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## **PREPARING FUTURE TEACHERS FOR INCLUSIVE EDUCATION**

**Abstract.** In the modern educational environment, inclusive education is increasingly recognized as a necessity. Therefore, in order to effectively support this paradigm, it is essential to provide teachers with practical experience working with students with special needs. The aim of this study was to evaluate the preparedness of prospective teachers for implementing inclusive education in classroom settings, to identify the key competences they possess in the domain of inclusive pedagogy, and to determine effective methods for improving the training of future educators in pedagogical universities to support the implementation of inclusive practices in schools. Using a combination of questionnaire and interviews, we aimed to find out the competencies that future teachers associate with inclusive education, as well as to identify the key factors influencing their readiness. The results of the study showed a link between university preparation and the readiness of future teachers for inclusive education; the need to provide future teachers with comprehensive training and practical experience to ensure that they are adequately prepared to adopt inclusive education principles and work effectively with diverse student populations.

**Keywords:** inclusion, inclusive education, students with special needs, SEN learners, future teacher's preparation.

### **Introduction**

In the twenty-first century, there has been a marked increase in the number of children identified with special educational needs (SEN), prompting significant developments in health, social, and educational policy frameworks. This demographic shift has catalyzed advocacy efforts by families and civil society organizations, emphasizing the right of individuals with disabilities to participate fully in all aspects of society. Inclusion, therefore, transcends policy implementation; it reflects a paradigmatic transformation in societal perceptions of diversity, promoting equity and access within educational systems.

Conventions, declarations and other regulations have been created, aimed at providing and receiving equal and quality higher education for every person with special needs, as well as lifelong learning. Kazakhstan became signatory to them. In 2011, the authorized state body in the field of education initiated the State Program for 2011–2020 (Government of the Republic of Kazakhstan, 2021) which aimed to transition all schools towards inclusive environments by the year 2020. This program included the establishment of pilot inclusive schools and the introduction of courses on inclusive education within university curricula. However, the prevailing cultural attitudes in the country, as well as the mindset of educators responsible for developing the competencies of future teachers, significantly impact the education of individuals with special needs.

The growing emphasis on inclusive education in international policy frameworks further reinforces the urgency of addressing teacher preparedness. The 2030 Agenda for Sustainable Development, specifically Goal 4 (Quality Education) (United Nation, n.d.), commits nations to “ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.” This makes the professional development of teachers in inclusive practices not just a national concern, but a global priority. Kazakhstan's alignment with this global agenda highlights the need for research that evaluates how well local institutions are

meeting these expectations particularly teacher training programs, which are central to implementing inclusive education effectively.

In addition, as the concept of inclusion evolves to encompass not only physical and cognitive disabilities but also linguistic, cultural, and socio-economic diversity, the expectations placed on teachers have become more complex. Inclusive classrooms today may consist of neurodiverse learners, or children affected by trauma and displacement. This broadening scope demands that teachers possess not only theoretical knowledge but also hands-on, practice-oriented skills that allow them to differentiate instruction and manage diverse learning needs in real time. Therefore, investigating the current state of teacher readiness in Kazakhstan is a timely and necessary step toward bridging the gap between inclusive policy and classroom realities. Investigating this issue within the context of Kazakhstan may provide valuable insights for the enhancement of teacher preparation programs.

The aim of this research is to assess future teachers' readiness to work in inclusive classroom settings, and identify competences they possess in realm of inclusive education as well as identify methods for enhancing the preparation of prospective teachers in pedagogical universities for the implementation of inclusive practices in schools.

*Advancing inclusive education: challenges, teacher readiness, and institutional roles*

UNICEF (2017) emphasizes that inclusion represents a vital opportunity for all students, regardless of their diverse backgrounds, to engage in a shared learning experience that fosters mutual growth and development. In alignment with this perspective, Dyssegaard C.B. and Larsen M.S. (2013) articulate that inclusive education facilitates a gradual convergence of special and general education systems. This integration is underpinned by common principles that promote success and accountability for educational outcomes.

