INITIAL TEACHER PREPARATION FOR INCLUSIVE EDUCATION IN KAZAKHSTAN: PRE-SERVICE TEACHERS' BELIEFS ABOUT STUDENTS WITH SPECIAL EDUCATIONAL NEEDS AND THEIR INCLUSION IN MAINSTREAM CLASSROOMS: A MIXED-METHODS STUDY

by

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THESIS

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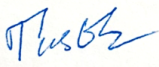
2023

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OCTOBER 2023

Declaration of Originality

I hereby declare that this submission is my own work and to the best of my knowledge it contains no materials previously published or written by another person, or substantial proportions of material which have been submitted for the award of any course or degree at NU or any other educational institution, except where due acknowledgement is made in this thesis. This thesis is a result of my independent work, except where otherwise stated, and the views expressed here are my own.

Signed:

Date: 21.06.2023

Ethics Approval

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May 5, 2020

Dear Gulmira Tussupbekova,

This letter now confirms that your research project entitled *Initial teacher preparation for inclusive education in Kazakhstan: Pre-service teachers beliefs about students with SEN and their inclusion in mainstream classrooms* has been approved by the Graduate School of Education Institutional Research Ethics Committee at Nazarbayev University.

You may proceed with contacting your preferred research site and commencing your participant recruitment strategy.

Yours sincerely,

Daniel Hernández-Torrano

On behalf of Zumrad Kataeva
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Abstract

The notion of inclusive education has become a widespread discussion topic and common practice internationally. Globally inclusion conveys the broad meaning of supporting and welcoming children's diversity and meeting their varied individual needs (Ainscow, 2020; Graham, 2020). By bearing in mind the right of children to be educated without discrimination in schools, Kazakhstan is moving towards inclusion and spreading inclusive education in mainstream schools.

Since signing the UN Convention on the Rights of Persons with Disabilities (UN CRPD) in 2008 and ratifying it in 2015, Kazakhstan has prioritised special and inclusive education. The inclusion of students with special educational needs (SEN) in mainstream schools is a key focus, as outlined in the State Programme for the Development of Education and Science for 2020-2025 (Ministry of Education and Science [MoES], 2019). However, there is a significant need for well-trained teachers and methodological support to promote inclusive education throughout Kazakhstani schools (MoES, 2019; 2021). To address this, understanding pre-service teachers' beliefs about inclusion is crucial for effectively implementing inclusive education policies and practices in secondary schools.

This research, which examines pre-service teachers' beliefs regarding students with SEN and their inclusion, is grounded in critical realism. It offers a helpful framework for evaluating the underlying causes and mechanisms that result in certain beliefs. The study employed an explanatory sequential mixed-method design in two quantitative and qualitative phases. In the first phase of the study, the questionnaire that examines beliefs about students with SEN and future teachers' self-efficacy and readiness to work in an inclusive environment was spread among pre-service teachers at 12 higher educational institutions in Kazakhstan. Then the qualitative phase of the study involved online semi-structured interviews with 12 pre-service teachers to explore their beliefs, concerns and suggestions regarding inclusive education and improvement of initial teacher education (ITE) for inclusion.

The empirical findings of this study have the potential to contribute to the knowledge of inclusive education in Kazakhstan. The study provides insights that can inform policymakers in implementing educational reforms and improving teaching practices related to ITE for inclusion. This research also opens avenues for further exploration of pre-service teachers' beliefs about children with SEN and their inclusion in mainstream schools in Kazakhstan. Finally, this thesis offers several policy, practice, and future research suggestions to address the identified issues.

Keywords: inclusive education, initial teacher education for inclusion, pre-service teachers, students with SEN, Kazakhstan.

Аңдатпа

Инклюзивті білім беру тұжырымдамасы бүкіл әлемде кеңінен талқыланатын тақырыпқа және ортақ тәжірибеге айналды. Жаһандық деңгейде инклюзия балалардың әртүрлілігін қолдау мен қабылдау, және олардың әр түрлі жеке қажеттіліктерін қанағаттандыруды білдіреді (Ainscow, 2020; Graham, 2020). Балалардың мектепте кемсітусіз білім алу құқығын ескере отырып, Қазақстан жалпы білім беретін мектептерге инклюзивті білім беруді енгізуге және таратуға бет бұруда.

2008 жылы БҰҰ-ның Мүгедектердің құқықтары туралы конвенциясына (БҰҰ Конвенциясы) қол қойып, 2015 жылы оны ратификациялағаннан бері Қазақстан арнайы және инклюзивті білім беруге басымдық берді. Білім және ғылымды дамытудың 2020-2025 жылдарға арналған мемлекеттік бағдарламасында көрсетілгендей (Білім және Ғылым Министрлігі, 2019), ерекше білім беру қажеттіліктері бар оқушыларды жалпы білім беретін мектептерге қосу негізгі бағыттардың бірі болып табылады. Дегенмен, Қазақстанның барлық мектептерінде инклюзивті білім беруді ілгерілету үшін жақсы дайындалған мұғалімдерге және әдістемелік қолдауға айтарлықтай қажеттілік бар (Білім және Ғылым Министрлігі, 2019; 2021). Бұл мәселені шешу үшін жалпы білім беретін мектептерде инклюзивті білім беру саясаты мен тәжірибесін тиімді енгізу үшін болашақ мұғалімдердің инклюзивтілікке қатысты сенімдерін түсіну өте маңызды.

Болашақ мұғалімдердің ерекше білім беру қажеттіліктері бар оқушыларға және оларды қосуға қатысты сенімдерін зерттейтін бұл ғылыми жұмыс сыни реализмге негізделген. Ол белгілі бір сенімдерге әкелетін негізгі себептер мен механизмдерді бағалау үшін пайдалы негізді ұсынады. Зерттеуде сандық және сапалық кезеңнен тұратын түсіндірмелі дәйекті аралас әдіс қолданылды. Зерттеудің бірінші кезеңінде Қазақстанның 12 жоғары оқу орындарының студенттері арасында ерекше білім беру қажеттіліктері бар оқушылар туралы сенімдері, өзіндік тиімділігі және болашақ мұғалімдердің инклюзивті ортада жұмыс істеуге дайындығы зерттелетін сауалнама

таратылды. Содан кейін, зерттеудің сапалы кезеңінде 12 болашақ мұғаліммен олардың инклюзивті білім беру және инклюзия үшін бастапқы педагогикалық білімін жақсартуға қатысты сенімдері, алаңдаушылықтары мен ұсыныстарын зерттеу үшін онлайн жартылай құрылымдық сұхбат жүргізілді.

Бұл зерттеудің эмпирикалық нәтижелері Қазақстандағы инклюзивті білім беру туралы білімді дамытуға ықпал ете алады. Зерттеу жұмысы білім беру реформаларын жүзеге асыру және инклюзия үшін бастапқы педагогикалық білімге қатысты оқыту тәжірибесін жақсарту кезінде саясат жасаушыларға ақпарат пен түсінік береді. Бұл зерттеу сонымен қатар болашақ мұғалімдердің ерекше білім беру қажеттіліктері бар балалар туралы сенімдерін әрі қарай зерттеуге және оларды Қазақстандағы жалпы білім беретін мектептерге қосуға мүмкіндіктер ашады. Соңында, диссертация анықталған мәселелерді шешу үшін саясат, тәжірибе және болашақ зерттеулерге арналған бірнеше ұсыныстарды тартты.

Кілт сөздер: инклюзивті білім беру, инклюзивтік бастауыш педагогикалық білім беру, болашақ мұғалімдер, ерекше білім беру қажеттіліктері бар оқушылар, Қазақстан.

Аннотация

Понятие инклюзивного образования стало широко обсуждаемой темой и общей практикой во всем мире. В широком смысле инклюзия означает поддержку, принятие и вовлечение детей с самыми различными потребностями в школьную жизнь, а также удовлетворение их индивидуальных нужд (Ainscow, 2020; Graham, 2020). Казахстан движется в сторону инклюзии и распространения инклюзивного образования в общеобразовательных школах, имея в виду право детей на образование без какой-либо дискриминации.

С момента подписания в 2008 году Конвенции ООН о правах инвалидов (Конвенция ООН) и ее ратификации в 2015 году, Казахстан приоритезирует специальное и инклюзивное образование. Согласно Государственной программе развития образования и науки на 2020–2025 годы (Министерство образования и науки, 2019), включение учащихся с особыми образовательными потребностями (ООП) в общеобразовательные учреждения является одним из ключевых направлений развития. Однако, существует острая необходимость в хорошо подготовленных педагогах и методологической поддержке кадров для содействия инклюзивному образованию во всех школах Казахстана (Министерство образования и науки, 2019; 2021). Для решения этой проблемы крайне важно понимать убеждения будущих учителей об инклюзии, с целью эффективной реализации политики и практик инклюзивного образования в общеобразовательных школах.

Данное исследование, которое изучает убеждения будущих учителей относительно учащихся с ООП и их включения, основано на критическом реализме. Оно предлагает полезную систему для оценки основных причин и механизмов, приводящих к определенным убеждениям. Исследование использовало объяснительный последовательный тип смешанного метода исследования в двух количественных и качественных фазах. В первой фазе исследования был распространен

опросник среди студентов высших учебных заведений Казахстана, благодаря которому изучаются убеждения будущих учителей, относительно учащихся с ООП, самоэффективность и готовность будущих педагогов работать в инклюзивной среде. Затем, на этапе качественного исследования, были проведены онлайн полуструктурированные интервью с 12 будущими учителями для изучения их убеждений, опасений и предложений относительно инклюзивного образования и улучшения процесса обучения начального педагогического образования.

Эмпирические результаты этого исследования могут внести вклад в пополнение знаний об инклюзивном образовании в Казахстане. Данное исследование формирует понимание, которое может использоваться политиками при дальнейших реализациях образовательных реформ, а также может быть применено для улучшения процесса обучения будущих учителей и практик преподавания, связанных с начальным педагогическим образованием. Эта работа открывает пути для развития дальнейших исследований касательно убеждений будущих учителей относительно детей с ООП и их включения в обычные школы в Казахстане. Наконец, данная диссертация предлагает рекомендации для политики, практики и будущих исследований в решении выявленных проблем.

Ключевые слова: инклюзивное образование, начальное педагогическое образование для инклюзии, будущие учителя, учащиеся с ООП, Казахстан.

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List of Abbreviations

ANOVA – Analysis of Variance

CIS – Commonwealth Independent States

CRPD - Convention on the Rights of People with Disabilities

HEIs – Higher Educational Institutions

IE – Inclusive Education

ITE – Initial Teacher Education

MoES – Ministry of Education and Science

OECD – Organisation for Economic Co-operation and Development

OHCHR – Office of the United Nations High Commissioner for Human Rights

OSCE – Organisation of Security and Co-operation in Europe

PMPC - Psychological, Medical and Pedagogical Consultations

SCT - Social Cognitive Theory

SEN – Special Educational Needs

UN – United Nations

UNDP – United Nations Development Programme

UNESCO – United Nations Educational, Scientific and Cultural Organization

UNICEF – United Nations International Children's Emergency Fund

Chapter 1. Introduction and Research Context

This chapter presents the context and justification for this research study which focuses on pre-service teachers' beliefs about including children with special educational needs (SEN) in mainstream classes in Kazakhstan. Moreover, the sense of student-teacher competence and confidence in working with children with SEN and their perceptions of how their initial teacher education programmes prepare them to teach in inclusive classrooms are described. This chapter is organised into six sections. Firstly, the research background information is provided. Second, the context of the study is outlined. Third, the problem statement this research intends to address is introduced. In particular, the changes that have shaped the education system in Kazakhstan around the provision for children with SEN are described. Further, information about the context of the study is provided by describing the education system in Kazakhstan, and a focus is drawn on the provisions made for pre-service teachers. Fourth, the purpose statement and research questions are outlined. Fifth, the rationale and significance of the study is discussed. Finally, summaries of the key ideas presented in this chapter and an outline of the remaining chapters of this research are exhibited.

1.1 Research Background

Inclusive education is a philosophy of teaching and learning around the world that has become a significant focus of policy and government initiatives in the last decades to promote equity, social justice, and human rights (Armstrong et al., 2010; Graham, 2020; Hernández-Torrano et al., 2020). The origins of inclusive education are rooted in the conviction that the traditional approach of segregating students considered "abnormal" or "special" in separate schools outside the mainstream system reduces the educational opportunities of these students and undermines their fundamental human rights of obtaining a

quality education, realising their full potential, and participating in society under equal conditions. In its initial stages, inclusive education globally referred to providing children with disabilities and SEN in mainstream classes (Graham, 2020). However, nowadays, inclusive education conveys a broader meaning relating to supporting and welcoming children's diversity and meeting the varied individual needs of all students (Ainscow, 2005; 2020; Ballard, 1999; Graham, 2020).

Over three decades ago, Ainscow (1991) emphasised the crucial role of the school environment in the needs of children with SEN and disabilities. Instead of focusing on their differences, the school settings and practices should be able to embrace those differences and exclude any means of discrimination and barriers to inclusion. More recently, Ainscow (2005) argued that inclusive education aims to "eliminate social exclusion that is a consequence of attitudes and responses to diversity in race, social class, ethnicity, religion, gender and ability" (p. 2). Similarly, Florian et al. (2017) indicate that inclusive pedagogy is an approach that supports teachers in responding to and meeting students' individual needs without making them feel excluded or marginalised at any point in their studies. The pedagogical practices of teachers being able to use knowledge of individual differences of every single student and applying the teaching practices to "everybody" rather than including "all" students and having differentiation for "some" of them (Florian et al., 2017, p. 27).

The successful implementation of inclusion lies beyond accessing students with special educational needs into mainstream classes (Graham, 2020). It includes providing all students with opportunities to be equal members of that classroom (Ainscow, 2005; 2020; Graham, 2020). Bearing this in mind, it is crucial to note that providing inclusive education practices is a holistic process that requires all stakeholders to be actively and positively involved, especially the teachers (Ainscow, 2005; Woodcock, 2021). Besides, research reveals that teachers' beliefs, in particular self-efficacy beliefs and beliefs about students with

SEN, play a vital role in their classroom behaviour (Romi & Leyser, 2006; Woodcock et al., 2022). For instance, teachers' self-efficacy beliefs influence student motivation, achievements, and outcomes (Tschannen-Moran & Woolfolk-Hoy, 2001; Mojavezi & Tamiz, 2012). Also, teachers' self-efficacy beliefs are positively associated with positive classroom management strategies, as well as a significantly higher degree of willingness to include students with SEN (Emmer & Hickman, 1991; Jordan et al., 1993; Romi & Leyser, 2006; Woodcock et al., 2019).

Teacher education for inclusion has become an important agenda as an integral part of forming positive outcomes for meeting the needs of teachers and their students (Forlin, 2010). Initial teacher education plays a vital role in forming favourable views about inclusion among future teachers (Stites et al., 2018). Studies have shown that teachers who have gained knowledge and experience in promoting the values of inclusive education throughout their teacher education programmes tend to be more willing to include students from diverse backgrounds and create an inclusive educational environment (Keppens et al., 2019; Martinez, 2003; Romi & Leyser, 2006). Moreover, the knowledge obtained during education about inclusion and experience working with students with SEN is more likely to instil positive views about inclusion and be sustained throughout teachers' careers (UNESCO, 2003).

The ideology of inclusive education and its implementation has been widely embraced by all stakeholders, including theorists, researchers, policymakers, and practitioners. Diverse challenges have been encountered in the process of transmitting effective inclusive practices. In the Kazakhstani context, one of the main challenges is the preparedness of teachers to meet the diverse needs of students, especially those at risk of being marginalised. More specifically, exploring teachers' beliefs about students with SEN and their inclusion in mainstream schools is compelling in order to develop further inclusive policies, practices,

and cultures in Kazakhstan. This is deemed an initial step towards reforms in the units of study and curriculum modifications of pre-service teacher education.

1.2 Context of the Study

This section provides information about the current state of the children with SEN in Kazakhstan by delving into the issues of including them in public schools nationwide. Further, the existing state policies and practices are discussed.

1.2.1 Inclusive Education Policies in Kazakhstan

Since the collapse of the Soviet Union, and especially during the last two decades, Kazakhstan has placed increased emphasis on inclusive education as it seeks to offer more equal and inclusive educational opportunities for all children. In Kazakhstan, inclusive education has a long history dating back to the Soviet era, when the government set up a network of special schools for children with impairments (Makoelle & Somerton, 2021). However, the nation has made great progress toward a more inclusive education system since gaining its independence.

Kazakhstan has made numerous efforts to promote social equity through different initiatives. Examples include being a signatory on the UNESCO Salamanca Statement and Framework of Action in Special Needs Education, which was agreed upon in Salamanca in 1994, Spain (Somerton et al., 2021; UNESCO, 1994). According to this statement, all children, regardless of their physical, intellectual, social, emotional, or any other conditions, must be accommodated by schools (Smith-Davis, 2002). Within these policy frameworks, the rights of people are to be promoted through social inclusion based on international practices. Legislation on the rights of people with disabilities was passed by the government of Kazakhstan in 1999, and it contained provisions for inclusive education (Rollan, 2021). Moreover, joining the "Education for All" (EFA) programme, making further steps in the commitment to the Dakar Framework of Action (UNESCO, 2000) and becoming signatories

to the Convention on the Rights of Persons with Disabilities (UN CRPD) in 2008 showcase the State's initiatives towards the promotion of inclusion. Further, the ratification of the UN CRPD in 2015 has fostered the promotion of a "Future without Barriers" programme, which aims to enhance the lives of people with disabilities in the country (OHCHR, 2022). Consequently, *The National Plan to Ensure the Rights and Improve the Quality of Life of Persons with Disabilities in the Republic of Kazakhstan* was adopted, which established goals for increasing the enrolment of children with disabilities in mainstream schools (Decree of the Government of the Republic of Kazakhstan, 2019).

Other initiatives have also been carried out in the educational sphere to promote the inclusion of young people in schools across Kazakhstan. The most significant ones are perhaps the design of the *State Programme for the Development of Education and Science of the Republic of Kazakhstan for 2016-2019* (Ministry of Education and Science [MoES], 2016), the *State Programme of Development of Education and Science of the Republic of Kazakhstan for 2020 – 2025* (MoES, 2019) and *The National Project "Quality Education "Educated Nation"* (MoES, 2021), which emphasise the importance of including schoolchildren with SEN in the educational process of general education schools. As a result, 46.5% of children with SEN have obtained the opportunity to be educated with their peers (MoES, 2019). Moreover, the conditions to facilitate the inclusion of children with SEN are reported to have been created in 60% of schools, and the government aimed to create conditions for inclusive education in 100% of Kazakhstani mainstream schools by 2025 (MoES, 2021). However, up to date, no statistics and detailed information have been provided on achieving these goals. Moreover, it is unclear how these conditions are intended to be achieved and what it means by conditions to facilitate inclusion, as well as the means of support for the facilitation of inclusion. Despite the State's intention to achieve a high rate of

inclusive schools across the country by 2025, the process is deemed slow (Human Rights Watch, 2019).

