsolved.

Analyzing the respondents' answers, we should also account for the subjective factor. To obtain more complete and truthful answers, the respondents should have information about an alternative condition of the organization of learning for SWD with an ideal form of education in universities with an accessible environment.

The survey showed that a lot of respondents (questions 2 and 3) admitted insufficient support and inadequate conditions for SWD. Therefore, when gaining new experience in the Czech Republic we concentrated on the issue of how universities create those conditions and what aspect of university life those conditions are connected with. We found that abroad the main emphasis when handling SWD is made on the activeness of their educational and informal communication with other students. Our faculty members gained experience of how to engage students in various events and activities in the most effective way.

The results of the questionnaire on the level of professional competencies of SWD and their socialization conducted at Toraighyrov University are presented in Table 1.

Table 1. Survey results. Note: χ^2_{crit} for the significance level of 0.05.

No.	Question	Answer option	CG	EG	χ^2_{crit}	χ^2
1	Are you eager to join in organizing different professionally oriented events at the university?	Yes	18.3%	53.3%	5.991	23.763
		No	41.7%	16.7%		
		Depends on the event	40.0%	30%		
2	Can you freely express your professional opinion in front of a large audience?	Yes	21.7%	41.7%	5.991	18.952
		No	40.0%	15.0%		
		Depends on the people around	38.3%	43.3%		
3	Do you participate in professional forums and competitions in and outside the university?	Yes	33.3%	51.7%	3.841	12.538
		No	66.7%	48.3%		
4	How do you usually spend your free time? (multiple choice possible)	Alone with smartphone	33.3%	15.0%	9.488	26.714
		With friends	30.0%	48.3%		
		With family	26.7%	26.7%		
		With romantic partner	3.3%	8.3%		
		Reading, going on walks	18.3%	6.7%		
5	Do you take an active part in the extracurricular life of the faculty and the university?	Yes, I am a volunteer	1.7%	10%	7.815	14.678
		Yes, I am a member of a student research society	6.7%	16.7%		

Yes, I am an athlete	3.3%	3.3%
No, I only study	88.3%	70%

The results of Pearson's χ^2 for the CG and EG show that for the questionnaire items concerning involvement in the organization of different university events, the ability to express one's professional opinion in front of a large audience, participation in events in and outside the university, spending one's free time, and participation in the extracurricular life of the faculty and the university $\chi^2 > \chi^2_{crit}$.

This allows us to reject the null hypothesis H_0 . Consequently, accepting the alternative hypothesis H_1 , we can argue that these samples have statistically significant differences in the development of professional competencies and socialization.

VI. DISCUSSION

Analysis of foreign experience shows that psychological and pedagogical support consists in systemic activities of university faculty and psychologists aimed at creating a comprehensive system of clinical, psychological, pedagogical, and psychotherapeutic conditions conducive to SWD acquiring knowledge, abilities, and skills, achieving successful adaptation and rehabilitation, developing personal relationships, and integrating into society.

To add more, our experiment shows that the czech model of SWD engagement in active academic life may be effectively employed in universities of Kazakhstan. It is worth noting that better involvement of SWD in university life can be achieved not only with the help of faculty members who would encourage such students to participate in forums and conferences, but also through other means. For example, some researchers [22] suggest creating an institute of representation. According to this concept, representatives should be selected among SWD and would be present at each university, helping such students to get involved in various activities. Other researchers [23] suggest creating special clubs that would consist of active SWD and promote greater involvement for other SWD.

In the sphere of creating better conditions and sufficient support for SWD not only engagement in a greater number of events and activities poses certain problems but also organization and architecture suitability for SWD:

Among the organizational difficulties experienced by SWD in their training, we should note the period of adaptation, finding the right lecture room, and classes in different buildings on campus. In addition, challenges also arise when preparing for practical and laboratory classes. It also highlighted the unsuitability of some dormitory rooms to the needs of SWD and the lack of architectural accessibility in communal shower rooms in the dormitory. Among the difficulties encountered during adaptation of SWD researchers mention insecurity, change of place of residence and independent life without parents, and adaptation to different teaching styles, which influences the assimilation of information [24, 25].

The greatest challenges for SWD during their studies are difficulties in taking in information during class. This was especially underlined in our preparatory survey (Question 3, Figure 1). Alleviating those difficulties faced by SWD in their training is the task of teacher-curators who act as mentors and help them when needed. For better assimilation of information, if necessary, teachers may give additional explanations of the studied material in consultations and after class and tailor the errors which occur when SWD orally reproduce gained education material [26].