The UNESCO Global Education Monitoring Report of 2020, titled "Inclusion and Education: All Means All," (2020) highlights a significant concern regarding the inadequacy of teacher preparation programs in numerous countries. These programs often fail to adequately address the complexities of teaching within inclusive settings. Consequently, the topic of inclusive education is gaining popularity, particularly those that arise from educators, universities, peers, and parents. For instance, the research conducted by Lohrmann S., and Bambara L. M. (2006) delves into teachers' preparedness for functioning effectively in inclusive classrooms. Their qualitative study reveals several critical factors that contribute to the establishment of an effective and supportive inclusive environment. These factors include a school-wide culture that prioritizes support, a clearly articulated vision for inclusion, in-class support mechanisms, and a collegial atmosphere among staff.

Furthermore, the work of Zagona, Kurth, and MacFarland (2017) examines the correlation between the completion of inclusive education courses and teachers' readiness to operate in inclusive classrooms. Their experimental findings substantiate a strong connection between these two variables, indicating that professional development in inclusive practices is essential for enhancing teacher readiness.

Teachers are tasked with the responsibility of designing educational programs that meet the diverse needs of all learners. However, they often encounter significant time constraints that hinder their ability to address the wide array of individual requirements present within their classrooms. Jardinez M. J., and Natividad L. R. (2024) argue that not all educational institutions are equipped to provide the necessary conditions for effective inclusive education. They identify various physical barriers, such as the presence of stairs without ramps, insufficient adaptive equipment, a lack of Braille educational materials, and the absence of sign language interpreters and screen readers.

Moreover, Chen et al. (2021) highlights the detrimental psychological and emotional effects of peer rejection on students with special educational needs (SEN). Students who experience behavioral inclusion often face bullying and exclusion from their peers, which can

lead to a range of negative outcomes, including diminished self-esteem, reduced self-confidence, limitations in social development, feelings of loneliness, and heightened stress levels. This underscores the urgent need for comprehensive strategies to foster inclusive educational environments that support the well-being and development of all students.

Previous studies have demonstrated that challenges related to inclusive education persist across various countries, with scholars exploring multiple dimensions of this issue. The present research aims to investigate the readiness and preparedness of prospective teachers to effectively operate within inclusive classroom settings.

### **Methods and materials**

In the process of working on the study, an analysis of Kazakhstani policies, documents on inclusive education and international literature on the research topic were done. A questionnaire “Me and inclusive education” was implemented. Students were also interviewed on the obstacles of deterring them from working in inclusive classrooms. The experiment was held in a university of Astana city. The participants of the experiment were students of the 4<sup>th</sup> course (46 participants), educational program “English and primary school teacher”.

When completing the questionnaire, respondents were asked to select a few of the most important statements regarding inclusive education. The questionnaire data include questions about inclusive education in Kazakhstan, the existing law about inclusion that was accepted in 2021, and understanding of the term “inclusion”. Also, this methodology provides an opportunity to identify the attitude of respondents to inclusive education and readiness to work with children with special needs; the assessment of the formation of professional competencies required to work in inclusive education was revealed.

It should be mentioned that students had the course “Inclusive education”.

Participation in the study was voluntary, and students were made aware of the study’s objectives as well as the anonymity of the collected data.