Kazakhstan has recently put in place a variety of initiatives and programmes designed to promote inclusive education. One such programme is the "Inclusive Education" project, which the Ministry of Education and Science carries out with assistance from the United Nations Development Programme (UNDP). The initiative intends to raise the number of children with disabilities enrolled in regular schools and the standard of instruction for these students. In addition, multiple professional development opportunities for teachers on inclusive education have been made available for in-service teachers in recent years (Irsaliyev et al., 2017). For example, from 2014 through 2017, 2771 mainstream teachers across the country obtained training on inclusive education (Irsaliyev et al., 2017). Another example is the graduate programme on Educational Leadership in Inclusive Education provided by Nazarbayev University, Graduate School of Education (NUGSE). Since 2015, NUGSE has graduated over 40 master's degree students in Inclusive Education (Makoelle & Somerton, 2021). Also, the faculty members of this institution have organised a range of professional development programs for in-service teachers across Kazakhstan (Graduate School of Education, 2017).

In Kazakhstan, there is a traditional and sequential model for teacher education. In this system, aspiring teachers often complete their initial teacher education (ITE) programmes in higher education institutions (HEIs) before beginning their careers. The Kazakhstani ITE system has a sequential approach to programme structure, with pre-service teachers moving through a number of educational phases or levels. Typically, they begin with a bachelor's degree programme in education, which equips them with the theoretical knowledge and pedagogical abilities they need to succeed. They might continue their study in a master's programme in education after finishing the bachelor's programme to advance their

knowledge and specialisation. Following the initiatives to promote inclusive education in Kazakhstan, a core "Inclusive Education" course was also incorporated into all ITE programmes in 2016 (Nogaibayeva et al., 2017). This course is integrated with the volume of two credits, which is 1,6% of all theoretical education credits during the whole ITE period. National policymakers argue that this volume should be enough to gain theoretical knowledge on inclusion. However, it is unclear whether this is sufficient for gaining practical skills in teaching methods and approaches for teaching students with SEN (Nogaibayeva et al., 2017). Hence, the inclusive education monitoring authority has been recommended to renew the content of educational programmes in compliance with the requirements of the modern labour market, which includes preparing professionals who can work with diverse categories of students with SEN. Moreover, there is agreement that there is a need to improve the teaching methods in Pedagogical Colleges and HEIs and increase the hours of practical classes and internships (Nogaibayeva et al., 2017).

1.3 Problem Statement

Despite these initiatives, there is still considerable controversy surrounding understanding and implementing inclusive education in Kazakhstan. These controversies are the result mainly of a (1) narrow conceptualisation of inclusion driven by a psycho-medical approach to the identification of students with disabilities, (2) teachers' minimal understanding and knowledge about inclusive education; and (3) an outdated initial teacher education system and the low status of the teaching profession in Kazakhstan.

1.3.1 Narrow Conceptualization of Inclusion in The Context of Kazakhstan

The concept of inclusive education in Kazakhstan is predominantly driven by the idea of integrating students with disabilities into the general education environment (Rouse & Lapham, 2013). A disabled child is defined under the law "On Social Protection of Disabled

Person in the Republic of Kazakhstan" (Law no.39-III, dated April 13, 2005) as "...a person who has health problems with a persistent disorder of body functions, caused by diseases, injuries, and their consequences, defects, leading to a physical dysfunction and the need for his/her social protection". This conceptualisation excludes a considerable proportion of young people that might experience barriers to access and participation in quality education (OECD/The World Bank, 2015).

Moreover, children labelled as "disabled" in the context of Kazakhstan are predominantly educated at special "correctional" schools or in special classes within mainstream schools, where they receive little support (OECD, 2015, p. 39). According to OECD/The World Bank (2015), very few programmes and resources are aimed at assisting students who fall behind due to some learning difficulties or those who come from a disadvantaged background. Relatedly, Florian and Becirevic (2011) argue that there are some difficulties in Commonwealth Independent States (CIS) in terms of promoting the concept of Education for All (EFA) due to their legacy of *defectology*, which is still evident in the current ITE curriculum. Defectology is "a multi-disciplinary approach that combines psychology, medicine, philosophy, sociology, and political theory to diagnose, educate and rehabilitate people with mental and physical handicaps'' (Rouse et al., 2000, p. 8). Specially trained "defectologists" work with students with SEN who are prescribed either for home-schooling or education in separate correctional classes (Makoelle & Somerton, 2021). However, the general idea of defectology contradicts the absolute values of inclusion and inclusive education by mainly isolating students with SEN from their ordinary peers and providing them with education in a special or correctional institution (Gevorgianiene & Sumskiene, 2017; Makoelle & Somerton, 2021).

1.3.2 Kazakhstani Teachers Have Limited Understanding About the Inclusion of Students with SEN

Teachers' knowledge about inclusion are crucial aspects of achieving positive, inclusive education outcomes (see Forlin, 1995; Lambe, 2011; Tiwari et al., 2015; Unianu, 2012). However, with the exception of a few studies on in-service teachers' perceptions of inclusion and their readiness to work in an inclusive environment (e.g., Movkebaieva et al., 2013; Movkebayevaa et al., 2016), little is known about pre-service teachers' perceptions of inclusion and inclusive education in the Kazakhstani context. Still, the information available about the knowledge of in-service teachers about inclusive education is discouraging. Nogaibayeva et al. (2017) found that 80% of in-service teachers mentioned having minimal knowledge of teaching students with SEN, and 20% expressed an absolute lack of knowledge in this field. Moreover, none of the teacher specialists acknowledged that they had gained enough special knowledge in teaching and working with students with SEN (Nogaibayeva et al., 2017). Also, it is crucial to note that the majority of new teachers joining their early career stages tend not to have sufficient background knowledge and expertise to work in the current educational environment due to their insufficient preparedness at their initial teacher training programmes across the vast majority of former Soviet countries (UNICEF, 2010). Florian and Becirevic (2011) believe that this is a consequence of the extensive focus on the subject matter in the initial education programmes of former Soviet Union countries. The government has voiced the need for highly trained, professionally qualified new teachers to be entering the profession in the Strategic Plan of the Ministry of Education and Science of the Republic of Kazakhstan for 2017-2021 in order to expand the Education for All environment among Kazakhstani schools (MoES, 2016). Still, little research has been conducted on inclusive education teacher preparation policies and practices in Kazakhstan.

1.3.3 Outdated Initial Teacher Education System and Low Status of The Teaching Profession

Initial teacher education is considered one of the most important tools for encouraging and enhancing an inclusive educational environment. As Florian and Rouse (2009) stated, "the task of initial teacher education is to prepare people to enter a profession which accepts individual and collective responsibility for improving the learning and participation of all children" (p. 596). However, it has been argued that the higher education system in Kazakhstan has inherited its current model from the Soviet legacy of education in terms of being centralised, restricted to political ideology, and emphasising specialisations (Ahn et al., 2018). More specifically, the Kazakhstani teacher training system still reinforces a traditional approach of teaching focused on theoretical knowledge but with little emphasis on developing practical skills and competencies to deal with real-life classroom issues (Yakavets et al., 2017). Moreover, according to the recommendations presented by OECD and The World Bank (2015) to Kazakhstan, there remains a necessity to create "national standards for teachers and school leaders" (p. 19). These standards could serve as "useful mechanisms" in clarifying the expected outcomes of the systems in initial teacher education programmes and professional development courses (OECD/The World Bank, 2015, p. 19).

In addition, it is noted that across most post-Soviet countries, the teaching profession is underestimated and low-valued (Steiner-Khamsi et al., 2007). That is why, in most cases, students choose this profession due to the limited choices available based on their low Unified National Testing (UNT) results (OECD/The World Bank, 2015). Consequently, students often join this profession without any intrinsic motivation or aptitude. These trends are most likely to have negative implications for future teachers who, first of all, do not choose this profession thoughtfully, by taking the whole responsibility of their profession, and lead to a high possibility of quitting their job at the early stages of their career (Ingersoll

& Strong, 2011). Also, a lack of motivation leads to a limited interest in learning and exploring inclusion and the general philosophy, principles, and practices of teaching (Gyimah, 2006). In this context, the OECD/The World Bank (2015) has recommended "raising the bar to enter the profession" by introducing interviews and tests to evaluate students and future teachers' ability for this career, as well as providing a limited number of places for initial teacher education so that they close the needs of the school system (OECD/The World Bank, 2015, p. 24).

As mentioned above, implementing effective inclusive practices encounters several challenges in the Kazakhstani context. The reasons lie in the ambiguity of concepts of SEN and students with SEN in Kazakhstan. Also, the law on the status of a teacher and their limited readiness to work in an inclusive environment hinder the 'pathway' towards inclusion. This research is underpinned by the arguments that the major aim of inclusive education is to provide a positive, encouraging environment and access to education for all students to meet their needs. However, prior to implementing the approaches to inclusion, it is crucial to explore and obtain information about teachers' beliefs about students with SEN and their readiness to work in an inclusive environment (Elliott & McKenney, 1998; Essex et al., 2021; Sharma et al., 2021).

1.4 Research Aim, Research Questions, and Objectives

The aim of this study is to examine pre-service teachers' beliefs about the inclusion of students with SEN into mainstream classrooms and to what extent they feel prepared to work in an inclusive classroom. Moreover, the study aims to uncover future teachers' perceptions about how their initial teacher education programmes prepare them to teach in inclusive classrooms. The specific objectives of this study are to contribute towards policy reforms by examining and evaluating the ideas and concepts HEIs stakeholders hold about Initial

Teacher Education towards expanding the Education for All environments among Kazakhstani mainstream schools, as well as their pervasiveness and adequacy with the current curriculum.

This study aims to answer four research questions:

- RQ1: What are the pre-service teachers' beliefs about the students with special educational needs and their inclusion in mainstream schools in Kazakhstan? This research question aims to explore pre-service teachers' beliefs about students with SEN and their inclusion in mainstream schools in Kazakhstan. Moreover, the study examines whether there are significant differences in pre-service teachers' beliefs about inclusion that could be connected to the variables of teacher gender, experience, discipline, context, and training.

- RQ2: How prepared do pre-service teachers feel about working with students with SEN in a mainstream classroom? This research question is concerned with exploring pre-service teachers' perspectives on their self-efficacy and preparedness to work in an inclusive classroom and to what extent they feel confident in relation to their future career prospects.

- RQ3: What factors influence pre-service teachers' beliefs about inclusion? This research question examines the influencing factors on pre-service teachers' beliefs about students with SEN and their inclusion and the self-efficacy beliefs of future teachers to work in an inclusive setting.

- RQ4: How could the Initial Teacher Education programmes better prepare pre-service teachers to teach in an inclusive classroom from their perspectives? This question explores pre-service teachers' reflections and feedback on their obtained knowledge and experiences throughout their studies in relation to their preparation to work in an inclusive classroom.

1.5 Rationale and Significance

The ideology of inclusion and inclusive education has brought changes to the philosophy of teaching. Meeting the needs of every single student and preserving their fundamental human rights allows the learning procedure to be effective, as well as motivating and engaging. However, research reveals that both in-service and pre-service teachers have limited knowledge and beliefs about the principles of inclusion (Civitillo et al., 2016). Gaining insight into pre-service teachers' beliefs about students with SEN and their inclusion facilitates meeting pre-service teachers' needs and guides administrative decisions. Also, exploring pre-service teachers' beliefs about their readiness to work in an inclusive environment is a significant tool to facilitate the change and standards of inclusive education practices. Obtaining the voices of those who will be directly involved in implementing inclusive education is a paramount stage of receiving valuable "inside" information in enacting the reform (Stoiber et al., 1998, p. 108).

The findings of this study will provide valuable information on pre-service teachers' views towards inclusion within the context of Kazakhstan. Furthermore, the study will assist in understanding the challenges and opportunities faced by the Kazakhstani education system in promoting inclusion and how ITE programmes can be adjusted to prepare future teachers better. The results of this study will be useful for education policymakers, teacher educators, and other stakeholders in Kazakhstan's education field. This study has the potential to inform Higher Education Institutions' stakeholders with respect to pre-service teachers' beliefs about students with SEN and their inclusion in mainstream schools, as well as their feelings about inclusive teaching practices and their preparedness to work in an inclusive classroom. The study can contribute to the lack of research with regard to the policies and potential reforms in implementing inclusive education in Kazakhstan mainstream schools. Also, the study is

expected to provide input into the critical examination process that will be necessary for policymakers to take immediate action through educational reforms and changes to current teaching practices regarding initial teacher education for inclusion. Moreover, this study intends to enhance and improve the experience of students with SEN in schools by paving the way for further research in relation to the development of experiences and confidence of pre-service teachers and initial teacher preparation programmes. Finally, this study also aims to add to the international body of literature a picture of the post-Soviet Kazakhstan context of pre-service teachers' beliefs about students with SEN and inclusion.

1.6 Definition of Key Concepts

In this section, the key concepts in the study are briefly defined. These concepts are further explored in the literature review chapter of the research.

Inclusion: In this study, inclusion is understood as a process of reducing all the barriers that a student with SEN might encounter in a mainstreaming process in order to promote access and full participation, as well as the empowerment of being an equal and active member of society.

Inclusive education: With the goal of fostering diversity, acceptance, and collaboration among all members of the school community while meeting individual learning needs, inclusive education encourages full participation and equal opportunities for all students, including those with a range of abilities, backgrounds, and needs, within regular classroom settings (Ainscow, 2020; Graham, 2020).

Mainstream education: The term mainstream education, which is also used to refer to regular education or general education, describes the typical educational environment in which students receive instruction in a regular classroom setting alongside their peers who do not have significant disabilities or special educational needs, regardless of their abilities, disabilities, or needs (Ebersold, 2003; Lloyd, 2008; Takala & Sume, 2018).

Students with special educational needs (SEN): Within the scope of this study, which is held in the context of Kazakhstan, the concept of students with SEN is broadly used to refer to children with disabilities (children with organic disorders attributable to organic pathologies), children with difficulties (students with emotional disorders, or specific difficulties in learning), and children with disadvantages (students with disadvantages arising primarily from socio-economic, cultural, and/or linguistic factors), as defined by OECD (2007, p. 20).

Belief: An individual's perception and acceptance of something to be true based on their own judgments (e.g., Five & Buehl, 2012; Kagan, 1992; Nespor, 1987; Pajares, 1992; Richardson, 1996; Rokeach, 1968).

Initial teacher education: A complex system of attracting and selecting candidates, their continuous training and instilling in them all required professional skills and competencies, certification and registration of the degrees earned, and supporting their early career development (König & Mulder, 2014; OECD, 2019a, p. 11).

Pre-service teacher: Future and/or novice teachers, as well as teacher candidates, who undergo formal initial teacher education programmes and earn a degree in certain content subjects and pedagogy.

1.7 Summary and Outline of The Research

This chapter has presented an overview of the context of inclusive education in Kazakhstan with the main emphasis on policy enactment that is a supranational agenda. The information presented in this study shows that the notion of inclusive education is an umbrella term that addresses the needs and demands of diverse children. At the same time, acknowledging those differences reveals the challenges that hinder most students with SEN from participating and becoming full members of their educational environments (Mittler,

2002). It could be concluded that a more holistic approach to implementing inclusive education is required, including the resources, supports, and adequate training of teachers, bearing in mind that teachers are the main agents of the global implementation agenda. As a result, teachers' beliefs and concerns about students with SEN are essential to consider (Forlin & Chambers, 2011).

The next two chapters present a critical review of the literature related to the study and the methodology of the research. The literature review consists of five main sections that include the historical overview and perspectives on the development of the concept of inclusion and its definitions. Further, the models of initial teacher education and their preparation for inclusive education are discussed in the second section. The third section addresses the literature on teachers' beliefs about inclusion. A theoretical framework and its implications in the current study are discussed in section four. The final section presents the chapter's overall conclusion and the literature review's implications. In the third chapter, a detailed discussion of the methodology of this study is provided, which includes the philosophical underpinnings of the research, the rationale for the selected methodology, sampling, research instruments, data collection techniques, and their analyses.

Chapter 2. Literature Review

This chapter presents a thorough review of the relevant studies in the field of inclusive education, the role of initial teacher education in preparing teachers for inclusive education environments, and teachers' beliefs about students with special educational needs (SEN) and their inclusion in mainstream schools. The chapter consists of five sections. The first section presents an overview of the development of inclusive education that facilitated its expansion internationally. The second section introduces a critical review of the international research literature on pre-service teacher education in inclusive education in order to locate this study within the body of international literature. Further, section three elucidates the essence of the concept of belief and the importance of teachers' beliefs about inclusive education, as well as how beliefs can influence teachers' presupposed classroom practices. Furthermore, a thorough review of the factors influencing teachers' beliefs about inclusive education is presented in this section. Section four presents the conceptual framework based on the concept of belief and aims to explore teachers' beliefs about students with SEN and inclusive education. The fifth section presents conclusions and implications of the reviewed literature.

This study used a traditional literature review approach to thoroughly examine the literature on pre-service teachers' beliefs about students with SEN and their inclusion in mainstream classrooms. A literature review is essential for evaluating and synthesising existing knowledge on a particular subject (Hart, 2018). Traditional literature reviews, often referred to as narrative literature reviews, qualitatively analyse earlier research while concentrating on particular research concerns or subjects (Cooper, 1998; Hart, 2018). These reviews are helpful in determining the present level of knowledge and locating gaps in the literature (Cooper, 1998; Hart, 2018). This study employed a traditional literature review, which included examining international and national policies on inclusive education,

empirical studies, textbooks, and grey literature, in order to contextualise and comprehend the current knowledge on the topic. Various databases, including Web of Science, Scopus, Google Scholar, and the official websites of international and government organisations, were searched for pertinent information (see Appendix A). The literature was then thoroughly assessed, taking into account the research design, methodologies, and conclusions of each policy document and empirical studies and highlighting their strengths, weaknesses, support, and gaps in relation to the existing research. By classifying policy papers and pertinent literature according to the topic and research questions, as well as by contrasting and comparing the results, the data were organised and synthesised. Finally, to guarantee consistency, the review was logically arranged and presented under broad themes.

2.1 Inclusive Education: Definition, Perspectives, and Models

There has been considerable scholarly discussion surrounding the idea of inclusion and inclusive education in recent years. A thorough awareness of the historical context of inclusion and the evolution of major ideas connected to promoting an inclusive educational environment has served as the foundation for this debate. The rich history of inclusion in education and inclusive education is examined in this part, along with the development of this vital discipline and the numerous ideas and techniques that have come to be used. This section offers a discussion about the concept of inclusion and inclusive education, its historical background, and the development of diverse key notions related to promoting an inclusive educational environment.