Another important element is adapting educational material to the student's nosology, among the key mechanisms of which the following are highlighted [10, 18]:

Students with hearing disabilities should be additionally forwarded lecture and presentation materials by email and explained points in the lectures that remained unclear when needed. Whenever possible, lectures should be broadcast on a special screen if the student is used to lip reading. Visually impaired students should additionally be emailed audio or video recordings of lectures for more thorough study and offered consultations when necessary. Of great importance is adapting exam procedures for SWD (it is important to allocate more time for the student to take the test; in exams held on videoconferencing platforms, the questions need to be read out loud and made available in an electronic version to be shown on screen).

It is worth mentioning that in the era of digital education those demands pose no problems [27, 28]. Digitalization has shown promise in improving learning skills for SWD through tools like simulations and gamified learning platforms, which enhance engagement and skill acquisition [29]. Additionally, educational technology, such as mobile applications for screening learning disabilities, has been effective in personalizing learning experiences and improving educational outcomes for these students [30]. The shift from traditional to

digital education necessitates ensuring that students with disabilities are not left behind, emphasizing the need for inclusive practices that cater to diverse abilities [31].

Thus, when respondents of the survey claimed the lack for appropriate conditions for SWD, primarily the psychological and pedagogical conditions were meant:

Researchers propose providing a special approach to SWD, which should consider the specifics of the disease, defects, pathological condition, and psychological or social problems that the person may encounter in everyday life; the pace at which the courses are taught should be flexible, adapted to the needs of the student; academic workload should be adjusted according to the degree of disability [32]. As well the upbringing process requires more attention, responsibility, understanding, and knowledge [9]. Securing equal opportunities for participation is also has to be considered in university events (providing transportation, auxiliary means, volunteers) and raising the general cultural level of able-bodied students to foster a tolerant attitude towards applicants with SWD and understanding their life problems [12]. Psychologists especially claim that one should avoid reminding or emphasizing the student's functional limitations and understanding their inner world [33].

Thus, we demonstrated that there are many problems associated with providing inclusive education. The experience gained by faculty members in the Czech Republic showed how to solve such a problem as weak involvement of students with special needs in educational and extracurricular activities through faculty members' training. The analysis of scientific literature showed that there are other problems, e. g. ensuring the accessibility of campuses and dormitories, ensuring proper perception of information and with psychological assistance. These problems should also be considered for SWD in Kazakh universities [34, 35].

VII. CONCLUSION

Some Kazakh universities are adopting the inclusive model of education, one example being the efforts of Toraighyrov University. The university's experience working with SWD proves that they do not feel inferior but, on the contrary, realize themselves as persons best in higher education.

The study confirmed the hypothesis that as a result of teachers implementing foreign experience in creating psychological and pedagogical conditions to support SWD in their professional development, their level of professional competencies and socialization increases.

Relying on our research findings, we should highlight the effectiveness of teachers' application of foreign experience in creating psychological and pedagogical conditions to support SWD. A positive dynamic was observed in the aspects of SWD students gaining informal experience, increased self-confidence, and improved soft skill scores. The parameters of the social circle changed, as the number of SWD who spend their free time together with fellow students increased, which testifies to their better adaptation to the university educational environment. Students with SWD receive comprehensive support from teachers and university administration, academic material is adapted as needed, and additional consultations are provided.

The study limitations include the sample size of the participants in the pedagogical experiment. Further scientific investigations may be aimed at researching the effectiveness of introducing modern technical tools in work with SWD.

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Author contribution

All authors made an equal contribution to the development and planning of the study.

Conflicts of Interest

The authors declare no conflicts of interest.

Data Availability Statement

Data are available from the authors upon request.