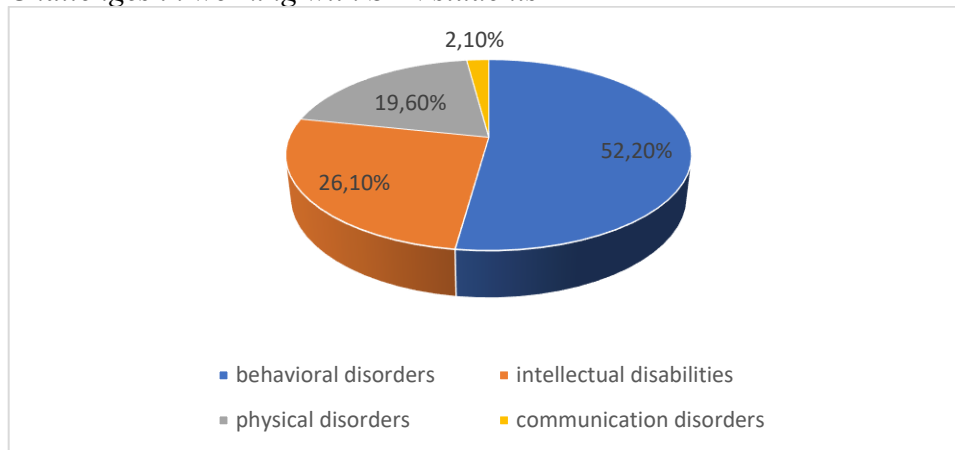
### **Results and discussion**

The results of the study indicate that merely 43% of students demonstrate awareness of the law of the Republic of Kazakhstan pertaining to inclusive education. Among the participants, only 30.4% have experience working with students who have special needs. Furthermore, 69.6% of respondents claim to comprehend the term “inclusion,” while 45.7% have participated in professional development courses outside of their university education.

In addressing the challenges faced when working with students with special educational needs, the findings reveal that 52.20% of students encounter difficulties with students exhibiting behavioral disorders, 26.10% with those experiencing intellectual disabilities, 19.60% with physical disorders, and a minor 2.10% with communication disorders.

**Picture 1**

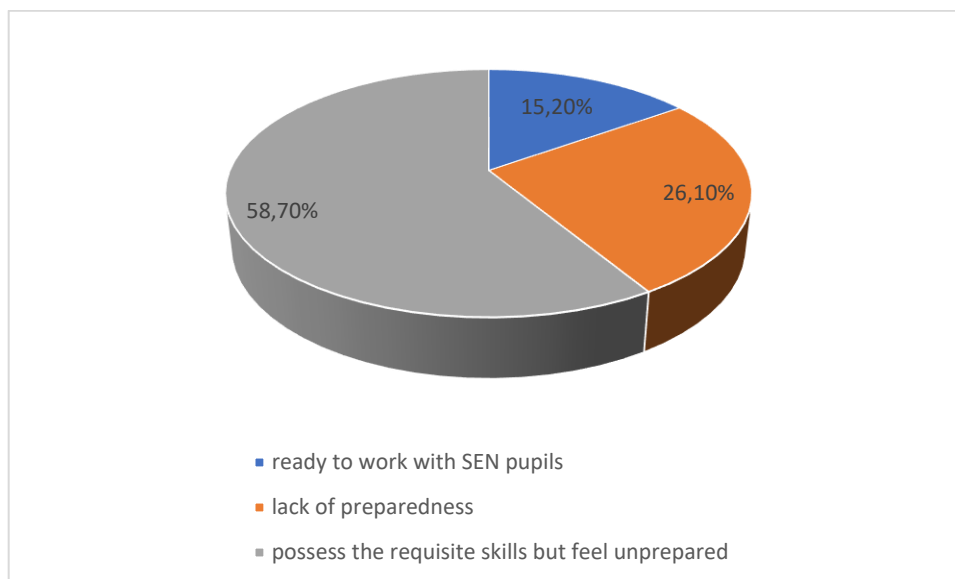
*Challenges in working with SEN students*



Regarding psychological and professional preparedness for engaging with students with special educational needs, the results suggest that only 15.20% of prospective teachers consider themselves ready to work with such students. In contrast, 26.10% of respondents indicated a lack of preparedness, while 58.70% possess the requisite skills yet feel unprepared to engage with these groups.