2.1.1 What Is Inclusive Education?

Inclusive education, in general, is considered an umbrella term that covers the concepts and values of human rights, social justice, equity, equality, and quality education for all (Hornby, 2015; Makoelle & Somerton, 2021). The movements towards inclusion and

inclusive education have experienced several historical and political changes that still encounter some challenges concerning its principles and practices (Ainscow, 2020; Clough & Corbett, 2012; McDonnel, 2016). Moreover, Horny (2015) emphasises that the definition of inclusive education is mostly grounded on the diversity of the basic needs of a particular country. In other words, some countries consider inclusive education to be an approach that serves the needs of students with special needs. In contrast, at an international level, inclusion is broadly considered as a reform that serves to support and welcome diversity among learners based on race, ethnicity, gender, age, and range of abilities (Ainscow, 2020; Graham, 2020).

While there is no consensus on the definition of the concept of inclusive education (Armstrong et al., 2010; Makoelle & Somerton, 2021; Woodcock et al., 2022), there is a widespread agreement that it is a process of "minimizing of all barriers to learning and participation" (Booth, 2000, p. 78). For example, Ainscow (1991; 2020) defines inclusion in education as a means of overcoming the barriers that someone might encounter in obtaining access to education. Barton (1998) describes inclusion as a process that requires the educational setting to be adapted and adjusted to the students' needs rather than merely providing access to general education settings. Similarly, Hornby (2015) asserts the idea of inclusive education has many facets, including celebrating diversity, considering human rights and social justice, embracing the social model of disability and socio-political model of education, concentrating on school transformation, and guaranteeing children's entitlement and access to education. That is, a crucial part of inclusive practices lies beyond the fact that a student does not only obtain access to the mainstream schooling system but also becomes an equal member of that system by actively getting involved in the education process along with the others (Ainscow, 2020; Graham, 2020; Mezzanotte, 2022). Florian et al. (2017) understand inclusive education as providing access to education for all vulnerable groups of

children, including those from the lower socio-economic background, migrants and immigrants, representatives of diverse "ethnic, cultural or religious heritage", as well as students with SEN (p. 19). At this stage, it is crucial to consider the emergence and historical development of inclusion and inclusive education, as well as to scrutinise the "linear progression" of key ideas towards "a unitary perspective" on it (Armstrong et al., 2016, p. 1).

2.1.2 Perspectives in Inclusive Education

The current thinking around inclusive education has been shaped and influenced by different historical perspectives on disability, diversity, and inclusion. Clough and Corbett (2012) presented a chronological development and interaction of diverse ideologies that have led to the current concept of inclusive education and its practices organised into five different stages: (1) the psycho-medical legacy, (2) the sociological response, (3) curricular approaches, (4) school improvement strategies, and (5) disability studies critique (p. 9).

The dominant approach to the education of diverse students in the 1950s was the "psycho-medical legacy", where a human being with disabilities was labelled as someone "in deficit" and prescribed to "special" education (Clough & Corbett 2012, p. 11). That is, disability was associated with a human being suffering from a psychological or physiological impairment, and inclusion was determined through the lens of providing access to mainstreaming mainly to students with disabilities, who needed specific treatments and professional medical help (Farkas, 2014, p. 12).

In the 1960s, the "sociological response" challenged the biological focus of disability that characterised the psycho-medical model and started paying extensive attention to the social construction of the sources of disability (Clough & Corbett, 2012). The sociological response proposes that the challenges and difficulties of SEN should be seen as a consequence of social processes. The key focus of this concept is "the social disadvantage rather than individual deficit" (Clough & Corbett, 2012, p. 15). The significant contribution

of this perspective to the current thinking of inclusive education is a change of perceived views about students with SEN from having a problem in them to the problem lies within society itself, which has led to a society being more open and accepting students with SEN (Clough & Corbett, 2012).

Further, in the 1970s, the social changes in the understanding of concepts such as SEN and disability led to the modifications of the school curriculum. Starting with individual plans for students with SEN, further changes in the school curriculum were introduced to meet the needs of students (Clough & Corbett, 2012). The development of curriculum and integration of some amendments was also undoubtedly influenced by Warnock Report in 1978, which identified curriculum in four elements: "1) setting of objectives; 2) choice of materials and experiences; 3) choice of teaching and learning methods to attain the objectives; and 4) appraisal of the appropriateness of the objectives and the effectiveness of the means of achieving them" (DES, 1978, p. 206). These curriculum developments have smoothed the boundaries of special education and enhanced the inclusion of students with SEN.

The fourth perspective includes school improvement strategies that promote collaboration between researchers, school administration, and other stakeholders (e.g., teachers). In the 1980s, within the school improvement practices, diverse ideas on the development of school services were promulgated. Moreover, various discussions about the concept of SEN were held that encouraged "the action research movement, cooperative inquiry, and natural inquiry evaluators" (Ainscow, 1991, p. 12). The main impact of this perspective on the current thinking of inclusive education is the encouragement of teachers' active participation in examining and exploring specific processes in their schools within a naturalistic setting (Clough & Corbett, 2012). Also, cooperative inquiry facilitated

collaborative processes to support inclusion, as well as the promotion of inclusive education research and further developments of inclusive education theories (Clough & Corbett, 2012).

Another influential perspective adding to the current conceptualization of inclusive education has been the so-called "disability studies critique," which has been developing since the 1990s (Clough & Corbett, 2012, p. 27). Although disability studies are an independent discipline outside of education, it has made a significant contribution to the further discussion of inclusive education from the perspective of social adaptation of students with SEN that include healthcare, housing, employment, and educational inclusion (Clough & Corbett, 2012, p. 27). Figure 1 provides a visual representation of the different perspectives influencing the current thinking on inclusive education.

Figure 1

The Historical Development of The Perspectives on Inclusion (Clough & Corbett, 2012).
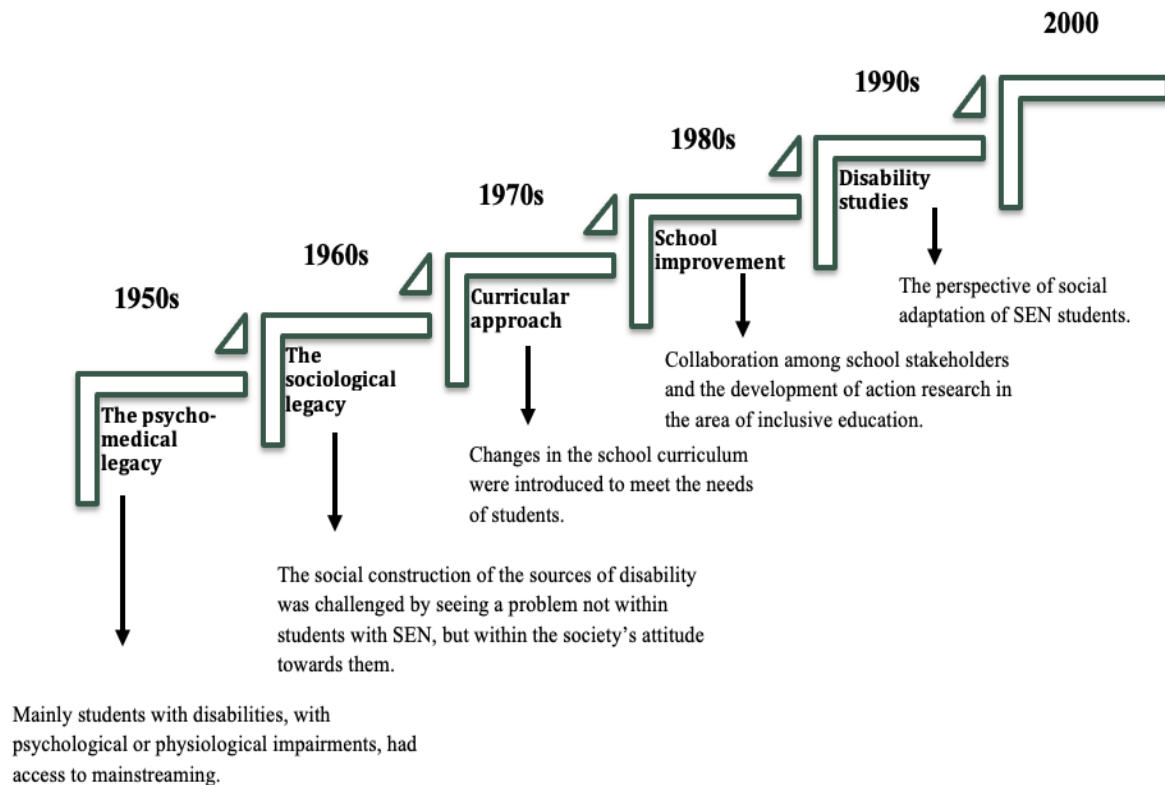
2.1.3 Inclusive Education Practices: From Segregation to Inclusion

The development of inclusive education policies and discourses has encountered various historical shifts from disability to segregation and then further to inclusion that could provide initial access to the schooling of students with SEN. However, this transition has not been smooth, nor has it occurred rapidly.

Historically, children with disabilities were denied access to education due to perceived views of challenges they might cause. However, in the late 1700s, physician Benjamin Rush introduced the idea of "educating people with disabilities" (Stainback & Smith, 2005, p. 13). In the context of the U.S., children with disabilities were first provided access to education back in the 1800s. Nevertheless, most children considered to have disabilities did not have the opportunity to obtain an education at that time. The reason was

the stigma that these children would bring inconveniences to the schooling process. The movement to educate those excluded people led to the establishment of segregated schools (Stainback & Smith, 2005).

The notion of segregation refers to the practices of creating and separating students with similar educational needs based on their particular difficulties and providing them with specially trained and qualified staff in special facilities and environmental settings (Frederickson & Cline, 2009; Graham, 2020; Mezzanotte, 2022). Segregation practices were intrinsically linked to the concept of disability. In the 1950s and 1960s, there was high interest and recognition of "the dignity of all citizens", which led to questioning the separate education of minority students (Stainback & Smith, 2005, p. 15). Further, special education leaders started advocating for the rights of people with disabilities so that they could study alongside their peers in ordinary school environments (Stainback & Smith, 2005). Subsequently, the placement of students was based on identified needs as a substitute for the placement based on the categorical labels. Correspondingly, addressing the needs of all students and the performance of high standards in the educational process was a tremendous need for all students and teachers (Stainback & Smith, 2005).

This further led to the international practices of integration. In 1983, Booth (2000) defined "integration as the process of 'increasing the participation of people in their communities' to reflect this concern with all social contexts" (p. 79). The provision of a separate education system was no longer justified for the majority of students with SEN from both research and rights perspectives (Frederickson & Cline, 2009). Avramidis et al. (2000) argue that such a view has led to the movement of placement of students with SEN to more integrated settings. By the early 1980s, students with mild and moderate forms of disabilities started being integrated into general educational settings (Stainback & Smith, 2005). Also, students with severe forms of disabilities, who were in the past considered to be uneducable,

began receiving educational support from their local schools and administration (Stainback & Smith, 2005).

By the end of the 1980s, the merging of special and general education into a "comprehensive system" in order to educate all children on part-time and full-time bases created a hot debate among researchers and various stakeholders (Stainback & Smith, 2005, p. 17). Despite some disagreements and negative attitudes towards placing students with various forms of disabilities into general educational settings, the benefits of this kind of education have outweighed the efficiency of instructions, less disruption rate in ordinary classrooms, and more opportunities for students with disabilities to socialise with their peers (Fox & Ysseldyke, 1997; Fuchs & Fuchs, 1994; Lieberman, 1988; Stainback & Smith, 2005). The movement towards including and educating all children with a wide range of diversity in the global educational environment has taken a leading role. Avramidis et al. (2000) defined inclusion as "restructuring educational provision to promote 'belonging' (Kunc, 1992), i.e., all pupils in a school see themselves as belonging to a community, including those with significant disabilities" (Avramidis et al., 2000, p. 278). Moreover, inclusive educational policies and practices have been developed in accordance with various research on the operation of effective inclusive schools, curriculum, differentiated instructions, teaching methods and assessment (Bender, 2002; Downing, 2002; Rubin, 2002; Stainback, 2002; Stainback & Smith, 2005; Tomlinson, 1999; Tomlinson, 2001).

As is illustrated in this section, inclusive education principles and practices have undergone diverse historical developments, including, first of all, diverse perspectives on the notion of inclusion, its emergence from the narrow concept of disability up to the questioning of its social connotations, as well as the diversification of the SEN concept. By bearing in mind the global sustainable development agenda "Education for All", its expansion throughout the world and efficient implementation undoubtedly depends on the level of

preparedness of central stakeholders, particularly the teachers. As highlighted by Forlin (2010b), teachers are less likely to actively contribute to establishing inclusive school communities if they lack a robust and practical knowledge foundation and a pro-inclusion mindset. As part of the successful implementation of inclusive education, teachers need to be confident with both "curriculum content and learner diversity" in order to overcome barriers to inclusion (Graham et al., 2020, p. 127). Instilling a positive belief system about inclusion and students with SEN is an integral part of gaining formal and practical knowledge during the initial teacher education (Forlin, 2010b).

2.2 Initial Teacher Education and Inclusive Education

Initial teacher education (ITE) for inclusion has been recognised as an essential part of the ongoing successful implementation of inclusive education (Avramidis & Norwich, 2002; Forlin, 2010a; Mintz, 2022; Winter, 2006). There is consistent evidence that pre-service teacher education has a positive impact on developing and instilling beliefs, knowledge, skills, and attitudes towards diversity, child rights, and social justice that facilitate the implementation of inclusive education in school contexts (Campbell et al., 2003; Forlin, 2010a; Rouse, 2008; Sharma et al., 2008; Zagona et al., 2017). This section engages with the characteristics of different ITE models for inclusive education. It discusses the essential role of ITE in preparing teachers to work in an inclusive educational environment.

2.2.1 Preparing Pre-Service Teachers for Inclusive Education

ITE is considered the cornerstone of multiple student academic and non-academic outcomes (Musset, 2010) and a vital component of any initiative that aims to effectively meet the needs of students in the classroom (Forlin, 2012). Most countries around the world offer ITE programmes for inclusion that combine subject-matter courses (content knowledge), teaching skills (pedagogical knowledge), and practical school experiences. However, ITE

programmes can take several forms depending on the concentration of knowledge vs

practical skills; structural organisation; content; its focus on general, special, or inclusive

education; practical allocation; and duration (Musset, 2010).

Traditional vs Alternative ITE Models. Musset (2010) distinguishes two main

typologies of ITE models: traditional models and alternative models. Traditional models

encompass "normal school traditions" and "academic traditions" (Musset, 2010, p. 17). The

"normal school traditions" are associated with primary school teaching and are based on

"practical training" (Musset, 2010, p. 17). The "academic traditions", on the other hand, are

associated with secondary school teaching, where much focus is paid to knowledge of the

subject content in the academic disciplines and obtaining learning skills for problem-solving

and knowledge acquisition (Musset, 2010, p. 17). Within the framework of this teaching

model, teachers are trained to be subject specialists with a limited focus on methodology and

teaching practice. Alternative models include the "professionalization of teaching", and the

"minimum-competency model" (Musset, 2010, p. 18). The main characteristics of the

"professionalisation of teaching" model are case-based learning, the development of

independence and critical thinking skills, as well as the encouragement to be competent

professional teachers (Buchberger et al., 2000, p. 18; Musset, 2010). On the other hand, the

"minimum-competency model" is an alternative route to becoming a teacher within a short

time that welcomes candidates from diverse professional backgrounds (Musset, 2010, p. 18).

Concurrent vs Consecutive ITE Models. Musset (2010) also highlights two

structural characteristics of ITE programmes: concurrent and consecutive models. Within the

framework of the concurrent model, theoretical and practical professional knowledge is

provided along with general education, i.e., future teachers gain their professional knowledge

throughout their bachelor's degree course (European Commission/EACEA/Eurydice, 2015;

Musset, 2010). In consecutive models, theoretical and professional knowledge is provided

after the candidate has already obtained general education. In other words, those who are

educated in other disciplines can further decide to become a teacher and gain a teaching

qualification through the consecutive model (European Commission/EACEA/Eurydice,

2015; Musset, 2010). In the majority of European countries, including France, Spain,

Finland, and Germany, the shift towards a concurrent model from a consecutive one has

taken the lead by giving credit to the importance of achieving inclusive approaches through

proper dedication to study time and practice rather than by "bolting on additional content"

(European Agency for Development in Special Needs Education, 2011, p. 18).

General, Special, and Inclusive Education in ITE Programmes. ITE programmes

for inclusion can also be classified, taking into consideration their emphasis on general,

special, or inclusive education. Stayton and McCollum (2002) determined three models of

ITE programmes for inclusion. First, the infusion model focuses on the coverage of several

courses in special education so that the general education teachers will have some extent of

knowledge to work with students with SEN. However, according to some research evidence,

adding one or two special education courses is not sufficient to adequately prepare future

general education teachers to work in an inclusive setting (Blanton & Pugach, 2011;

Gettinger et al., 1999; Stayton & McCollum, 2002). Particularly, focusing on differences

among students leads to risks of learner marginalisation in a class and to an assumption that

only a certain group of teachers need to know about diverse characteristics of SEN in order to

meet learners' individual needs (European Agency for Development in Special Needs

Education and Inclusive Education, 2022). Second, the collaborative teaching model

proposes that the majority of the teaching courses are jointly taken by both general education

and special education teachers in the same classroom (Stayton & McCollum, 2002). Third,

the unified model integrates the curricula of general education and special education into one

single curriculum. The combination of professional teaching programmes for general and

special education has facilitated the shared responsibility in meeting the needs of students with SEN among future teachers and showed positive results (Stayton & McCollum, 2002). The European Agency for Development in Special Needs Education and Inclusive Education (2022) also stresses the importance of offering ITE programmes that focus on normalising differences and viewing "diversity as an opportunity for all", where future teachers share responsibility and become competent to teach all learners (p. 12).