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REFERENCES

1. Mysina, G. A. (2016). Sotsialno-psikhologicheskoe soprovozhdenie studentov s osobymi obrazovatelnyimi potrebnoyami v ramkakh inkluzivnogo obrazovaniia [Socio-psychological support of students with special educational needs within the inclusive education]. *Russian Journal of Humanistic Psychology*, 3(4), 249-260.
2. Simaeva, I. N., & Khitriuk, V. V. (2014). Inkluzivnoe obrazovatelnoe prostranstvo [Inclusive educational space]. *I. Kant Baltic Federal University Vestnik*, 5, 31-39.
3. Bordovskii, G. A. (2013). Inkluzivnoe obrazovanie: Problemy sovshenstvovanie obrazovatelnoi politiki i sistemy [Inclusive education: Problems of improving educational policy and system]. *Pedagogicheskoe obozrenie*, 3(133), 2-21.
4. United Nations. (2007). Convention on the Rights of Persons with Disabilities. <https://social.desa.un.org/issues/disability/crpd/convention-on-the-rights-of-persons-with-disabilities-articles>
5. Ministry of Science and Higher Education of the Republic of Kazakhstan. (2023). Order of March 28, 2023, No. 248 "On approval of the Concept of development of the higher education and science in the Republic of Kazakhstan for 2023-2029".
6. Artemeva, T. V., Akhmetzianova, A. I., & Kurbanova, A. T. (2015). Inkluzivnaia praktika v vysshei shkole: Uchebno-metodicheskoe posobie [Inclusive practice in higher education: Educational and methodological manual]. Kazan: Kazan University Publishing House.
7. Balakina, N. V. (2023). Osobennosti prakticheskoi podgotovki studentov v usloviakh inkluzivnoi obrazovatelnoi sredy [Features of practical training of students in an inclusive educational environment]. *Bulletin of the Moscow City Pedagogical University. Series "Pedagogy and Psychology"*, 2(6), 58-64.
8. Semikin, G. I., & Mysina, G. A. (2015). Ob organizatsii inkluzivnogo obrazovaniia v MGTU im. N.E. Baumana [Organization of inclusive education in Baumann Moscow State Technical University]. *Russian Journal of Humanistic Psychology*, 2(3), 261-268.
9. Akimova, O. I., Korneva, V. O., & Chernysheva, N. S. (2016). Dostupnost vysshego obrazovaniia dlia lits s ogranichennymi vozmozhnostiami zdorovia i invalidov v ramkakh inkluzii [Availability of higher education for persons with special educational needs as a socio-pedagogical problem]. *Scientific and methodological electronic journal "Koncept"*, 50, 45-51.
10. Zorina, E. E. (2018). Preodolenie barerov pri realizatsii inkluzivnogo obrazovaniia v vuze [Eradicating the barriers to inclusive higher education]. *The Education and Science Journal*, 20(5), 165-184.
11. Isaevskaia, E. V., & Kolyvnova, L. A. (2016). Sovremennye podkhody inkluzivnogo obuchenii studentov v usloviakh professionalnogo obrazovaniia [Modern approaches of inclusive education of students in the context of vocational education]. *Young Scientist*, 16(120), 11-15.
12. Mironov, A. S. (2015). Psikhologo-pedagogicheskoe soprovozhdenie uchebnogo protsessa studentov s ogranichennymi vozmozhnostiami i osobymi obrazovatelnyimi potrebnoyami v MGTU im. N.E. Baumana [Psycho-pedagogical support of the educational process for the students with disabilities and special educational needs in the Baumann Moscow State Technical University]. *Russian Journal of Humanistic Psychology*, 2(4), 311-318.
13. Artemeva, T. V. (2015). Psikhologicheskoe soprovozhdenie studentov v inkluzivnom prostranstve vuza [Psychological support for students in the inclusive space of a university]. In *Inkluzivnoe professionalnoe obrazovanie* (pp. 161-164). Chelyabinsk: Chelyabinsk University Publishing House.
14. Dontsov, D. A., Dontsova, M. V., & Senkevich, L. V. (2015). Inkluziia v uchebnykh gruppakh, sotsialnaia readaptatsiia i rehabilitatsiia posredstvom psikhotehnologii mikrogrupp [Inclusion in the study groups, the social readaptation and rehabilitation by psychological technology of microgroups]. *Clinical Psychology and Special Education*, 4(4), 79-91.
15. Skamianova, T. Iu. (2015). Professionalnaia praktika studentov s osobymi obrazovatelnyimi potrebnoyami [Industrial training of students with special educational needs]. *National Association of Scientists*, 4(9), 19-22.
16. Skamianova, T. Iu. (2019). Uspeshnaia professionalnaia adaptatsiia studentov s osobymi obrazovatelnyimi potrebnoyami [Successful professional adaptation of students with special educational needs]. *Herald of Tver State University. Series: Pedagogy and Psychology*, 3(48), 187-199.
17. Akhmetzianova, A. I., Artemeva, T. V., Kurbanova, A. T., Nigmatullina, I. A., Tvardovskaia, A. A., & Faizrakhmanova, A. T. (2015). Inkluzivnaia praktika v vysshei shkole: Uchebno-metodicheskoe posobie [Inclusive practice in higher education: Educational and methodological manual]. Kazan: Kazan University Publishing House.
18. Bairamov, V. D., Bonkalo, T. I., Raidugin, D. S., & Voevodina, E. V. (2018). Metodologicheskie podkhody k aktualizatsii professionalnogo samoopredeleniia obuchaiushchikhsia s invalidnostiu i OVZ v usloviakh stanovleniia sistemy inkluzivnogo obrazovaniia [Methodological approaches to the actualization of professional self-determination in students with disabilities in the context of development of inclusive education]. *Psychological Science and Education*, 23(2), 19-28.
19. Denisova, O. A., & Lekhanova, O. L. (2017). Inkluzivnoe obrazovanie studentov s invalidnostiu v regionalnom mnogoprofilnom vuze na primere Cherepovetskogo gosudarstvennogo universiteta [Inclusive education of students with disabilities in the regional multidisciplinary university: The experience of Cherepovets State University]. *Psychological Science and Education*, 22(1), 119-129.
20. Goncharova, V. G., & Didenko, L. A. (2013). Individualno orientirovannye obrazovatelnye programmy kak sredstvo povysheniia kachestva professionalnogo obrazovaniia lits s ogranichennymi vozmozhnostiami zdorovia [Individual educational programs as a means of vocational education quality increase for people with disabilities]. *Special Education*, 3, 32-41.