**Picture 2**

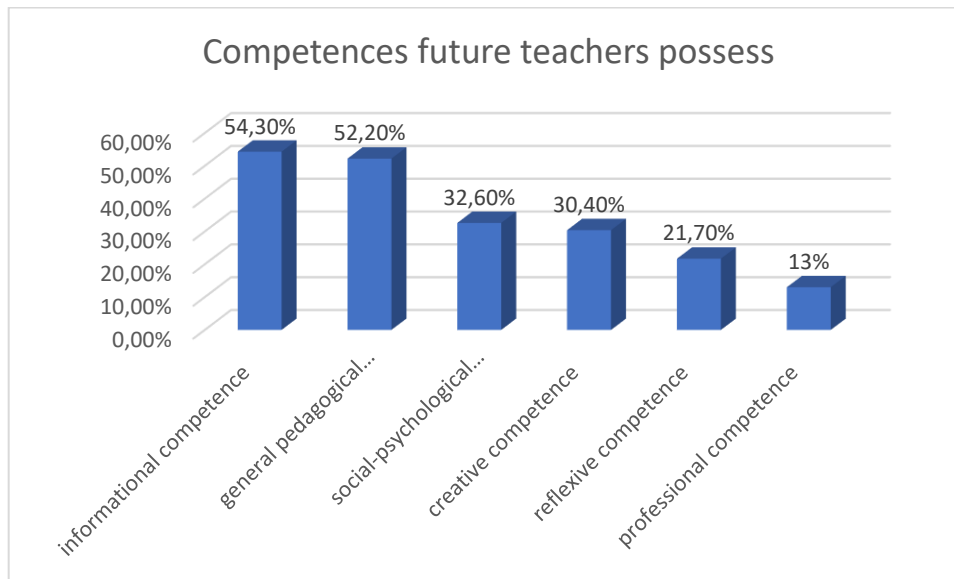
*Psychological and professional preparedness for engaging with SEN students*



Additionally, the study examined the competencies that students possess in the realm of inclusive education. The results highlight that informational competence is held in the highest regard, with 54.30% of participants recognizing its importance. This is followed by general pedagogical competence at 52.20%, social-psychological competence at 32.60%, creative competence at 30.40%, reflexive competence at 21.70%, and professional competence at 13%.

**Diagram 3**

*Competences future teachers possess*



Also, students were interviewed on the inclusion issues to find out the reasons for avoiding working in inclusive classes. Most interviewers mentioned the following basic reasons: lack of practical experience, fear of failure, insufficient number of tasks and exercises for SEN students, and lack of self-confidence.

The obtained results show that more than half of the respondents understand the concept of inclusion, but there are still some gaps that should be filled in. Notably, only a small number of prospective teachers (15.2%) feel psychologically ready to work with students with special educational needs (SEN). This lack of readiness can be attributed to several factors, including insufficient working experience and a fear of failure when engaging with students with disabilities. Additionally, societal attitudes towards the inclusion of ordinary and SEN students in the same classroom contribute to this apprehension, as future teachers often worry about potential conflicts with parents.

Research conducted by Boyle, Anderson, and Allen (2020) highlights the critical role of teachers in inclusive education and their perceptions of inclusion. Their findings indicate that teachers who maintain a positive attitude towards inclusion tend to create a more controlled educational environment compared to those with a negative outlook. However, it is important to note that another study revealed that a positive attitude towards inclusive education is associated with a higher risk of professional burnout (Holmqvist & Lelinge, 2021). This paradox underscores the complexity of teacher experiences in inclusive settings.

Further investigation by Woodcock et al. (2022) into teacher self-efficacy and inclusive education practices in New South Wales, Australia, reveals that both high and low efficacy teachers possess a similar conceptual understanding of inclusion, yet they employ different teaching practices. Teachers with high self-efficacy report greater job satisfaction, lower stress levels, and a more effective approach to managing challenging student behaviors. This suggests that fostering self-efficacy among teachers could be a key factor in enhancing their effectiveness in inclusive classrooms.

In a related study, Resch and Schritteser (2023) examined the benefits of service-learning for inclusive education in Australia. They found that this approach encourages teachers to step outside their comfort zones, bridging the gap between theory and practice. Service-learning not only engages learners in the educational process but also addresses

community needs, develops job-related competencies, and supports learning beyond the classroom. Therefore, integration of service-learning with practice-based learning can greatly enhance teacher preparation for inclusive education.