       Inclusive Education Content. In terms of content, ITE programmes are expected to develop teachers' skills, values, and beliefs that encourage them to meet the needs of diverse learners in the process of inclusive practices implementation (Engelbrecht, 2013; European Agency for Development in Special Needs Education, 2015). For example, the *Profile of Inclusive Teachers,* a guide for developing the ITE programmes in the European context, identifies four core values nurtured in teaching and learning as a requirement of teacher competencies related to inclusive teaching, including "valuing learner diversity, supporting all learners, working with others, and personal professional development" (European Agency for Development in Special Needs Education, 2012, p. 7). A recent publication of the European Agency for Development in Special Needs Education and Inclusive Education (2022) revisited the Profile of Inclusive Teachers and offered seven significant features of developing a competence framework for inclusion: 1) "connecting education professionals" meaning that successful implementation of inclusive education practices needs networking and collaboration between various stakeholders and professionals, as teachers alone cannot be accountable for it (p. 18); 2) "encouraging team reflection" indicating that collective professional learning and team reflection may have a stronger impact on inclusive education implementation rather than individual learning of teachers (p. 18); 3) "sharing a teacher perspective, sharing a whole-school view" refers to taking into account "teacher skills and practice" and teacher competences with emphasis on teaching, co-teaching and teacher

support in the process of developing inclusive environment, as well as the attention should be paid to the development of a whole-school view for inclusion (p. 19); 4) "focusing on equity, focusing on all learners" denotes teachers' awareness of diversity perspectives and related issues in order to represent all learners (p. 19); 5) "taking a holistic perspective on competence development" refers to teacher's capacity, skills, and effectiveness to meet the contextual demands, where competences are determined as "complex combinations of attitudes, knowledge and skills" in actions under certain situations and successful accomplishment (p. 20); 6) "a professional learning tool for multi-level use" meaning that teachers should be continuously engaged in professional development and learning opportunities in order to maintain inclusive practices (p. 20); and 7) "a value-based approach" ensures reflection of shared values of inclusive education among teachers, the four core values for inclusion that were presented earlier by European Agency in 2012 (p. 21). Also, Rouse (2008) proposes that there is inconsistency in terms of the views on the role of teacher and their beliefs about teaching children with SEN. Rouse (2008) argues that it is challenging to change teachers' beliefs, especially when they have a strong teacher identity in a particular field of expertise. In other words, core subject teachers would have more emphasis on developing learners' skills and content subject knowledge rather than increasing social equity values (Rouse, 2008).

The incorporation of Universal Design for Learning (UDL) into inclusive educational content within ITE programmes is crucial as it provides future teachers with the knowledge and abilities needed to create inclusive learning environments that accommodate a variety of learners (CAST, 2018). Through the development of the perspectives towards the concept of inclusive education, which emerged from meeting special educational needs to acknowledging the needs of a variety of students (Florian, 2019), the pedagogical society was introduced with and encouraged to a wide range of implementation of the UDL approach

(Galkienė & Monkevičienė, 2021). UDL is believed to be a supporting instrument to facilitate inclusive education practices (Woodcock et al., 2022). UDL, initially developed in the K-12 education system in the United States, is gaining popularity worldwide (Layer, 2019; Novak & Bracken, 2019; Tobin & Behling, 2018). Its goal is to accommodate the variety of learning demands of learners by removing obstacles and decreasing the need for specific accommodations for people with SEN (Tobin & Behling, 2018). The social, cultural, and linguistic backgrounds of students can have an effect on how well they learn and acquire information (O'Neill, 2015). In order to accommodate all students, it is also necessary to adapt and execute various learning activities as a result of the transition in educational approaches from traditional teaching to student-centred and active learning (Olaussen et al., 2019). As a result, the development of UDL and its extensive adoption in educational settings have recently come to light. Instead of concentrating on individual students through personalised teaching, UDL encompasses a curriculum that accommodates the needs of all learners (Galkienė & Monkevičienė, 2021; Woodcock et al., 2022). It emphasises the significance of taking each learner's individual needs into account when creating instructional materials and activities and acknowledges that each learner has their own requirements (CAST, 2011). UDL encourages a variety of representations, expressions, and interactions, enabling the customisation of instructional materials and learner experiences (CAST, 2018). This method recognises the variety of students with SEN and the demand for particular accommodations in a classroom context (Tobin & Behling, 2018). UDL may assist pre-service teachers in modifying and improving educational opportunities for students with SEN, emphasising the need to implement UDL concepts during ITE programmes.

Placement and Practice. Another essential aspect of pre-service teacher education for inclusion is the role of placements and practices. Teacher education for inclusion is not an easily taught course, which is embedded in the curriculum and may not provide any

productive outcome. Florian (2013) argues that the so-called "university-based learning" provides a greater opportunity for student teachers to experience the theory in practice (p. 96). Schools and universities should work in close partnership in order to provide future teachers greater opportunities to develop their teaching capacity, as well as "engage in critical and reflective practice" (Florian, 2013, p.100). In other words, having school placements in diverse classrooms is essential for pre-service teachers to encounter challenges and test theories in real-life practices.

Duration of ITE Programmes. Besides, the quality and duration of pre-service programmes play an essential role in instilling confidence and inclusive beliefs in future teachers. In many countries, despite their experience of practising inclusion, the limited hours of training for developing skills and expertise to work with students with SEN among both in-service and pre-service teachers were identified as one of the major barriers to inclusion (Avramidis et al., 2000; Robson, 2005). According to Specht et al. (2016), the preparation of confident perspective teachers who can work in an inclusive environment requires more time and effort.

2.2.2 The Role of Initial Teacher Education Preparing Teachers to Work in Inclusive Settings

One of the goals of ITE, among many others, is to shape teachers' beliefs. ITE programmes play a significant role in reshaping future teachers' viewpoints and/or misconceptions (Portoles & Marti, 2018). As Miesera and Gebhardt (2018) noted, in-service teachers experience challenges in inclusive education settings, thus, they need to be prepared to work in inclusive classrooms well in advance. Future teachers' initial beliefs about teaching and education, which are based on their obtained knowledge throughout the ITE process, are likely to influence their "professional practices" (Portoles & Marti, 2018, p. 4). As Muchmore (2001) points out, teacher beliefs do not "exist in a vacuum ... they are

formulated and are held by particular people in a particular context" (p. 90). Moreover, several studies show that pre-service teachers' beliefs may remain unchanged after finishing their fundamental training (Abasifar & Fotovania, 2015; Karavas & Drossu, 2010; Peacock, 2001).

There is a vast amount of literature on teachers' beliefs about their roles and perceptions of inclusion in mainstream schools, the results of which indicate that the level of teachers' awareness about inclusion vastly influences their beliefs about an inclusive environment, i.e., the more they are qualified in special education, the less resistant they are to an inclusive educational environment (Avramidis & Norwich, 2002; Booth et al., 2003; Braunsteiner & Mariano-Lapidus, 2021; Winter, 2006). As Beachman and Rouse (2012) noted, "preparing teachers to work in inclusive ways would be facilitated by teacher education itself becoming more inclusive" (p. 9). Indeed, pre-service teachers' views and perspectives towards inclusion can be positively reshaped with the help of courses and experiences that instil the values of diversity and support. In this regard, Florian (2013) argues that pre-service teachers need to be taught and filled with a strong commitment to social justice, care, and equity. Moreover, pre-service teachers should be taught to accommodate the needs of all students without differentiating them, whether they require special educational needs or not. McIntyre (2009) further argues that "whatever is achieved in the university, the teaching practices and attitudes that student teachers usually learn to adopt are those currently dominant in the school" (p. 602). This clearly indicates the crucial role of the university programmes that instil the values and appreciation of diversity among the pre-service teachers, which further influence future classroom practices. However, a number of studies have found that both pre-service and in-service teachers admit to a lack of confidence and inadequate preparedness to teach in inclusive classrooms (Domovic, 2006; Forlin, 2012; Vidovic, 2005). A review of the literature on this topic by Domovic et al. (2017) found that

there is a scarce understanding on the part of pre-service teachers on the behaviourist orientation towards students with developmental difficulties, which further leads to low self-confidence in an inclusive classroom environment. Similar issues were raised in other studies indicating the necessity of general and special educators gaining more knowledge about the characteristics, communication, and learning needs of students in an inclusive environment (Finke et al., 2009; McSheehan et al., 2006; Zagona et al., 2017).

In addition, Richardson (1996) noted that beliefs direct actions and, thus, may change beliefs under the influence of experiences and reflection on actions. By acknowledging the significant role of pre-service teachers' beliefs, it is possible to make a difference and cultivate positive attitudes towards inclusion among future teachers by providing them with relevant experiences throughout their ITE programmes (Garriott et al., 2003; Richardson, 1996). For example, Lambe and Bones (2006) highlighted that the pre-service teacher education programmes are one of the favourable stages of educating about inclusion and nurturing positive attitudes towards inclusive education. Moreover, Sharma and Sokal (2017) concluded that there are significant positive correlations between pre-service teacher education about inclusion and their attitudes, concerns, and teacher efficacy in teaching in inclusive classrooms. Their study confirmed the substantial impact of teacher education programmes on their attitudes about inclusion. The academic programmes about inclusive education are endorsed to be practical depending on their committed outcomes and aims of achieving specific goals regarding inclusion (Lambe, 2011; Nketsia & Saloviita, 2013; Sosu et al., 2010).

2.3 Pre-Service Teachers' Beliefs about Inclusive Education

This section aims to present the concept of belief, the importance of teachers' beliefs about the inclusion of students with SEN, and the factors influencing teachers' beliefs, as these aspects have an integral role in setting effective inclusive practices. It also discusses the

relationship between teachers' beliefs about inclusion and other relevant concepts, such as

teachers' practices, knowledge, and outcomes.

2.3.1 Teacher Beliefs: Definition and Domains

The concept of belief has been studied and discussed by various researchers in an

attempt to distinguish its dimensions and clarify how it relates and extricates from other

related constructs such as knowledge and attitude. That is why it has long been viewed as a

"messy construct" (Sanger, 2017, p. 340). The challenge of defining the concept of belief is

rooted in the inconsistency and diversity of the fields of studies that have implemented this

notion and the vague ambiguity of study agendas (Eisenhart et al., 1988). Nevertheless,

despite the complexity of the essence of belief and its components, the majority of studies

that have been conducted on this theme tend to define the construct as an individual's

perception and acceptance of something to be true based on their judgments (e.g., Five &

Buehl, 2012; Kagan, 1992; Nespor, 1987; Pajares, 1992; Richardson, 1996; Rokeach, 1968).

Table 1 presents several definitions of the construct beliefs.

Table 1

Definitions of Belief

Psychologists	Definitions of belief
Pajares (1992, p. 316)	"An individual's judgment of the truth or falsity of a proposition."
McAlpine et al., (1996, p. 392)	"Beliefs are understood to be a set of interrelated notions…" Educational beliefs are a substructure of the total belief system and must be understood in terms of their connections to other, perhaps more influential, beliefs.
Richardson (1996, p. 104)	"Describes a proposition that is accepted as true by the individual holding the belief. It is a psychological concept and differs from knowledge, which implies an epistemological warrant".

In their systematic literature review, Fives and Buehl (2012) identified six major domains of teachers' beliefs that include: "a) beliefs about self, b) context or environment, c) content or knowledge, d) teaching practices, e) teaching approach and f) students" (p. 472). Beliefs about self-refer to teachers' identity and their role as teachers. Beliefs about the context or environment are indicative of their conceptions about their schools, the atmosphere within their schools and culture, as well as their relationships with their colleagues, administration, and parents. Beliefs about content or knowledge denote teachers' ideas about all the knowledge they pass on to their students and everything they teach to their students and learn themselves. Beliefs about teaching practices are divided into two areas: "teachers' beliefs about specific teaching practices" and "teachers' beliefs about a holistic approach to teaching" (p. 472). Finally, teachers' beliefs about students encompass all beliefs teachers have about student diversity, aptitudes and capabilities, exceptionalities, and language differences (Fives & Buehl, 2012).

Research suggests that the following domains of teachers' beliefs are relevant for inclusive education: teachers' self-efficacy beliefs, beliefs about students, and beliefs about teaching practices (Domovic et al., 2017; Richardson, 2003; Romi & Leyser, 2006; Sharma et

al., 2015; Woodcock et al., 2012). Teachers who are committed to inclusive education must have confidence in their capacity to modify instruction, adjust teaching strategies, and meet the needs of all students. Teachers are more likely to be motivated, proactive, and persistent in putting inclusive practices into practice, promoting an inclusive learning environment for all students, when they have strong self-efficacy beliefs. Also, expectations, perceptions, and interactions with students are influenced by teachers' beliefs about their students. Every student's potential is valued in inclusive education, and their individual abilities are acknowledged. Teachers are more likely to give equal learning opportunities, establish high goals, and provide the right assistance to help all students achieve when they believe in students' skills and potential, regardless of their diverse characteristics. Additionally, beliefs about teaching practices are essential for inclusive education because they guide teachers' instructional choices, strategies, and approaches. As a result, every student will be able to succeed in an inclusive learning environment created by teachers who embrace and execute inclusive practices in their classrooms.

This study is deemed to explore the domains mentioned above of preservice teachers' beliefs. Under those circumstances, the next section presents international study results related to teachers' beliefs about students with SEN and their inclusion in mainstream classrooms.

2.3.2 Pre-Service Teachers' Beliefs about the Inclusion of Students with SEN

Pre-service teachers' beliefs about teaching and working with students with SEN is a predetermining factor of their readiness for developing and fostering an inclusive environment in the classroom (Avramidis & Norwich, 2002; Booth et al., 2003; Miesera & Gebhardt, 2018; Sharma & Sokal, 2016; Winter, 2006). There is cumulative evidence that teachers' beliefs about themselves and their students, their abilities to work, as well as the curriculum, the course content and, in general, the values of their teaching principles and

practices, influence their skills, motivation, and actions taken in the classrooms, in accordance with the quality of their experiences (Kagan, 1992; Pajares, 1992; Sanger, 2017).

Research on pre-service teachers' beliefs about students with SEN indicates that, in general, future teachers tend to hold positive beliefs about inclusion (Beacham & Rouse, 2012; Dorji et al., 2021; Forlin et al., 2009; Hosking et al., 2015; Rihter & Potočnik, 2022; Spandagou et al., 2008). More specifically, in the Slovenian context, pre-service teachers who had more favourable beliefs about children with SEN showed a stronger propensity to use accommodations and adjustments (Rihter & Potočnik, 2022). Also, those who had personal experiences with students with SEN displayed a higher level of confidence in their own abilities (self-efficacy) compared to students without such experiences (Rihter & Potočnik, 2022). Additionally, the findings of an empirical study in the Chinese context suggest that pre-service teachers' positive attitudes towards inclusion relate greater to their self-efficacy beliefs in behaviour management and inclusive instruction implementation (Li & Cheung, 2021).

Moreover, previous research suggests that teachers' beliefs about children with SEN vary depending on the level of severity of the disability and/or the extent of assistance required. Stoiber et al. (1998) acknowledged that practitioners show less resistance to the inclusion of students with mild forms of disabilities rather than students with severe forms of cognitive disabilities, including children with challenging behaviour (Jordan et al., 2009; Sharma et al., 2006; Stoiber et al., 1998). Additionally, teachers with "extensive and specialised training" showed more positive beliefs about students with SEN in comparison to teachers with lower degrees and training (Stoiber et al., 1998, p. 121).

2.3.3 Pre-Service Teachers' Self-Efficacy Beliefs about Working in Inclusive Classrooms

The concept of teacher's self-efficacy beliefs was derived from Bandura's social cognitive theory (1997), who defined it as "beliefs in one's capabilities to organise and

execute the course of actions required to produce given attainments" (p. 3). Bandura's theory implies that teachers' self-efficacy beliefs influence their behaviour and actions in the classroom, which in turn, impacts students' achievement of educational outcomes. Numerous studies have demonstrated that teacher self-efficacy can facilitate the development of favourable attitudes toward inclusive education and increase their willingness to include children with SEN (Main & Hammond, 2008; Rihter & Potočnik, 2022; Savolainen et al., 2022; Woodcock et al., 2022). Moreover, teachers' self-efficacy plays a significant role in their behaviour, and it is believed to impact the implementation of inclusive education practices in a classroom (Daum et al., 2022; Main & Hammond, 2008; Woodcock et al., 2022). Scarparolo and Subban (2021) highlight that it is difficult to change pre-service teachers' self-efficacy beliefs once they are formed, so it is essential to create adequate conditions to instil positive self-efficacy beliefs for pre-service teachers during the ITE programmes and teaching practicum.

Studies confirmed that pre-service teachers' self-efficacy beliefs are developed and strengthened in large part due to effective classroom management, the influence of inclusive education (IE) courses, practical experiences like internships and school practicum, and cooperative efforts among future teachers (Kwok, 2021; Malinen et al., 2013; O'Neill, 2016; Sharma et al., 2008; Son, 2012; Song et al., 2019).

Behaviour Management. Self-efficacy growth and confidence in pre-service teachers are significantly influenced by the capacity to effectively manage student behaviour. In general, classroom management is found to be a primary concern for many future teachers (Ingersoll & Smith, 2003; Wubbles et al., 2014) as it is reported that the courses on classroom management are often overlooked during the ITE programmes (Greenberg et al., 2014; Hammerness, 2011). According to Evertson and Weinstein (2013), classroom management is defined as pedagogical skills implemented by teachers "to establish and sustain an orderly

environment so students can engage in meaningful academic learning" (p. 4). Based on this definition, Kwok (2021) classifies three guiding types of beliefs in classroom management: beliefs about students' behaviour management, beliefs about teaching academic content, and beliefs about building rapport and forming a positive atmosphere in the classroom. An empirical study revealed that pre-service teachers associate classroom management mainly with behaviour management and, at a lesser level, with academic perspectives (Kwok, 2021). Notably, experience is one of the major factors affecting teachers' beliefs about classroom management, confirming that early career and in-service teachers tend to have more complex beliefs about classroom management in comparison to pre-service teachers, who are predominantly behaviourally oriented (Kwok, 2021). In accordance with an empirical study result by O'Neill (2016), pre-service teachers' self-efficacy beliefs increased significantly after completing an elective course on classroom behaviour management. Thus, O'Neill (2016) concludes that completion of an entire course on classroom management is more effective in enhancing pre-service teachers' self-efficacy beliefs in comparison to completion of any other course that covers the topic of classroom management.

Impact of IE Courses on Self-Efficacy/Content of ITE about IE. Recent evidence suggests that the implementation of courses on IE at HEIs tends to have a positive impact on pre-service teachers' self-efficacy beliefs (Campbell et al., 2003; Sharma et al., 2008; Son, 2012; Song et al., 2019; Varcoe & Boyle, 2014). For instance, in a South Korean context, Song et al. (2019) examined pre-service teachers' attitudes, efficacy, and intentions to teach in an inclusive classroom. The findings suggest that the future teachers' concerns declined significantly, and their attitudes and efficacy towards inclusion increased and became more positive after completing a course on IE.

Internship. Teacher practicum is acknowledged to be one of the essential aspects influencing pre-service teachers' self-efficacy beliefs and their readiness to work in an

inclusive setting. Malinen et al. (2013) confirmed that experience in teaching students with SEN is the strongest predictor of teachers' self-efficacy beliefs. Similarly, Wertheim and Leyser (2002) contend that careful selection of schools and mentors for practicum experience should be guaranteed in order to obtain "successful learning experiences in coursework and practica" as an integral part of enhancing pre-service teachers' self-efficacy beliefs for inclusive practices (p. 62).