21. Melnik, Iu. V., Paniukova, S. V., Serebriannikova, O. A., & Saitgalieva, G. G. (2017). Otechestvennyi i zarubezhnyi opyt vuzov po obucheniiu i soprovozhdeniiu studentov s invalidnostiu [International experiences of training and support of students with disabilities]. *Psychological Science and Education*, 22(1), 88-97.
22. Bjørnerås, A.B., Langørgen, E., Witsø, A.E., Kvam, L., Myhr, D., Andersen, J.M.R., Goodall, G., Horghagen, S. (2023). Disabled student ambassadors promote inclusion in Norwegian higher education: building competencies and strategies for the future. *Disability & Society*, 1–25.
23. Jain, N., & Jain, T. K. (2019). *Sustainable Development through Student Engagement: Innovations and Initiatives in Higher Education*. Retrieved from: <https://ssrn.com/abstract=3314509>.
24. Abdelkarim, S. B., Ahmad, A. M., Zahrah, J., Makhoul, N. N., Al-Nuaimi, M. N., & Naji, K. (2023). Criteria and Challenges of Inclusive Design in the Built Environment. *Proceedings of the International Conference on Civil Infrastructure and Construction (CIC)*, 2023(1), 49–59.
25. Allarakhia, H. (2023). Jenna Gonzalez: Providing accessible housing on campus. *The Successful Registrar*, 23(11), 12.
26. Chadina, L. A., Bersenev, M. V., & Kozlitina, A. L. (2018). Razvitiie obrazovatel'nogo prostranstva cherez uvelichenie stepeni inkluzii (mirovoi opyt) [The development of the educational space through an increase in the degree of inclusion (world experience)]. *Tomsk State University Journal*, 437, 188-196.
27. Zolotova, V. O., & Kovalenko, O. M. (2024). Review of methods for studying the features of perception and reproduction of text information by students with disabilities. *Education, innovation, and research as a resource for community development*, 58-62. Cheboksary: ID "Sreda".
28. Akhmetshin, E. M., Kozachek, A. V., Vasilev, V. L., Meshkova, G. V., & Mikhailova, M. V. (2021). Development of digital university model in modern conditions: Institutional approach. *Digital Education Review*, (40), 17-32.
29. Ayao, D., Gunarhadi, G., Yasin, M. H. bin M., & Subagya, S. (2024). The Impact of Digitalization on Improving Vocational Skills Mastery for Learning Disabilities Special Education Needs Students (SENs): A Literature Review Analysis. *Proceeding of International Conference on Special Education in South East Asia Region*, 3(1), 476–482.
30. Adjiovski, B., Bogatinoska, D.C., Ismajloska, M., Malekian, R. (2024). Enhancing Educational Technology in Lectures for School Students with Learning Disabilities: A Comprehensive Analysis. *SN COMPUT. SCI.*, 5, 716.
31. Paladugula, R. (2023, December 19). *Defining disability inclusive education*. COMPUTE '23: Proceedings of the 16th Annual ACM India Compute Conference, 5.
32. Shurygin, V., Abdullayev, I., Hajiyev, H., Yakutina, M., Kozachek, A., Zakieva., R. (2024). Blended learning: The effect on students' self-regulation and academic achievements. *Novitas-ROYAL*, 18(1), 137-154.
33. Alekhina, S. V. (2015). Psikhologo-pedagogicheskie issledovaniia inkluzivnogo obrazovaniia v praktike podgotovki magistrantov [Psycho-pedagogical research of inclusive education in the undergraduates training]. *Psychological Science and Education*, 20(3), 70-78.
34. Amanova, I., & Amanova, M. (2023). The psychological readiness of the educators for inclusive education at universities of Kazakhstan. *Eurasian Journal of Current Research in Psychology and Pedagogy*, 3, 21-29.
35. Magauova, A., Zhomartova, A., Aubakirova, R., Nurgalieva, M., & Syrgakbaeva, A. (2024). The Problem of Creating Conditions for Including Students with Special Educational Needs in the Process of Mastering Professional Competencies. *KazNU Bulletin. Pedagogical Series*, 79(2), 94–104.