In recent years, universities in Kazakhstan have significantly expanded their efforts to prepare future educators for inclusive classrooms through a range of practice-oriented training programs. For instance, Sarsen Amanzholov East Kazakhstan University has implemented multiple initiatives, including a 72-hour professional development course titled “Formation of Inclusive Culture,” which blends theoretical knowledge with hands-on exercises to build empathy and pedagogical readiness (East Kazakhstan University, 2025a). The same institution also launched a training program for teacher assistants focused on individualized diagnostics, inclusive program planning, and legal literacy, resulting in over 150 trained professionals since 2021 (East Kazakhstan University, 2025b). In addition, the opening of an on-campus inclusive primary school provides university students with direct teaching experience in diverse classrooms, supporting the practical application of inclusive strategies (East Kazakhstan University, 2024a). Similarly, Al-Farabi Kazakh National University offers bachelor’s and master’s programs in inclusive education that integrate diagnostic tools, assistive technology, art therapy, and inclusive pedagogy, supported by internships and applied research (KazNU, 2024). Furthermore, a national-level forum involving 35 Kazakhstani universities has initiated collaborative curriculum development on inclusive practices and proposed dual-degree programs for training specialists in early support and rehabilitation pedagogy (East Kazakhstan University, 2024b). These efforts mark a significant shift from theoretical to applied models of teacher preparation, aligning Kazakhstan’s higher education institutions with global standards for inclusive education.

Astana IT University (2023) is leading a national study that examines the integration of assistive technologies into Kazakhstani higher education systems. The project includes several practical initiatives: creating multilingual sign-language video lectures for social sciences and humanities courses; conducting a nationwide survey to assess accessibility for students with special educational needs (SEN); preparing comparative brochures on global best practices; and analyzing assistive technology applications across universities in Kazakhstan, the UK, and Scotland to inform policy and institutional strategies. Through evidence-based recommendations and methodological materials, this initiative marks a major step toward embedding inclusive design into the academic infrastructure.

In parallel, empirical research emerging from Nazarbayev-affiliated institutions highlights current strengths and gaps in teacher preparation for inclusive classrooms. Notably, a study titled “Pre-Service English Language Teachers’ Training to Work in Inclusive Educational Environment” involving over 1,000 students across eight universities found high confidence among future teachers in addressing common speech or hearing disorders, yet revealed a lack of readiness to support learners with complex or severe disabilities (Nazarbayev University Graduate School of Education, 2023; Jangeldinova et.al., 2024). These findings align with broader literature emphasizing the need for more hands-on, practice-oriented training and assistive technology familiarity in teacher education programs nationwide.

Kazakhstan’s approach to inclusive education shows both alignment with and divergence from global inclusion trends. Like many countries, Kazakhstan has ratified international frameworks such as the UN Convention on the Rights of Persons with Disabilities and committed to Sustainable Development Goal 4, which advocates for inclusive and equitable quality education. In recent years, the government has introduced inclusive education policies, teacher training programs, and pilot inclusive schools, reflecting a shift toward more systemic and structured implementation, similar to global practices (UNESCO, 2020). However, challenges remain that distinguish Kazakhstan’s context, particularly in terms of cultural attitudes, institutional readiness, and resource limitations. While many Western countries

emphasize co-teaching models, universal design for learning (UDL), and fully integrated classrooms, Kazakhstani schools still face gaps in infrastructure, accessibility, and consistent teacher preparedness (Jardinez, Natividad, 2023; East Kazakhstan University, 2025a). Moreover, while inclusive education in global discourse increasingly includes learners from diverse linguistic, migrant, and socio-economic backgrounds, Kazakhstan's model remains more narrowly focused on students with visible physical or cognitive disabilities. This suggests that while Kazakhstan is progressing toward global inclusion standards, further development is needed to ensure alignment with the broader, multidimensional understanding of inclusion found in international best practices.

The study indicates that teachers who possess theoretical knowledge, practical experience, and sufficient support from colleagues, school administration, and parents, can attain significant success in their work with SEN students. This leads us to propose several recommendations for overcoming existing obstacles in teacher preparation for inclusive education.