Cooperation. Collaboration is identified as one of the essential aspects of the successful implementation of inclusive education practices (Song et al., 2019). This is due to the fact that working together can enable pre-service teachers to share information, ideas, and resources, which can improve their capacity to cater to the various needs of children in inclusive classrooms. Through collaboration, pre-service teachers can gain the knowledge necessary to create a supportive learning environment for all students as well as a common understanding of inclusive education. Additionally, collaboration among pre-service teachers can make it easier to develop inclusive teaching strategies that are built on equity and diversity. Collaboration-based inclusive education practises can encourage favourable beliefs and attitudes towards different pupils and result in improved academic performance for all students, including those with SEN (McGinty et al., 2008; Park et al., 2016). Pre-service teachers must thus be prepared with the abilities and information required to cooperate and collaborate in order to promote the adoption of inclusive educational practices (Song et al., 2019).

2.3.4 Factors Influencing Pre-Service Teachers' Beliefs about Students with SEN and Their Inclusion

Overall, the literature suggests that there are three sets of factors influencing teachers' beliefs about inclusion. These factors are related to students, teachers themselves, and environmental factors.

Student-Related Factors. As far as children are concerned, the majority of teachers identified the level of severity of disability and degree of special or additional needs of students influence their dispositions towards inclusion and inclusive education (Avramidis, 2001). Moreover, there is empirical evidence that the degree of disability and the level of special needs exert a considerable influence on teachers' self-efficacy beliefs (Stoiber et al., 1998). According to the research results by Ward et al. (1994), teachers were more likely eager to educate children with SEN who had mild forms of physical disabilities as they did not require additional instructional skills from the teacher. However, in the case of children with mild-to-moderate forms of intellectual disabilities, teachers showed some concerns about their inclusion as it required more attention and other competencies from teachers, which seemed to be challenging for them. Similar study results have been shown by Forlin (1995), where teachers were more willing to accept children with physical disabilities rather than children with cognitive disability. Regarding the emotional and behavioural dimensions, teachers felt less likely to accept children with behavioural disorders compared to other types of disability (Avramidis et al., 2000). The reason behind less acceptance from teachers was that these children seemed to be significantly challenging and required more skills to manage them (Cooper, 2005).

There seems to be widespread agreement that the majority of teachers do not feel confident about working in inclusive classrooms and acknowledge having limited knowledge of working in an inclusive environment (Avramidis et al., 2000; Florian & Black-Hawkins, 2011; Makinen, 2013; Tiwari et al., 2015). Florian and Black-Hawkins (2011) argue that this is due to the lack of clarity in the definition of inclusion and what the teachers need to know. In the same vein, Rouse (2008) argues that there is a conflicting agenda set in front of the education system; where on the one hand, they strive to be inclusive and open to everyone, but on the other hand, there is a high demand for the high achievement of students. Equally

important, Steiner-Khamsi et al. (2007) admitted that there is a significant focus on gifted and talented students in Central Asian countries, and teachers focus on developing those students' skills while underserving other students with SEN. This is likely an outcome of the pressure to achieve high academic standards from the administration, where teachers are required to present more tangible results (Hajar et al., 2023). That is why Rouse (2008) supports the view that it is essential to provide new knowledge to teachers concerning inclusive education.

  Teacher-Related Factors. Multiple teacher-related factors influencing their beliefs about students with SEN and inclusion have been identified in the literature, including gender, teaching experience, the experience of interaction with students with SEN, and the type of ITE programmes.

  Several studies have identified a significant difference between male and female pre-service teachers' self-efficacy beliefs for inclusion. In general, there seems to be agreement that female teachers tend to report higher self-efficacy beliefs about including students with SEN, and that was evidenced in the Mexican (Forlin et al., 2010), Canadian (Ismailos et al., 2022), and Austrian (Schwab et al., 2021) contexts. At the same time, male pre-service teachers had higher self-efficacy in regard to classroom management. Likewise, Main & Hammond (2008) found that male pre-service teachers had higher self-efficacy beliefs in behaviour management prior to the school placement than female pre-service teachers. However, it was at the same level after the placement for both male and female pre-service teachers (Main & Hammond, 2008). Also, a study by Stoiber et al. (1998) showed that more experienced teachers revealed a higher level of willingness to include students with SEN rather than those with one to four years of teaching experience.

  According to the study results by Forlin et al. (2010), the more experience and training pre-service teachers gain throughout their studies, the more positive they become about supporting inclusion. This is supported by the study results of Specht et al. (2016), who

emphasise that the more pre-service teachers spend time in a practicum placement, the higher their self-efficacy and beliefs in teaching in inclusive classrooms they have. Sokal and Sharma (2017) indicate that neither experience alone nor knowledge alone is efficient, but a proper combination of both would facilitate better beliefs about inclusion in teachers. In other words, more interactions with students and one-on-one interactions with students with SEN tend to increase teachers' confidence in working in an inclusive environment (Forlin et al., 2010). On the contrary, null or limited training experience negatively affects pre-service teachers' beliefs about including students with SEN in general education settings (Forlin et al., 2010).

Another factor that influences a teacher's beliefs about diversity and SEN needs is personal contact of teachers with students with SEN, i.e., those who have some relatives or friends with SEN within their close circle tend to have more positive beliefs about inclusion (Specht et al., 2016). Moreover, reflecting on those experiences and sharing best practices are advised for in-service and pre-service teachers to excel in their teaching practices in inclusive settings (Main & Hammond, 2008).

Likewise, the type of ITE programme the future teachers are being trained in has demonstrated a significant influence on their depositions about inclusion (Forlin et al., 2010). More specifically, the more experience and training pre-service teachers obtained about inclusion, the more positive beliefs they had about supporting inclusive education (Forlin et al., 2010). Similarly, in a study by McHatton and Parker (2013), pre-service students in a combined special education course (joint certificate of special and regular education) with the placement of teaching students with SEN showed that future teachers of regular education displayed more positive views about inclusion in comparison to special education pre-service teachers, who were slightly negative after the co-teaching internship. Also, previous studies found that pre-service teachers with combined programme backgrounds and those with

regular ITE programmes had similar views about inclusion (Kim, 2011). Savolainen et al. (2020) noted a dearth of empirical studies examining the relationship between teacher self-efficacy and their implementation of inclusive practices in a classroom. One of the examples of such an empirical study was in an Australian context, where Woodcock et al. (2022) explored in-service primary school teachers' self-efficacy beliefs toward inclusion and inclusive practices. The findings presented two categories of teacher self-efficacy: high efficacious teachers and low efficacious teachers, where both teachers showed a similar understanding of the philosophy of inclusion (Woodcock et al., 2022). However, interesting findings were revealed in regard to the inclusive practices, where teachers with the highest level of self-efficacy beliefs highlighted the importance of the whole class's success, and lessons were based on building learners' confidence by using a strength-based approach and empowering student agency (Woodcock et al., 2022). Teachers with the lowest self-efficacy beliefs focused on student deficits, categorising students with SEN, and classroom behaviour management. In addition, low-efficacious teachers reported relying on teacher assistants who would work and provide individual support to students with SEN (Woodcock et al., 2022). However, supporting specific students in inclusive classrooms is argued to create opportunities for micro-exclusion (Slee, 2013; Woodcock et al., 2022).

Environment-Related Factors. Concerning environment-related factors, the cultural and historical structure of a particular education setting might pose barriers to the provision of inclusion and accommodation of students with SEN. These include financing and budgeting, class size, lack of teaching skills and individualised teaching programmes, and weak cooperation between stakeholders (Robson, 2005). Moreover, Sharma et al. (2008) suggest that the countries that hold stronger legislation in promoting and encouraging the spread of inclusive education, such as Australia and Canada, tend to influence more positively the pre-service teachers' decreased level of concern about working in an inclusive

environment rather than in countries with a lower level of support and legislation about inclusion, such as China and Singapore. A similar stance is taken by Walton and Rusznyak (2014) in their study about pre-service teacher education in the context of South Africa. They emphasised that countries where inclusive education is introduced at a policy level but has not been established on a national and cultural level encounter challenges in integrating a positive, inclusive environment that could be prosperous for pre-service teacher education (Walton & Rusznyak, 2014).

2.3.5 The Relationship Between Teachers' Beliefs, Practices, Knowledge, and Outcomes

Another critical point is the significance of interrelated knowledge that affects the teachers' beliefs and their further behaviour (Florian & Black-Hawkins, 2011). Also, a paramount relationship between teachers' beliefs and their actions is evident in student outcomes (Richardson & Placier, 2001).

Not least important is the knowledge of teachers that may affect teachers' enactment of their beliefs into practice. Some researchers have found that the lack of knowledge of the content hinders teachers' beliefs from being implemented (Bray, 2011; Kang, 2008; Rushton et al., 2011). According to Mouza (2009), teachers need to have "content knowledge, pedagogical knowledge, and pedagogical content knowledge" in order to be able to put their beliefs into practice (cited in Buehl & Beck, 2015, p. 76). As presented above, teachers' knowledge, beliefs, and practices are tightly related and interchangeably influence each other depending on the individual context and certain aspects being studied.

Moreover, numerous studies suggest that what teachers believe is straightforwardly reflected in their students and the classroom outcomes (DeCorte et al., 2008; Fives & Buehl, 2012). That is to say, the way the teacher perceives the success or failure of a particular teaching approach, for instance, is reflected in the final outcomes and students' success or failure. According to Pajares (1992), "belief systems in general, will help understanding how

teachers internalise and practice what they learn in teacher education" (p. 322). Consequently, Schutz (1970) argued that student-teachers should be able to gain real-life-based practical experience to accommodate their future professional environment and develop new beliefs or modify existing ones (cited in Pajares, 1992).

2.4 Theoretical Framework

This section of the study presents the theoretical framework used to explore pre-service teachers' beliefs regarding students with SEN and their inclusion in Kazakhstani mainstream schools. The theoretical framework provides the analytical lenses through which the research and data were interpreted.

Social Cognitive Theory. This study has drawn heavily on Albert Bandura's Social Cognitive Theory (1986) which focuses on the role of personal, behavioural, and environmental aspects in shaping human behaviour. This theory has significantly impacted the understanding of how individuals learn, particularly in social contexts.

A key component of Social Cognitive Theory (SCT) is self-efficacy, which refers to an individual's belief in their ability to successfully perform a specific task or behaviour (Bandura, 1997). Bandura (1997; 2001) argued that individuals with high levels of self-efficacy are more likely to engage in challenging tasks and persevere in the face of obstacles, while those with low levels of self-efficacy may avoid such tasks and give up easily when faced with challenges. SCT suggests that individuals' behaviour and beliefs are shaped by their social environment, personal experiences, and beliefs about themselves and others (Bandura, 1986). Bandura (1986, 1997) presented triadic reciprocal determinism with three dimensions: personal factors, behaviour, and environment.

Figure 2

Interacting Determinants of Social Cognitive Theory
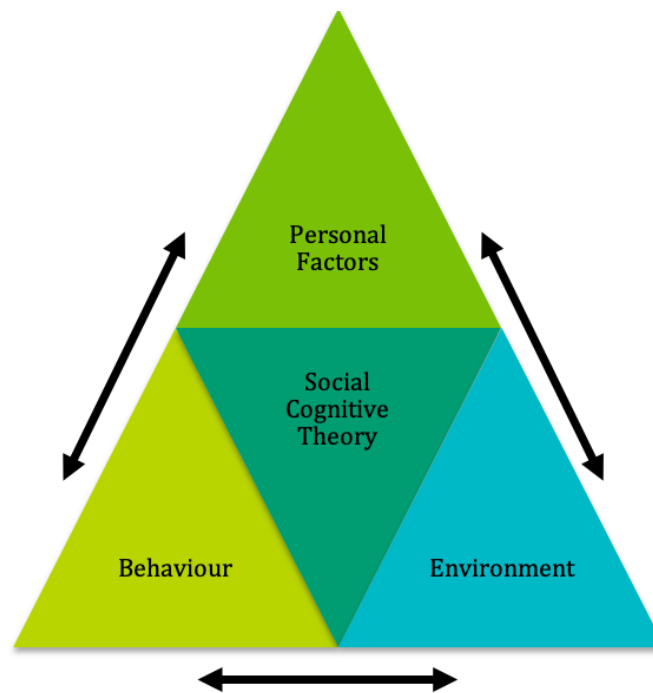
Note. This figure is adapted from "*Self-Efficacy: The Exercise of Control*" by A. Bandura, 1997, p. 6. Copyright 1997 by W.H. Freeman and Company.

Personal factors consist of various variables causing an individual's behaviour, including diverse cognitive aspects such as thoughts, feelings, beliefs, perceptions, goals, and intentions, as well as demographic aspects (Carillo, 2010). Pre-service teachers' beliefs about students with SEN and their total self-efficacy beliefs are explored under the dimension of personal factors in this study.

The behaviour dimension refers to certain knowledge and skills assisting an individual to act (Bandura, 2001). A variety of teacher actions are derived from high levels of teacher self-confidence in their abilities. Strong self-efficacy beliefs are associated with better planning and organisation, a willingness to try new and creative teaching methods, a strong academic focus in the classroom, increased student involvement, more frequent use of flexible grouping, persistence in assisting struggling students, a focus on working with failing

students rather than simply sending them to special education, and a tendency to be less critical of students who provide inaccurate information (Tschannen-Moran et al., 1998). The employment of inclusive strategies, classroom management, classroom practices, and collaboration are the areas of teaching behaviours that are applicable to this study.

Environment refers to the social and physical environments that can impact an individual's behaviour by providing opportunities and social support (Bandura, 2001; Carillo, 2010). The environmental factors such as ITE programmes, school placement/internship, and other factors such as university type and major are examined under the environment dimension.

The key idea of this theoretical framework is the interrelationship between the three elements of personal, behaviour, and environmental dimensions (Bandura, 2001). In other words, all elements are reciprocal and have a bidirectional influence on each other (Bandura, 1988; 2001; Wood & Bandura, 1989). For instance, if a teacher believes in inclusive education principles (personal dimension) but lacks confidence in implementing them in practice (behavioural dimension), they might develop this confidence by studying and observing IE practices and developing their knowledge, which further helps them engage in the practice. Alternatively, a teacher might possess specific knowledge about IE but be unsure in their beliefs about inclusive practices (personal dimension); however, by studying in an environment that promotes inclusion and working in a school or having an internship in a school that encourages "inclusive ethos (doing)" (environmental dimension), they tend to see the effectiveness of inclusive practices that positively influence their beliefs (Black-Hawkins et al., 2008, p. 15). In other cases, reciprocity between the behavioural and environmental dimensions can be seen in the context of inclusive behaviour. Suppose a teacher believes in the importance of inclusive education (personal dimension) but lacks the behavioural skills to implement inclusive practices in their daily life (behavioural dimension).

In that case, they might benefit from being in an environment that promotes inclusive behaviour, such as an inclusive community or workplace. By observing and engaging in inclusive practices in the environment, a teacher can develop the necessary skills and knowledge to implement inclusive practices in their personal life (Black-Hawkins et al., 2008).

In general, there is a reciprocal relationship between a teacher's personal beliefs and behavioural skills and the environmental context in which they operate. By developing skills and knowledge in one dimension, individuals can strengthen their beliefs in the other dimension and vice versa. The preliminary literature review shows that teachers' beliefs are vastly constructed and affected by diverse factors that include teachers themselves, their environment, and the children whom they are assumed to teach and work with. By forming the basis of Bandura's (1986) SCT, this theoretical framework represents an integrated structure of the factors that shape pre-service teachers' beliefs about their conceptions of students' diversity, beliefs about self, and readiness to work with students with SEN.

SCT is a useful framework for understanding pre-service teachers' beliefs about students with SEN and their inclusion in mainstream schools in Kazakhstan. This theoretical framework is essential in the further data analysis procedure. The study results were interpreted based on three guidelines of "personal, behaviour, and environment" factors (Bandura, 1997). According to this theory, an individual's beliefs and attitudes are shaped by their experiences and their observation and interpretation of others' experiences (Bandura, 1986). In the context of pre-service teachers' beliefs about students with SEN, their prior experiences and exposure to media and social norms can influence their beliefs about inclusion in mainstream schools (Bandura, 2005).

Further, SCT highlights the importance of teacher training and education in shaping their beliefs about their ability to work with these students. According to SCT, individuals'

beliefs about their competence and efficacy in a specific task will impact their attitudes and behaviour towards it (Bandura, 1997). This highlights the importance of providing pre-service teachers with opportunities to learn and practice working with students with SEN in order to build their confidence and efficacy in this area.

Finally, using SCT as a theoretical framework in this research allows for a comprehensive examination of the multiple factors that may contribute to pre-service teachers' beliefs about inclusion. This framework can provide insights into the processes through which pre-service teachers' beliefs are formed and changed and can inform educational interventions to promote more positive beliefs about inclusion among pre-service teachers. It also helped to investigate to what extent their current ITE programmes facilitate their knowledge of inclusion and teaching in an inclusive environment. By examining pre-service teachers' beliefs through the lens of SCT, it is possible to gain a deeper understanding of the environmental factors that contribute to these beliefs and how they may impact the implementation of inclusive education in Kazakhstan. This can inform the development of more effective teacher training programmes that address pre-service teachers' beliefs about inclusion, ultimately leading to improved educational outcomes for students with SEN. Overall, Bandura's (1986; 1997; 2001) SCT provides a comprehensive framework for understanding how individuals learn and how personal, behavioural, and environmental factors shape human behaviour.

2.5 Conclusions and Implications of Reviewed Literature on Inclusion Research

In conclusion, the literature review presented in this study highlights the complexity and nuances of the concept of inclusive education. The first section of the literature review elaborated on the definitions and interpretations of inclusive education. It is evident that the definition and implementation of inclusive education can vary depending on the context in

which it is applied. Thus, it is crucial to take a holistic approach when implementing inclusive education principles and practices to ensure that the needs of all students are met. The current understanding and practises of inclusive education are the outcome of the concept's evolution and have been shaped by many historical views. The historical progression shown by Clough and Corbett (2012) demonstrates the shift from a psycho-medical perspective, where disability was seen as an individual defect, to a sociological reaction, which focused on the societal construction of disability. Additional contributions to inclusive education came from revising the school curriculum and adopting school development plans. The criticism of disability studies has also highlighted how children with SEN adjust socially to many facets of life. These viewpoints have helped create a more welcoming and open culture by jointly influencing how inclusive education is currently thought upon.

The second thematical section of this literature review expanded on the role of ITE programmes. One of the key factors that contribute to effective inclusive schooling is teachers' preparation level. Teachers play a vital role in creating and maintaining an inclusive classroom environment as the primary agents of inclusion. Therefore, ITE programmes, specifically those focused on inclusion, must be thoroughly examined and evaluated for their effectiveness in preparing teachers for this demanding role. Pre-service teachers' professional practises are greatly impacted by their beliefs, which are shaped by their ITE experiences. To successfully equip teachers to work in inclusive settings, ITE programmes must become more inclusive. Pre-service teachers' beliefs on inclusion may be favourably changed through imparting ideals of diversity, equity, and social justice and teaching accommodations for all students. However, studies show that both pre-service and in-service teachers frequently feel a lack of confidence and readiness for inclusive classrooms, highlighting the need for better knowledge and awareness of a variety of students' needs. In order to foster positive beliefs

and attitudes towards inclusion, it is crucial to provide appropriate experiences across ITE programmes. Beliefs may be affected and modified via experiences and reflection on actions. It has been discovered that teacher efficacy in teaching in inclusive classrooms is significantly improved by inclusion focused ITE programmes. In order to achieve the required results and encourage inclusive education practises among future teachers, practical and goal-oriented academic programmes in inclusive education must be created and implemented.