- Read and analyze the law of the Republic of Kazakhstan on inclusive education and international documents on the topic;

- Implement more practical tasks in educational program on working with SEN students; Future teachers can practice on giving clear instructions or explanation or create their own practical tasks.

- Organize meeting with SEN students so future teachers will be ready to work with them. They will know about SEN students' specific needs, strength and challenges.

- Evaluate school textbooks in terms of inclusion (content, accessibility, language, assessment, etc.);

- Attend extra courses for professional development can provide future teachers with peer support and opportunities to practice communication with SEN students' parents and caregivers.

While this article highlights the importance of preparing teachers for inclusive education, it is important to acknowledge its limitations. The study primarily focuses on teacher preparation, and university educators were not interviewed regarding the challenges they face in organizing courses on inclusive education or in managing inclusive classrooms. Addressing these gaps in research could further enhance our understanding of effective teacher preparation in this critical area.

## **Conclusion**

The pursuit of inclusive education is a multifaceted endeavor that necessitates a concerted effort from various stakeholders, including educators, institutions, and policymakers. The insights provided by UNICEF, UNESCO, and various researchers underscore the importance of creating supportive environments that cater to the diverse needs of all learners. While significant strides have been made in understanding the principles of inclusion and the factors that contribute to effective inclusive practices, challenges remain, particularly in terms of teacher preparation and institutional readiness. Addressing physical barriers and fostering a culture of support within schools are essential steps toward ensuring that all students, including those with special educational needs, can thrive academically and socially. Ultimately, a commitment to inclusivity not only enhances educational outcomes but also promotes a more equitable and compassionate society.

The literature review and practical aspects of this research underscore the pressing relevance of inclusive education across various countries. The findings of this study highlight significant challenges faced by future teachers in their readiness to implement inclusive education, particularly concerning their insufficient levels of inclusive competence, lack of practical experience, and prevalent fears of failure. These challenges emphasize the urgent need

to equip future educators with comprehensive and updated knowledge on how to engage with students who have special educational needs through implementation of service-learning, practice-based learning, and development practice-oriented educational programs.

Our research findings and the examination of the evaluated materials have allowed us to develop specific suggestions for improving aspiring future teachers' readiness for inclusive classroom. It is imperative that higher education institutions prioritize inclusive education training as a fundamental component of teacher preparation programs. This study provides compelling evidence that such an emphasis is crucial for cultivating a generation of educators who are not only knowledgeable but also confident and capable of fostering inclusive learning environments.

Ultimately, addressing the identified gaps in teacher preparation will contribute significantly to the successful implementation of inclusive education, ensuring that all students, regardless of their individual needs, can thrive in supportive and equitable educational settings. Continued research and practical initiatives in this area are essential to further advance the effectiveness of teacher training programs and to promote inclusive practices in classrooms worldwide.

### **Conflict of Interest Statement**

The author declares no potential conflicts of interest regarding the research, authorship, or publication of this article.

### **References**

- Astana IT University. (2023). National research project: Integration of assistive technologies in higher education (2023–2025) [Unpublished project summary]. Astana IT University. <https://astanait.edu.kz/ap19677013/>
- Boyle, C., Anderson, J., & Allen, K. A. (2020). The importance of teacher attitudes to inclusive education. In *Inclusive education: Global issues and controversies* (pp. 127–146). Brill. [https://doi.org/10.1163/9789004431171\\_008](https://doi.org/10.1163/9789004431171_008)
- Chen, S., Huang, Q., Liu, Z., & Wang, H. (2022). Inclusion of young children with special needs in early childhood education in the United States: Advantages and disadvantages. In *Proceedings of the 2021 International Conference on Social Development and Media Communication (SDMC 2021)* (pp. 195–202). Atlantis Press. <https://doi.org/10.2991/assehr.k.220105.038>
- Dyseggaard, C. B., & Larsen, M. S. (2013). Evidence on inclusion: Excerpt. Department of Education, Aarhus University.
- East Kazakhstan University. (2024a, September 27). An inclusive primary school was opened at Amanzholov University. <https://vku.edu.kz/2024/09/27/an-inclusive-primary-school-was-opened-at-amanzholov-university>
- East Kazakhstan University. (2024b, June 8). 35 universities of the Republic of Kazakhstan discussed innovative approaches in inclusive education. <https://vku.edu.kz/2024/06/08/35-universities-of-the-republic-of-kazakhstan-discussed-innovative-approaches-in-inclusive-education>
- East Kazakhstan University. (2025a, April 15). Training “Formation of Inclusive Culture” in higher education institution. <https://vku.edu.kz/2025/04/15/training-formation-of-inclusive-culture-in-higher-education-institution>
- East Kazakhstan University. (2025b, April 16). The path to accessible education: Training of teacher assistants for schools in Eastern Kazakhstan. <https://vku.edu.kz/2025/04/16/the-path-to-accessible-education-large-scale-training-of-teacher-assistants>
- Government of the Republic of Kazakhstan. (2021). Ob utverzhdenii Gosudarstvennoy programmy razvitiya obrazovaniya Respubliki Kazakhstan na 2011–2020 gody [On