The importance of pre-service teachers' beliefs about inclusion was further discussed in the third theme area of this literature review. The attitudes and beliefs of teachers significantly influence the effectiveness of inclusive education. As a result, it is critical to examine teachers' views as well as the idea of belief in general in order to comprehend the complexity of inclusive education. The significance of recognising each student's potential and unique qualities is highlighted by pre-service teachers' expectations, views, and interactions with students and their skills are also influenced. Positively biased future teachers are more likely to give all students an equal chance to learn, set high standards, and provide the right kind of assistance so that everyone may achieve success in their educational process. Pre-service teachers' instructional decisions, techniques, and approaches are also influenced by their beliefs and attitudes about teaching methods, further advancing inclusive education. Every student may succeed in an inclusive learning environment when future teachers embrace and put inclusive practices into practise. The study addressed in this section builds on prior research that emphasises the importance of these factors on pre-service teachers' beliefs about children with SEN and their inclusion in mainstream classrooms.

Finally, this literature review elaborated on the theoretical framework in its fourth theme. The Social Cognitive Theory (SCT) of Bandura (1986) provides a useful framework for analysing pre-service teachers' beliefs about students with SEN and their inclusion in

regular schools in Kazakhstan. SCT contributes to the discovery of the influences and processes that form pre-service teachers' beliefs about inclusion by considering personal, behavioural, and environmental aspects. This theory places a strong emphasis on the importance of earlier experiences, societal norms, teacher preparation, and education in forming these views. By utilising SCT, this study offers a thorough knowledge of the many elements influencing pre-service teachers' beliefs and emphasises the demand for efficient teacher preparation programmes that promote positive views towards inclusion.

The next chapter of this study delves further into the methodology adopted, including the philosophical underpinnings of the research, the selection of research methods, the research design and sampling methods, and the ethical considerations of the study. Together, these elements provide a comprehensive understanding of the research approach and its legitimacy.

Chapter 3. Methodology

This chapter presents the methodology of the study regarding the exploration of Kazakhstani pre-service teachers' beliefs about students with special educational needs (SEN), as well as their inclusion in mainstream classrooms. It is organised into nine main sections. In the first section, the philosophical underpinnings of the research are discussed. The second section provides the justifications for adopting a mixed-methods inquiry. Then, the third section of the chapter presents an overview and description of the participants and sampling techniques. Further, the fourth section delves into research instruments, followed by the fifth section on the data collection procedures. Section six demonstrates the data analysis approaches. Then, the seventh section discusses issues around the legitimacy of the study in terms of validity, reliability, trustworthiness, transferability, and quality inference. Finally, the ethical considerations and summaries of this chapter are discussed, with some concluding remarks in sections eight and nine, respectively.

3.1 Philosophical Underpinnings of the Research

The research journey starts within the inquirer's set of individual beliefs and understanding of the social world (Morgan, 2007). In other words, the concept of a "mental model" or paradigm comes to play, which stands for the specific framework or lens through which a researcher approaches the problem (Greene, 2007, p. 67; Shannon-Baker, 2016). The concept of paradigm is defined by Morgan (2007) as "systems of beliefs and practices that influence how researchers select both the questions they study and methods that they use to study them" (p. 49). In other words, paradigms are treated as "epistemological stances" with particular "belief systems" that shape research question formation and their inquiry through the lens of specific "philosophy of knowledge" (Morgan, 2007, p. 52; Newby, 2010). Proponents of any particular paradigm shape their views further about the "ontological,

epistemological, methodological and methods" (Arthur et al., 2012, p. 17). The "nature of

reality", that is, the ontological assumptions, lead to the nature of the knowledge, in other

words, to the epistemological assumptions, which further give rise to the methodology and

meaningful representations of the knowledge (Cohen et al., 2011, p. 3).

Historically, there were two main clashes of paradigms in social inquiry: positivism

(and its variations) and constructivism (and its variations). As Guba and Lincoln (2005)

postulated, a positivist paradigm inquires about facts based on numeric data compared to

constructivism, which explores social understandings retrieved from participants'

perspectives based on their experiences. Accordingly, positivism is defined as "an

epistemological position that advocates the application of the method of the natural sciences

to the study of the social reality and beyond" (Bryman, 2008, p. 11). In terms of the

epistemology of this paradigm, it requires the researcher to be objectivist (Creswell &

Creswell, 2018). Therefore, positivists advocate using empirical research through observation

and experiment; thus, the analyses are expressed in "laws or law-like generalizations" by

testing hypotheses and employing the deductive approach (Cohen et al., 2011, p. 7). The

positivist paradigm underlies employing the quantitative methods, as it provides an

opportunity to use quantified measuring instruments (Wellington, 2015).

On the contrary, the constructivist approach emphasises an understanding of subjects'

perspectives and views, as well as the process and context where research occurs

(Wellington, 2015). Within this paradigm, the social world is explored with the help and

viewpoint of an individual or individuals who are integral parts of the study (Cohen et al.,

2018). Qualitative research focuses on meaning and understanding with an emphasis on

developing concepts and insights (Taylor et al., 2015). Qualitative methods are vastly used

within this paradigm, requiring data analysis inductively by developing general norms and

theories (Cohen et al., 2018; Taylor et al., 2015). Lichtman (2012) admits that all the data

gathered via qualitative research are equal to the means of collecting knowledge based on the researcher's perceptions and interpretations.

Within the paradigm debate, the proponents of two different scientific worldviews, positivism, constructivism, and diverse variations of both, present conflicting ideas and promote their own philosophical and methodological interpretations (Teddlie & Tashakkori, 2009). Despite the conflicting ideas regarding the two diverse contrasting philosophical paradigms, Brewer and Hunter (2006) argue that employing mixed research methods helps and even facilitates the issue of inquiry by exploring the general research problem from diverse angles and perspectives, as well as its interpretations by integrating different theoretical perspectives.

Shannon-Baker (2016) reviewed four diverse types of paradigms in conducting mixed-methods research that includes "pragmatism, transformative-emancipation, dialectics, and critical realism" (p. 331). Pragmatism is deemed to offer practical solutions with more focus on research questions and an opportunity to contextualise and generalise theories so that they can be transferable in other situations (Biesta, 2010; Shannon-Baker, 2016). This is in line with Kelly and Cordeiro (2020), indicating that pragmatism is a guiding framework emphasising practicality and the concept of what works well. The roots of pragmatism take place from the sceptical views on achieving "perfect knowledge" through the positivist scientific approach and integrating interpretivist views in order to obtain "experiential consequences" (Kelly & Cordeiro, 2020, p. 2). In other words, this is a practically based stance on the research (Mertens, 2003). Next, the transformative-emancipatory perspective highlights the importance of the voice of marginalised ones in every single stage of the mixed methods. It mainly addresses the social inequities to make the voices of the oppressed heard. A dialectics perspective refers to several paradigms and uses them in "respectful dialogue" within a research process (Greene & Hall, 2010, p. 124). More attention is paid here to the

tensions that arise throughout the process of uncovering "divergent data" (Shannon-Baker, 2016, p. 328). In other words, dialectics creates an opportunity to bring together opposing perspectives and data, which emphasises their value and their equal importance of them (Johnson & Stefurak, 2013). Finally, critical realism indicates a stance that is able to "address the other's limitations" by recognizing the possibility of other realities (Shannon-Baker, 2016, p. 329). To be specific, this perspective emphasises the importance of different viewpoints and diverse voices, highlighting the point that theories are not always impeccable in practice and even generalisable (Modell, 2009; Shannon-Baker, 2016).

In this study, which explored pre-service teachers' beliefs about students with SEN and their inclusion in mainstream schools, the researcher assumed that pre-service teachers' understanding of inclusion and their experience with students with SEN would be diverse. Moreover, pre-service teachers' learning experiences in Kazakhstan may possibly be varied, and their responses to the survey and interviews are likely to be different in comparison to similar international studies on future teachers' beliefs about students with SEN and their inclusion in mainstream classrooms due to cultural differences, as well as the student teachers' self-efficacy beliefs. That is why it was crucial to be open to the diverse viewpoints that the study participants could express in relation to the existing theory and the literature review. Therefore, a critical realism paradigm was a helpful lens for the study. Developed by Roy Bhaskar, critical realism is based on the belief that despite the implemented theories, it is significant to highlight the diversity of viewpoints in reality (Shannon-Baker, 2016).

3.1.1 Critical Realism

Critical realism is a philosophical approach to understanding the world that was developed by the British philosopher Roy Bhaskar. It is an approach that is characterized by a commitment to understanding the world as it really is rather than simply accepting the way that it appears to be (Bhaskar, 1989). At the same time, it is also an approach that is deeply

critical of traditional approaches to understanding the world, which Bhaskar argues are limited by their reliance on a narrow and reductionist understanding of reality (Bhaskar, 1989; 2002).

According to Bhaskar (1997), critical realism is based on the idea that there are multiple levels of reality, each of which is characterized by different kinds of causality and structures. The most fundamental level of reality is the "transcendental" level, which consists of the underlying structures and processes that give rise to the world we experience (Bhaskar, 2009, p. 17). These structures and processes are not directly accessible to us, but they shape and constrain how the world appears to us. The next level is the "empirical" level, which consists of the objects and events that we experience in the world (Bhaskar, 2009, p. 18). This level is shaped and constrained by the structures and processes at the transcendental level, but it is also open to human intervention and manipulation. Finally, there is the "actual" level, which consists of the social and cultural practices and structures that shape the way we experience and interact with the world (Bhaskar, 2009, p.22).

In accordance with critical realism, social phenomena occur in open systems, which are investigated through the prism of multiple levels of reality differing from each other. Although it is impossible to make predictions about social phenomena occurring in open systems as in natural science, it is still possible to conduct an in-depth analysis of causal mechanisms and their potential consequences at different structures and mechanisms of strata (Danermark et al., 2019). As Danermark et al. (2002) noted, the central idea of critical realism is rooted in the fact that reality is "structured, differentiated, stratified and changing" (p. 7). Moreover, knowledge about reality is frail and open to adjustment through the means of some theoretical and methodological tools, which aid us in determining theories to inform about the external reality (Danermark et al., 2019). Also, gained knowledge diverges in various contexts. To be specific, obtaining useful knowledge in a particular context does not

necessarily mean that it is absolutely true and suitable in other contexts. Thus, knowledge depends on certain mechanisms in reality (Danermark et al., 2002).

One of the key insights of critical realism is that there is a gap between the way the world appears to us and the way it really is (Bhaskar, 2002). This gap is caused by the fact that our experiences and understanding of the world are shaped by the social and cultural practices and structures that we encounter. As a result, our understanding of the world is always partial and incomplete, and we must constantly be open to the possibility of revising and extending our understanding in light of new evidence and insights (Bhaskar, 2002).

In order to bridge the gap between appearance and reality, Bhaskar argues that we need to adopt a critical and reflexive approach to understanding the world (Bhaskar, 1993). This means that we must be willing to challenge our assumptions and preconceptions and seek out new and alternative perspectives on the world. It also means that we must be willing to accept the limitations of our knowledge and recognise that there may be multiple valid ways of understanding the world (Bhaskar, 1993).

One of the key contributions of critical realism has been to challenge traditional approaches to understanding the social world, which Bhaskar (2002) argues are limited by their reliance on positivist and reductionist assumptions. By contrast, critical realism emphasises the importance of understanding the social world in terms of the underlying structures and processes that shape and constrain it and the ways in which human agency and intervention can transform these structures and processes (Bhaskar, 2002).

For a number of reasons, critical realism is a suitable philosophical paradigm to investigate pre-service teachers' beliefs about students with SEN and their inclusion in mainstream classrooms. Critical realism acknowledges that social, cultural, and historical settings have an impact on an individual's ideas and behaviour (Bhaskar, 2002). Understanding the larger social structures, cultural norms, and institutional practises that

shape pre-service teachers' beliefs regarding students with SEN is vital when researching these beliefs. It is important to go beyond research participants' perspectives and take into account the socio-political dynamics that influence and shape pre-service teachers' views and beliefs. Moreover, power dynamics between general education systems, special education systems, policymakers, parents, and teachers exist in the framework of inclusive education. It is crucial to critically analyse how these power dynamics affect pre-service teachers' beliefs of children with SEN and their participation in mainstream classrooms using critical realism. It promotes awareness of the cultural prejudices and institutional impediments that could affect teachers' beliefs and behaviours. In addition, the discovery of underlying processes and structures that influence social phenomena is emphasised by critical realism (Bhaskar, 2002). Critical realism helps to investigate the fundamental reasons and mechanisms that result in certain beliefs and practices while researching the views of pre-service teachers (Bhaskar, 2002). It acknowledges that teachers' ideas are not arbitrary but are impacted by a variety of aspects, including their own experiences, their training, the regulations of their schools, and society's discourses on inclusion and disability. Critical realism offers a greater comprehension of the many aspects that affect pre-service teachers' beliefs of children with SEN by exploring these mechanisms.

Overall, the philosophical framework provided by critical realism enables the researcher to conduct a thorough and context-sensitive analysis of pre-service teachers' beliefs about students with SEN and their inclusion in mainstream classrooms. Its commitment to understanding the world as it really is, and to challenge traditional assumptions and preconceptions helps to discover new and alternative ways of thinking about the world and our place in it. With an emphasis on advancing social justice and transformational action, it enables a comprehensive understanding of the underlying mechanisms, power relations, and social structures that shape these ideas.

3.2 Mixed Methods Approach: Rationale and Selected Methodology

The primary purpose of the current study was to explore pre-service teachers' beliefs about students with SEN and the extent to which they feel confident in their preparation for inclusive education in Kazakhstan. In this study, a mixed research methodology was deemed appropriate according to the nature of the research questions, as the notion of belief and its sub-concepts required a holistic approach. Conducting a survey was extremely useful for assessing the concept of beliefs as it allowed the researcher to "measure multiple constructs within a single set of questions" (Schraw & Olafson, 2015, p. 92). In the same way, a survey helped examine the interrelationship of multiple forms of beliefs and student-teacher demographic variables (Tashakkori et al., 2021). Further, conducting interviews, i.e., obtaining "verbal reports", was essential for collecting an in-depth exploration of the origin of teachers' beliefs, their development, and their impact on their actions (Schraw & Olafson, 2015, p. 92).

One of the major purposes for using mixed methods was to enable the researcher to examine the social phenomena in-depth by bringing together the strong aspects of both quantitative and qualitative methods (Hollstein, 2014; Tashakkori et al., 2021). That is to say, a thoughtful and skilful approach to solving the divergence of ideas, their clashes, and conflicts had the potential to "generate puzzles" and engage in new perspectives and understandings (Greene, 2007, p. 24). Concerning this study, mixed methods helped the researcher to explore the research questions from different angles, thus engaging multiple perspectives to encourage the generation of understanding within a broader and deeper context (Greene, 2007). It also enhanced the "depth and breadth" of the study results (Harwell, 2011, p. 159). The researcher recognized the value of quantitative data collection that facilitated summarizing pre-service teachers' beliefs, who were a large group of study

participants. In addition, the qualitative data helped the researcher to explore and understand those beliefs in-depth and at a more sophisticated level with a smaller group.

Another rationale for the implementation of mixed methods research lay in its process of triangulation, where the same phenomena were investigated through multiple methods that counteracted biases and strengthened the validity of the study results (Greene, 2007). The triangulation of the study results is often traced to the "multitrait, multimethod (MTMM) matrix" by developing the validation of inferences through the combination of divergent (different constructs) and convergent (the same constructs) validities (Campbell & Fiske, 1959, cited in Greene, 2007, p. 43). In this regard, an explanatory sequential design took its stance in order to, firstly, conduct surveys on the research questions to examine pre-service teachers' beliefs about students with SEN and their inclusion in mainstream schools, their perspectives on their preparedness to teach and work with students with SEN in a mainstream classroom, and to what extent they felt confident in their gained knowledge in HEIs in Kazakhstan. Next, this was followed by online (due to the COVID-19 pandemic restrictions) semi-structured individual interviews with student-teachers to follow up on emerging, relevant, and unexpected issues. This means the qualitative and quantitative data were not mixed in the data analysis process; on the contrary, their integration occurred while interpreting the results (Harwell, 2011; Cohen et al., 2018). A sequential explanatory research design allowed the researcher to search for explanations of the findings in regard to the pre-service teachers' beliefs about students with SEN. The separate data collection process was one of the strengths of this design, although it required more time and resources for each phase of the data collection (Harwell, 2011; Cohen et al., 2018). The sequential explanatory design was essential to address both "causal effects" and "causal mechanisms" of the current study by exploring the impact of extraneous variables of pre-service teachers' beliefs about students with SEN and their inclusion into mainstream school, as well as the probable

processes for certain beliefs (Teddlie & Tashakkori, 2009, p. 129). More detailed information on the research questions and their procedures are presented in Figure 3 and Appendix B.

Figure 3

The Sequential Explanatory Design
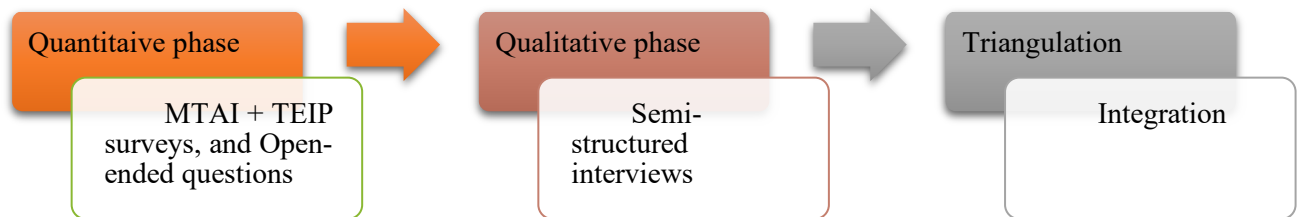
3.3 Participants and Sampling Techniques

This section provides a detailed account of the participants and sampling strategies used in the study's quantitative and qualitative phases. The sample strategies used in the study were carefully planned to guarantee that the participants represented a wide variety of experiences and backgrounds. The sample techniques used in both the quantitative and qualitative stages of the study are fully described in the following subsections, together with information on the participants' demographic characteristics.

3.3.1 Quantitative Phase

A two-stage sampling procedure was implemented in the quantitative phase of the study. The first stage considered a selection of the sample of higher educational institutions (HEIs) in Kazakhstan, which was conducted through purposive typical case sampling. Typical case sampling techniques produce a sample in which a researcher can select a certain number of schools or institutions based on representativeness; that is, the institutions should include the most typical cases of the population under the study (Cohen et al., 2018; Tashakkori et al., 2021). The full list of HEIs was retrieved from the official website of the Ministry of Education and Science of the Republic of Kazakhstan (Appendix C). Then, the

institutions vastly focusing on preparing future teachers were selected. Initially, it was planned to select one national HEI, one state HEI, one joint-stock HEI, and one private HEI, all of which train future teachers across the country. However, due to the limited access to HEIs across the country due to the COVID-19 pandemic and travel restrictions, the researcher had to consider more than one institution, as the response rate was lower than expected at the early stages of the data collection process. As a result, pre-service teachers from 12 different universities in Kazakhstan participated in the study.

Further, the second stage of the sampling process was based on stratified sampling (Cohen et al., 2018). Students from the previously selected universities were divided into homogenous groups by types of faculty/departments and year of the study. The main reason for choosing the sample sites was to account for the context and curriculum as potential factors contributing to pre-service teachers' beliefs. Mainly future subject teachers of Sciences, Humanities, and Special Education teachers (i.e., speech therapists, defectologists) who were older than 18 years of age were selected.

To facilitate the collection of online survey data, the researcher initiated a communication with the individuals responsible for overseeing the research sites, namely the Rectors and Vice-Rectors of HEIs. In this communication, the researcher provided comprehensive information about the research project and its procedures, seeking permission to distribute the online survey to pre-service teachers enrolled in programmes within their respective HEIs and departments who met the established inclusion criteria. Before the survey commenced, an email was sent to the potential participants through the gatekeepers, providing them with a detailed explanation of the study, as well as information regarding their rights, potential risks, and benefits. The gatekeepers were responsible for forwarding an anonymous questionnaire link to the potential study participants via email.

3.3.2 Qualitative Phase

In the next phase, twelve pre-service teachers studying at four different universities in Kazakhstan participated in the qualitative part of this study. The participants were selected for the individual online interviews from the pool of participants answering the survey using purposeful sampling techniques as a representation of majors. Purposeful sampling is a technique used for selecting the participants based on certain characteristics, where "the selection of participants, settings or other sampling units is criterion-based" (Ritchie et al., 2013, p. 113; see also Cohen et al., 2018; Tashakkori et al., 2021; Tashakkori & Teddlie, 2003). More specifically, homogeneous purposeful sampling was implemented in this phase, as it allowed the researcher to choose samples based on their similarity, and it was further used to conduct contrastive analysis (Cohen et al., 2018). Thus, students who participated in the survey, and in particular final year pre-service teachers, were invited to participate in a semi-structured online interview as by that time, these student-teachers were to have had teaching experiences during their internships. They were assumed to have more practical and theoretical experiences in their ITE programmes. At least one student from three different majors (science, humanities, and special education) and each type of HEI (national, state, joint-stock, and private HEIs) were invited to the interview. The number of participants was determined based on the principles of sufficiency and saturation (Cohen et al., 2018). Sufficiency refers to the amount and range of participants needed to reflect the population, while saturation of information refers to the point where the data collection no longer reveals new information (Seidman, 2006).

3.3.3 Demographic Data

The first section of the questionnaire requested the respondent's demographic data. There were five closed-ended items including gender, age, type of university, study year, and major. Such demographic information was considered important as the differences in the

characteristics of the sample of the Kazakhstani pre-service teachers could influence the interpretation of the results. In total, 1144 students from 12 universities participated in this study. However, after data cleaning, the final number of respondents was equal to 796. The number was reduced significantly due to the incomplete responses to a considerable number of items of the survey. Data from 348 surveys were not used in this study due to the substantial missing information. The majority of respondents were female students (90%), final year students (57%) of state universities (47%), and from the field of Humanities and Social Sciences (49%). Table 2 provides the demographic characteristics of the participants for the quantitative phase of the study.

Table 2

Demographic Characteristics of Participants (N = 796)

Characteristic	n	%
Gender		
Male	77	10%
Female	709	90%
Type of the University		
National University	248	31.2%
State University	372	46.7%
Joint-stock University	82	10.3%
Private University	67	8.4%
Major		
Natural and Technical Sciences	187	23.5%
Humanities and Social Sciences	390	49%
Special Education	167	21%
Bachelor's Degree		
I-year student	73	9.2%
II-year student	146	18.3%
III-year student	231	29%
IV-year student	225	28%

To recruit participants for the qualitative phase of the study, the respondents of the survey were provided with a separate link where they could leave their contact details to participate in the interview. In total, 53 potential participants expressed their interest and shared contact details to be further approached. The researcher used a random number generator to choose interview participants among 53 potential respondents. However, during the recruitment process via a phone call, seven potential participants refused to take part in an interview, and three email invitations remained unresponded. In general, 12 pre-service teachers participated in the second phase of the study. Table 3 presents brief demographic information about the interviewees.

Table 3

Demographic Information of The Interview Participants

Interviewees	Gender	Age	Region	Major	Subject	Year of Study	University
Participant 1	Female	20	North-eastern Kazakhstan	Special Education	Defectologist-speech therapist	4	B
Participant 2	Female	21	South-eastern Kazakhstan	Natural Sciences	Physics	4	A
Participant 3	Female	38	South-eastern Kazakhstan	Special Education	Defectologist	1	A
Participant 4	Female	22	South-eastern Kazakhstan	Natural Sciences	Physics	4	A
Participant 5	Female	20	Northern Kazakhstan	Social Science	Kazakh language and Literature	3	C
Participant 6	Female	19	North-eastern Kazakhstan	Social Science	Art and drawing	2	B
Participant 7	Female	20	South-eastern Kazakhstan	Social Science	English language	3	A
Participant 8	Female	20	North-eastern Kazakhstan	Primary Education	Primary school teacher	3	B
Participant 9	Male	18	Northern Kazakhstan	Social Science	Kazakh language and Literature	1	C
Participant 10	Female	20	South-eastern Kazakhstan	Natural Sciences	Chemistry and Biology	4	D
Participant 11	Male	21	Northern Kazakhstan	Social Science	English language translator	2	C
Participant 12	Male	21	South-eastern Kazakhstan	Natural Sciences	Chemistry and Biology	4	D

3.3.4 Initial Teacher Education Placement Context

According to the Order of the Minister of Education and Science of the Republic of Kazakhstan dated January 29, 2016, No. 107, Chapter 2. *Procedure for the organisation and conduct of professional practice:* The types, terms, and content of professional practice are determined by the working curricula and plans approved by educational organisations in accordance with paragraph 2 of Article 38 of the Law of the Republic of Kazakhstan. For instance, Abai Kazakh National Pedagogical University (KazNPU) provides the following set of requirements for the pedagogical practice:

1) Educational (introductory) practice is conducted in the 1st year (2nd semester), for no less than two credits (not less than two weeks, 60 hours).

2) Psycho-pedagogical practice is conducted in the 2nd year (4th semester) for no less than two credits (not less than two weeks, 60 hours).

3) Pedagogical practice is conducted in the 3rd year (6th semester) for no less than four credits (not less than four weeks, 120 hours).

4) Production pedagogical practice is conducted in the 4th year (8th semester), for no less than ten credits (not less than ten weeks, 240 hours) and the educational program 6B013 Training of teachers without subject specialisation, additionally - "The first days of the child in school" (KazNPU, 2019, p. 10).

In general, during their first academic year, pre-service teachers often participate in short-term school placements that are mostly focused on observing their mentor teachers and the courses they are given. However, in the third and fourth academic years, pre-service teachers have substantial increase of placement hours. They can work with mentors during this time, and they can get a month of experience instructing pupils. These longer-term school placements offer prospective teachers additional opportunities to put their knowledge into practise, obtain valuable hands-experience, and receive feedback from their mentors.

3.4 Research Instruments

Two surveys, *My Thinking about Inclusion* (MTAI) and *The Teacher Efficacy for Inclusive Practice* (TEIP), were used in order to examine pre-service teachers' beliefs about inclusion and their self-efficacy to work in inclusive settings, respectively.

3.4.1 My Thinking about Inclusion (MTAI)

The MTAI (Stoiberg et al., 1998) scale was used to investigate pre-service teachers' beliefs about students with SEN and their inclusion (RQ1). The MTAI questionnaire consists of two parts: the first part assesses teachers' beliefs about inclusive education. The second part examines the perceived barriers to inclusive education. An extended 28-item MTAI scale was used in this study. The scale reflects three belief domains related to inclusion: Core Perspectives (items 1-12), Expected Outcomes (items 13-23), and Classroom Practices (items 24-28) (Stoiber et al., 1998). According to Stoiber et al. (1998), the Core Perspectives dimension of the scale measured respondents' beliefs about inclusion and its "best practices" in terms of educating children in inclusive settings (p.110). More specifically, the items were constructed to measure respondents' values about what was best regarding the education of all children in inclusive classrooms. This dimension was grounded on the previous studies signifying the role of positive attitudes towards children with disabilities and their inclusion in mainstream classrooms (Stoiber et al., 1998). The Expected Outcomes dimension of the scale measured respondents' beliefs about what would happen as a result of inclusive education. For instance, item 18, "Inclusion promotes self-esteem among children with special needs", implied certain expectations from promoting inclusion. Finally, the Classroom Practices dimension of the scale denoted beliefs about the impact of inclusive education on classroom life and instructions on a daily basis. To illustrate, item 24, "Children with special needs monopolize teachers' time", indicated that inclusive education practices would influence on time-balance and interfere with teachers' daily work schedules. A

comprehensive 28-item version of the MTAI scale consisted of a 5-point Likert scale, where the respondents were instructed to indicate their degrees of agreement and acceptance of the statements (1 = strongly reject, 2 = reject, 3 = neutral, 4 = accept, and 5 = strongly accept). For the purposes of this study, the wording of several items was adjusted. This was done to make the terminology more consistent and to boost respondents' understanding of the questions. For example, "children with exceptional education needs" was changed to "children with special education needs". Cronbach's α coefficients for the MTAI Core Perspectives, Expected Outcomes, and Classroom Practices in this sample were .60, .67, and .58, respectively. The reliability coefficient for the total score of the MTAI was high (α = .80). The MTAI version used in this study is presented in Appendix D.

3.4.2 The Teacher Efficacy for Inclusive Practice (TEIP)

The TEIP (Sharma et al., 2011) scale was used to examine teachers' preparedness to work in an inclusive classroom (RQ2). The TEIP questionnaire was designed to explore pre-service teachers' feelings of self-efficacy while teaching in an inclusive environment. The questionnaire consists of 18 items that are answered on a 6-point Likert scale. The respondents were supposed to indicate degrees of their agreement with the provided statements (1 = strongly disagree, 2 = disagree, 3 = disagree somewhat, 4 = agree somewhat, 5 = agree, and 6 = strongly agree). It measures three dimensions: Efficacy to use Inclusive Instructions (items 15, 18, 10, 5, 6, and 14), Efficacy in Collaboration (items 3, 4, 9, 12, 13, and 16), and Efficacy in Managing Behaviour (items 1, 2, 7, 8, 11, and 17). These dimensions were based on previous studies highlighting the crucial role of three core skills so that teachers can effectively work in inclusive classrooms: content knowledge, classroom and behaviour management, and the ability to work collaboratively with colleagues and parents (Sharma et al., 2011). A total score for self-efficacy beliefs in inclusive environments is calculated by summing up all items of the TEIP. Cronbach's α coefficients for the TEIP

Inclusive Instructions, Collaboration, and Managing Behaviours in this sample were .81, .79, and .75. The reliability coefficient for the total score of the TEIP was very high ($\alpha = .91$). The TEIP version used in this study is presented in Appendix D.

3.4.3 Open-Ended Survey

An open-ended survey was used in order to explore pre-service teachers' readiness to work in an inclusive classroom (RQ3). Two questions were included. The first one was about three things pre-service teachers like best about the way how their university prepares them to work in an inclusive environment. The second one asked about three changes they would like to see at their university in order to get prepared to work in an inclusive environment adequately. The questions were adapted from the "Index for Inclusion: developing learning and participation in schools" by Booth and Ainscow (2002). The survey was presented in Appendix D.

3.4.4 Survey Translations

The MTAI and TEIP scales were originally constructed and developed in English. As the study participants were Kazakh and Russian native speakers, these questionnaires were translated into the Kazakh and Russian languages by the researcher (see Appendices E and F). The research instruments for this dissertation were translated through the following crucial steps, which were based on the 10-step translation framework developed by Wild et al. (2005):

1) Preparation: A fundamental preparation was conducted before the translation process began. This required deciding on the target languages—Kazakh and Russian—and the source language—English.

2) Forward Translation: Translating the research instruments from English into Kazakh and Russian was the first stage. The researcher carried the major responsibility for

this step. The researcher was keen to make the translation as accurate and close to the original text as possible.

3) Reconciliation: Several forward translations were reviewed and combined into a single forward translation in order to guarantee correctness and linguistic integrity. The goal of this operation was to improve and harmonise the translations.

4) Back Translation: After the reconciliation, back translations had to be carried out. To find any discrepancies, this required translating the new language versions—Kazakh and Russian—back into the original language, English.

5) Review of the Back Translation: The back-translated texts were examined closely by contrasting them with the source material. This stage involved finding and fixing any errors or inconsistencies between the reconciled translation and the original.

6) Harmonisation: A comparison of the back translations of the various language versions was done to guarantee consistency with the original instruments and throughout all translated versions. A consistent approach to translation problems was established by noting and addressing any discrepancies with the original language.

7) Cognitive Debriefing: A small sample of pertinent people were then assessed using the translated instruments. This stage attempted to analyse other phrasings and appraise the translations' interpretive value, understandability, and cultural applicability. Four experts were asked to provide feedback on the quality of the research instruments' translation. These experts were master's degree and PhD holders who were familiar with the topic of this dissertation and had extensive work experience in the field of inclusive education. Appendix I provides a summary of background information about the experts who participated in the quality assurance of the instruments. Two members of the expert committee, who were familiar with the field of study, the construct of interest, and the methodology, reviewed the Russian

translation of the questionnaire by comparing it with the original English text. They provided feedback by determining whether the translated and original versions achieved semantic, idiomatic, experiential, and conceptual equivalence (Beaton et al., 2000; Guillemin et al., 1993). A similar process was conducted with the Kazakh version of the questionnaire translation, where two other members of the expert committee provided feedback on the quality of the translation.

8) Finalisation and Review of Cognitive Debriefing Results: Expert members' interpretations of the translation were compared to the original using feedback from the cognitive debriefing. All differences were found and fixed such that the translations satisfied the necessary requirements. Specifically, the researcher reviewed the feedback and resolved some discrepancies by reaching a consensus on all items to produce a prefinal version of the translated questionnaire. A sample of the changes made to the questionnaire as a result of this process is provided below:

- In order to maintain consistency in the terminology, the concept "typically developing students" was translated into Russian as "ученики с обычным развитием" and into Kazakh as "қалыпты дамуы бар оқушылар".

- The English word "students" was translated into Russian as "ученики" and into Kazakh as "оқушылар" in order to refer to the students of secondary education.

- In item 24 of the MTAI scale, the phrase "monopolise teachers' time" was restated as "take most of the teachers' time" in Russian and Kazakh versions.

9) Proofreading: To ensure the quality of the translations, a final review of the work was done to identify and address any typographical, grammatical, or related issues.

10) Final Report: A thorough report detailing the progress of every translation was put together at the end of the translation process. This report functioned as a

documentation of the complete procedure and the steps implemented to guarantee the calibre of the research instruments that were translated.

More detailed information on the amendments of the research instruments based on the comments of each expert committee is provided in Appendix J.

3.4.5 Preliminary Pilot Testing

The preliminary version of the survey was piloted by asking 13 pre-service teachers to review it. The researcher altered some items based on comments regarding the wording and clarity of the items. This was done to make terminology more consistent and to boost respondents' understanding of the questions. For example, to the items where "integrated classroom" was used, the term "inclusive classroom" was also added; "children with exceptional education needs" was changed to "children with special education needs", and "exceptional needs" were changed to "special needs".

3.4.6 Research Interviews

The qualitative phase of the study included conducting semi-structured online interviews. As Seidman (2013, p. 9) noted, "at the root of in-depth interviewing is an interest in understanding the lived experience of other people and the meaning they make of that experience." As an illustration, Kvale and Brinkmann (2009) described in-depth interviews by using the metaphor whereby they represent an interviewer as a miner during the process of conversation and interaction with a study participant as exploring and 'digging' their pre-existing knowledge, perspectives, and views.

Individual semi-structured online interviews were conducted with the selected study participants to explore pre-service teachers' readiness to work in an inclusive classroom and further probe how ITE programmes could better prepare future teachers to work in an inclusive environment. For the semi-structured interview protocol, see Appendix G. This protocol comprises a series of relevant questions and probes to guide the discussion to ensure

all participants were offered the same opportunities to discuss relevant issues. The guide was divided into five domains of inquiry as follows:

- Pre-service teachers' background

- Pre-service teachers' perspectives on inclusive education

- Pre-service teachers' readiness for an inclusive environment

- The relevance of the teacher education curriculum with the development of inclusive education in mainstream schools in Kazakhstan

- Final comments

Semi-structured online interviews were chosen as the main instrument for data collection to answer all research questions due to several reasons. First of all, it was flexibly structured under particular topics that provided the researcher with an opportunity to probe and explore the responses within the interview schedule (Cohen et al., 2018; Tashakkori et al., 2021). Secondly, it was generative in terms of the possibility of creating new knowledge, ideas, and suggestions, or even solutions to the raised issues (Ritchie et al., 2013). The semi-structured interviews helped the researcher to follow up on quantitative data findings and conduct a more in-depth analysis (Tashakkori et al., 2021).

3.5 Data Collection Procedures

The data collection procedure consisted of two phases: quantitative and qualitative phases. In order to conduct the quantitative surveys, the researcher initially communicated with the gatekeepers of the research sites by contacting the coordinators of the pre-service teachers at each teacher training institution. Detailed information on the research project and a description of the procedures were provided via email in order to obtain authorisation to participate in the study. Due to the travel restrictions caused by the COVID-19 pandemic, these surveys had to be completed electronically. At the beginning of the survey, a

description of the study and the study participants' rights, risks, and benefits were explained first-hand. In order to ensure anonymity, anonymous questionnaire links were sent via e-mail and messenger to the potential study participants with the help of institution gatekeepers.

As far as the qualitative data collection phase was concerned, the pool of participants was retrieved from those who participated in the quantitative phase. At the end of the survey, there was a link to a separate sign-up sheet with an invitation to participate in the interview in order to elaborate further on the survey topics. Final year pre-service teachers were on the priority list of interview participants, as they were understood to have gained a certain amount of teaching practicum and theoretical basis. With their permission, the participants of the interviews were audio-recorded and gave consent to the interviewee. Then, after the interview, the data were transcribed verbatim.