- approval of the State Program for Education Development in the Republic of Kazakhstan for 2011–2020] (with amendments). <https://adilet.zan.kz/rus/docs/Z2100000056>
- Holmqvist, M., & Lelinge, B. (2021). Teachers' collaborative professional development for inclusive education. *European Journal of Special Needs Education*, 36(5), 819–833. <https://doi.org/10.1080/08856257.2020.1842974>
- Jangeldinova, S., Tleuzhanova, G., & Eskazinova, Z. (2024). Pre-service English language teachers' training to work in inclusive educational environment. *World Journal of English Language*, 14(6), 616–626. <https://doi.org/10.5430/wjel.v14n6p616>
- Jardinez, M. J., & Natividad, L. R. (2023). Challenges in implementing inclusive education in resource-constrained settings. *Shanlax International Journal of Education*, 12(2), 57–65. <https://doi.org/10.34293/education.v12i2.7182>
- Kazakh National University (KazNU). (2024). Education programs: Modern technologies in conditions of inclusive education. [https://www.kaznu.kz/en/education\\_programs/bachelor/speciality/1808](https://www.kaznu.kz/en/education_programs/bachelor/speciality/1808)
- Lohrmann, S., & Bambara, L. M. (2006). Elementary education teachers' beliefs about essential supports needed to successfully include students with developmental disabilities who engage in challenging behaviors. *Research and Practice for Persons with Severe Disabilities*, 31(2), 157–173. <https://doi.org/10.1177/154079690603100208>
- Nazarbayev University Graduate School of Education. (2023). Pre-service English language teachers' training to work in inclusive educational environment [Research report]. Nazarbayev University.
- Resch, K., & Schrittmesser, I. (2023). Using the Service-Learning approach to bridge the gap between theory and practice in teacher education. *International Journal of Inclusive Education*, 27(10), 1118–1132. <https://doi.org/10.1080/13603116.2021.1882053>
- UNESCO. (2020). *Global education monitoring report 2020: Inclusion and education – All means all*. UNESCO Publishing. <https://unesdoc.unesco.org/ark:/48223/pf0000373718>
- UNICEF. (2017). *Inclusive education*. <https://www.unicef.org/education/inclusive-education>
- United Nations. (n.d.). Sustainable Development Goal 4: Quality education. United Nations Department of Economic and Social Affairs – SDG Knowledge Platform. <https://sdgs.un.org/goals/goal4>
- Woodcock, S., Sharma, U., Subban, P., & Hitches, E. (2022). Teacher self-efficacy and inclusive education practices: Rethinking teachers' engagement with inclusive practices. *Teaching and Teacher Education*, 117, 103802. <https://doi.org/10.1016/j.tate.2022.103802>
- Zagona, A. L., Kurth, J. A., & MacFarland, S. Z. C. (2017). Teachers' views of their preparation for inclusive education and collaboration. *Teacher Education and Special Education*, 40(3), 163–178. <https://doi.org/10.1177/0888406417692969>

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