3.6 Data Analysis

The mixed-methods data analysis of each component occurred independently; that is, the quantitative and qualitative data results were analysed in accordance with each "methodological tradition" (Greene, 2007, p. 144). Afterwards, the integration or linking of the results took place at the data interpretation stage. As Greene (2007) wrote, a mixed data analysis goes through several stages: "data cleaning; data reduction; data transformation; data correlation and comparison; and analysis for inquiry conclusions and inferences" (p. 145).

3.6.1 Quantitative Data Analysis

The quantitative data were analysed via descriptive and inferential statistics using the IBM Statistical Package for Social Sciences (SPSS) version 23. Firstly, the collected data were reviewed in relation to their valid responses and methodological soundness. Before starting to analyse the data, the researcher cleaned the dataset and checked it for errors. Descriptive statistics (i.e., frequency distributions, minimum and maximum) were used to

inspect whether response scores were within the range of possible scores on each variable. The researcher also checked for the number of valid cases and missing cases. It was crucial to know whether there were many missing cases and to further explore the reasons behind them. As there were two questionnaires combined into one survey that in total consisted of 46 items (MTAI - 28 items and TEIP - 18 items), it was understandable why there were approximately 100 missing cases closer to the end of the survey. Most likely, incomplete responses were due to the fact that future teachers found the survey quite extensive, which may be explained by response fatigue. The researcher also checked the data output in relation to the number of cases that fell into each of the categories and their corresponding percentages. Secondly, the researcher inspected and corrected any errors and inconsistencies in the reporting of the open-ended questions, such as age (e.g., "24 years old", "24 y.o." and "24 года" was changed to "24").

Secondly, descriptive statistics and frequency counts were used to describe general trends in the data with regard to pre-service teachers' beliefs about the inclusion of students with SEN and their self-efficacy beliefs for teaching in inclusive environments. Assessment of the normality of the distribution of scores for the scales and subscales of the questionnaires plays a crucial role in guaranteeing the accuracy and consistency of the data, enabling suitable statistical evaluations, and permitting strong interpretations of the results. The three belief subscales of the MTAI scale and the total belief scale, as well as the TEIP scale and total self-efficacy scale, were explored for internal consistency using Cronbach's alpha. Then, a series of t-tests and ANOVAs helped to investigate the effect of different demographic variables on pre-service teachers' beliefs about inclusion. When comparing the means of two groups, t-tests are an invaluable statistical tool (Pallant, 2016). They offer a simple approach of determining statistically significant variations in means between two groups, which is important for analysing how binary demographic characteristics affect

inclusion beliefs (Pallant, 2016; Tashakkori et al., 2021). In this study, t-tests were used to investigate if male and female pre-service teachers had significantly different self-efficacy beliefs and beliefs about inclusion.

In the same vein, ANOVA was used as a useful tool for comparing differences between multiple groups (Pallant, 2016; Tashakkori et al., 2021). It reduces the need for several pairwise comparisons, which raises the possibility of Type I errors in statistical testing (Pallant, 2016). ANOVA offered a thorough grasp of how different demographic variable levels affect inclusion beliefs. In the context of this study, ANOVA was used for analysing how pre-service teachers' beliefs about inclusion and their self-efficacy beliefs are impacted by demographic variables of university type and major. Then, each significant test obtained for the independent variables was evaluated with the post-hoc procedure (See Table 4).

The process of coding the open-ended questions. Firstly, the survey SPSS (sav) data was saved in an Excel form and was further imported to NVIVO software. Then, the open-ended responses to Questions 11 and 13 were scanned and coded in NVIVO. Further, a list of common themes was created. The codebook was further exported into an Excel file. Finally, two diagrams were created based on the frequencies of the common themes that were presented in the codebook.

Table 4

Quantitative Data Analysis Approach

Research Questions	Research Instruments	Data Analysis
RQ1. What are the pre-service teachers' beliefs about the students with special educational needs and their inclusion in mainstream schools in Kazakhstan?	My Thinking about Inclusion (MTAI) scales	Descriptive Analyses
		T-test
		ANOVA
RQ2. How prepared do pre-service teachers feel about working with SEN students in a mainstream classroom?	The Teacher Efficacy for Inclusive Practice (TEIP) scales	Descriptive Analyses
		T-test
		ANOVA
RQ3. What factors influence pre-service teachers' beliefs about inclusion?	My Thinking about Inclusion (MTAI) scales; The Teacher Efficacy for Inclusive Practice (TEIP) scales	T-test
		ANOVA
RQ4. How could the Initial Teacher Education programs better prepare pre-service teachers to teach in an inclusive classroom from their perspectives?	Open-ended questions following the (TEIP)	Descriptive analysis: frequencies

3.6.2 Qualitative Data Analysis

The collected non-numerical data aimed to elaborate on the quantitative data adding its richness and depth. This study used an inductive approach to qualitative data analysis, meaning the data were used to build themes and conclusions (Teddlie & Tashakkori, 2009). In addition, the qualitative data analysis was mostly iterative; the researcher constantly went

back and forth in the data collection and analysis (Teddlie & Tashakkori, 2009; Tashakkori et al., 2021). All the notes, thoughts, and memos taken right after the interviews were considered as part of the data that were used in further analysis (Cohen et al., 2018; Tashakkori et al., 2021). The aim of the qualitative data analysis was to generate information that developed from description to explanation (Cohen et al., 2018; Tashakkori et al., 2021).

In general, the data analysis consisted of several procedures, which included "selecting, organizing, analysing, reporting and interpreting" (Cohen et al., 2011, p. 537). Firstly, the collected data were selected based on their relatedness to the study and further coded, then determining the patterns of the data set took place, which included identifying both similarities and differences of the data and creating categories. According to Saldana (2009), the coding process goes through three stages: the first cycle of coding, the second cycle of coding, and post-coding. The first cycle of coding represented the initial stages of data coding that consisted of seven subcategories: "Grammatical, Elemental, Affective, Literary and Language, Exploratory, Procedural, and Theming of the Data" (Saldana, 2009, p. 45). The second cycle of coding required further analytical skills to classify, categorise, prioritise, and synthesise the data (Saldana, 2009). Post-coding and pre-writing were the final stages of data analysis that encouraged the researcher to reflect on the identified "item's contents and arrange them in various orders" (Saldana, 2009, p. 186). Figure 4 visually depicts the stages of qualitative data analysis.

Figure 4

Stages of Qualitative Data Analysis
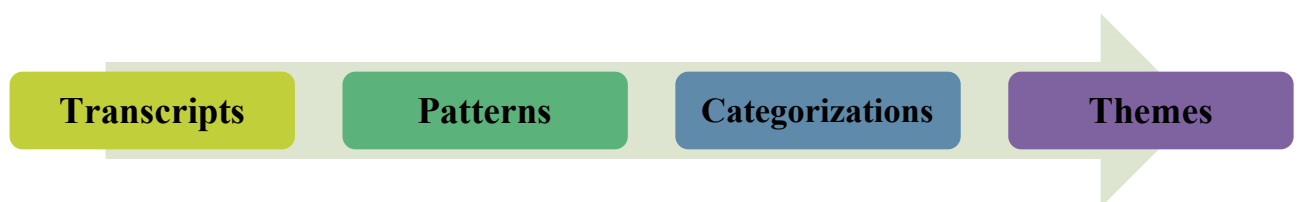
In the current study, diverse methods of coding were used concurrently. For instance, during the first cycle of coding, the researcher implied *In Vivo Coding*, which indicated the use of words or short phrases from the participant's own language (Miles et al., 2014). This type of coding is widely implemented among qualitative researchers as it "prioritises and honours the participant's voice" (Miles et al., 2014, p. 81). Repeatedly used words and phrases serve as leading points of the coding process. Within the grammatical method of coding, the researcher implied attribute coding, which logged the essential information of the data such as participant characteristics, demographics (e.g., age, gender), data format, time frame and other variables (Saldana, 2009). This type of coding is appropriate in studies with multiple participants and sites, as in the current study, in order to provide "contexts for analysis and interpretation" (Saldana, 2009, p. 56). Further, within the elemental coding, the essential topics were summarised by applying the descriptive coding method. The researcher also applied affective coding; within it, the values coding became an integral part of the data analysis. Values coding focuses on coding qualitative data that reflect the values of the study participant, their beliefs and attitudes, perspectives, and worldviews (Saldana, 2009). Values coding was essential in this study, as the researcher was exploring pre-service teachers' beliefs about students with SEN and their inclusion in mainstream classrooms. In the same vein, evaluation coding proved helpful in the exploration of pre-service teachers' judgments about their ITE programmes and their preparedness to work in an inclusive environment. The coding of the data was done through the NVivo software programme.

The creation of codes was based on both deductive and inductive coding. Initially, a provisional starting list of codes was created within the framework of deductive coding (Miles et al., 2014). This starting list was based on the conceptual framework, research questions, and key variables. Some other codes emerged during the data collection and analysis process, thus making the researcher open to inductive coding. The researcher was

also ready to revise the codes, which may be altered during the data analysis process. Finally, the revised codes were presented in a structural and conceptual order, as depicted in Table 5. This was a crucial aspect of creating a coherent and mutually related coding scheme that displayed a "conceptual web" with "larger meanings and their constitutive characteristics" (Miles et al., 2014, p. 88).

The second cycle of coding, pattern coding, required the summarised data segments to be grouped into smaller "categories, themes, or constructs", thus allowing a more meaningful analysis (Miles et al., 2014, p. 90). Pattern codes usually consist of four summarisers: "1) categories or themes, 2) causes or explanations, 3) relationships among people, and 4) theoretical constructs" (Miles et al., 2014, p. 93). The pattern codes were further mapped as they provided a visual network and displayed their interconnectedness.

Afterwards, all the coded data were analysed and sorted into overarching themes. Theming of the data allowed categories to emerge from the data (Ezzy, 2002). Thematic analysis of the current study data was an essential part that facilitated further interpretations to "develop higher-level theoretical constructs" (Saldana, 2009, p. 139). The identification of themes took place at the final stage, which was guided by the general agenda related to pre-service teachers' beliefs about students with SEN and their inclusion into mainstream classrooms, as well as pre-service teachers' preparedness to teach in an inclusive environment. The emerging themes of the data explained and added depth to the quantitative phase of the study (Guest et al., 2012) (see Table 5).

Table 5

Themes, Subthemes, and Codes

Theme	Subthemes	Code	Sub-codes
Pre-service teachers' beliefs about children with SEN and their inclusion	Conceptualization of Inclusive Education. Benefits of Inclusive Education for Students with SEN and beyond. Barriers to Inclusion.	Inclusion is... Benefits of Inclusion Barriers to Inclusion Challenges for Teachers	Being Equal with Students with Normal Development; Open-mindedness; Limited Facilities; Quality of Education Decreases; Social Exclusion; Teachers' negative attitudes towards SEN; Unawareness about Inclusive Education; Unqualified Teachers for Inclusion; Extra Time and Support for SEN students is needed; Lack of Experience; Lack of Support from Administration; Limited Content Knowledge; Pressure from Administration; Teacher responsibilities in Inclusive Classroom; Children's Wellbeing; Individual Work with Students.
Pre-service teachers' self-efficacy beliefs to work in inclusive classrooms	Readiness to Teach in Inclusive Classrooms. Inclusive Classroom Management. Internship Experience working with children with SEN.	Inclusive Education Programmes in ITE Internship Inclusive Classroom Management and Methodological Training Readiness to teach in Inclusive Classroom	

	Support for students with SEN.	Support for SEN students	
	Support for Teachers.	Supports for Teachers	
	Future plans to work at schools.		
Pre-service teacher preparation for Inclusive Education	The Inclusive Education Module in ITE Programs.	ITE challenges	Distance Learning Heavy Workload Lack of Online Platforms Limited Internet Access Limited Facilities Low Teaching Quality
	The role of internship in preparing pre-service teachers for inclusive education.	ITE improvement	Mentorship More Internships at School More Practical Activities More Teaching Methods Teacher preparation for Inclusion To Raise Interest among ITE Students
	Participants' suggestions on how to improve the ITE programs for inclusive education.		

3.7 Legitimation of the study

A mixed-methods approach, according to Tashakkori et al. (2021), carries the danger of inadequately integrating qualitative and quantitative data. By selecting and combining both types of data using a confirmatory method, the "legitimation" strategy was employed to assure validity and reliability in the quantitative phase and trustworthiness and transferability in the qualitative phase of this research (Onwuegbuzie et al., 2011).

3.7.1 Reliability and Validity

The reliability and validity of research are crucial aspects of any study, as they have a variety of meanings in different research approaches and methodologies (Cohen et al., 2018).

Reliability refers to the extent to which a questionnaire or any measurement procedure would produce the same results if used again under a similar methodology and conditions (Joppe, 2000; Cohen et al., 2018). Validity refers to the extent to which the instrument measures what it is supposed to measure (Cohen et al., 2018).

The validity and reliability of the two MTAI and TEIP questionnaires were tested and corroborated during the development of the original instrument. However, given the fact that the questionnaires were translated into the Kazakh and Russian languages and implemented in the context of Kazakhstan for the first time, several steps were taken in this study to ensure validity and reliability further. Content validity was ensured by conducting expert content validation involving four experts for the translation. These experts were holders of master's and PhD degrees working in HEIs, and some of them have had extensive experience in the field of inclusive education. Two experts checked the survey translation from English to Russian, and the other two experts checked the survey translation from English to Kazakh. Their suggestions and comments were essential to setting the questionnaires in their final forms. In order to assess the validity of the questionnaires from the pre-service teachers' perspectives, they were given to a sample of 13 student teachers who were purposefully selected. They were asked for any suggestions in relation to the comprehension and clarity of the questions and the applicability of the items to the context of Kazakhstan. Moreover, the internal consistency of the scales was examined using Cronbach's alpha coefficient.

3.7.2 Trustworthiness and Transferability

The concepts of reliability and validity have been vastly used in the natural sciences, so they have a different epistemological stance in comparison to qualitative research. That is why Lewis et al. (2003) refer to reliability as "sustainable" and validity as "well-grounded" in qualitative studies, as tests and measures of reliability and validity do not wholly represent qualitative investigation and can even create confusion in its application (p. 270).

The concept of reliability, in general, refers to the replicability of the study. In qualitative studies, this concept has been vastly criticised and discussed from the constructivist viewpoint that every single study is unique, and there is no reality to be replicated (Ali & Yusof, 2011; Golafshani, 2003; Moret et al., 2007). That is why, in qualitative studies, reliability refers to confirmability, trustworthiness, consistency, and the dependability of the study findings (Amankwaa, 2016; Kyngäs et al., 2020). All these concepts refer to the soundness of the study.

As far as the validity of research in a qualitative study is concerned, some authors suggest terms such as "understanding" and "authenticity" (Cohen et al., 2018). This is due to the fact that the researchers are the main instruments of a study, so they are part of the world of research, and through the prism of their understanding, the knowledge is gained in equal measure to the perspectives of other people. At the same time, the validity of the study in qualitative research refers to the "correctness" and "precision" of the findings as well as their interpretations (Lewis et al., 2003, p. 273). For instance, Lincoln and Guba (1985) suggest the terms "credibility" and "transferability" of qualitative evidence.

 In other words, the credibility of the current study was assured through the honest self-reporting of the research (Cohen et al., 2018). The transferability of this study was ensured by presenting the data in terms of the respondents rather than the researcher. That is, the researcher tried to avoid making subjective judgments in her interpretations through the validation of the respondents. After transcribing and coding the interviews, the transcripts were returned to the study participants for member checking. The respondents thus provided more in-depth information and content validation of their interviews.

3.7.3 Inference Quality

Greene (2007) suggests using the term inference quality in mixed research studies as it refers to the researcher's interpretations of study results, outcomes, and conclusions in

"multiple inquiry traditions" (p. 167). According to Teddlie and Tashakkori (2003), inference quality is "the mixed methods term for the accuracy with which we have drawn both our inductively and deductively derived conclusion from a study" (p. 36). Teddlie and Tashakkori (2003) highlight two essential aspects of inference quality: "the design quality", which warrants the quality of the method, and "the interpretive rigour", which warrants the quality of interpretation (p. 37). Also, Greene (2007) lists several characteristics of inference quality that pertain to the soundness of the study, such as: "particularity and generality, closeness and distance, meaning and causality, the unusual and the representative, the diversity with the range and the central tendency of the average" (p. 171).

3.8 Ethical Considerations

Ethical considerations of research and its procedures act, in fact, as a guarantee and protection of the study participants and researchers, as well as third parties' rights and entitlements. Resnik (2015) describes ethics as "norms for conduct that distinguish between acceptable and unacceptable behavior" (p. 2). Indeed, within the code of ethics, every stage of a study, starting with preliminary steps up until the final report, is systematised in a way that provides protection for all the participants of the research. Ethical considerations are an inevitable part of any kind of study; that is, under no conditions should it be forgotten throughout the whole process of research. To be exact, obtaining the approval of the ethics committee or access through the study gatekeepers is not enough to proceed with the research.

Concerning this doctoral dissertation of examining *Pre-service teachers' beliefs about students with special educational needs and their inclusion in mainstream schools,* it was essential to acknowledge that the researcher might have encountered some ethical issues. That is why overcoming potential risks that might have appeared for the study participants

was an essential part of the research process. Namely, the various aspects of vulnerability had been taken into consideration first-hand. Moreover, the provision of the opportunity to withdraw at any stage of research was an essential part of respecting the autonomy of the study participant, as well as keeping the data confidential and anonymous.

The first step was gaining access to the site through the potential gatekeepers, in the case of this study, through the university administration. For this reason, an official letter and/or email with detailed information about the study, including Consent Forms and Information Sheets, were sent to the gatekeepers to collect data from HEIs. Afterwards, signed personal consent forms were obtained from the potential study participants during the semi-structured interview phase. The letter to gain access and informed consent forms are available in Appendix H.

In the case of the anonymous online surveys, the students were presented with some brief information about the study prior to their delving further into the main survey, where they were provided with the opportunity to either agree or disagree to participate in the study. For the online surveys, if someone ticked a box indicating that they did not give their consent, the survey came to an end. Even during the interviews, it was essential to double-check and re-ask the interviewees for their agreement to participate in the study. All the participants were reminded about the confidentiality of the collected data and their right to withdraw at any time without penalty or loss of benefits. All the transcribed and coded audio-recorded data remained confidential. The collected data is being stored securely on a password-protected hard drive and will be destroyed three years after the completion of the study.

Cohen et al. (2011) stress that ethical considerations are "the way to protect the well-being of participants from any harm or danger that would affect them whether physically or psychologically as a consequence of the interview" (p. 382). It is incredibly crucial to

consider the ethical issues related to the study participants in terms of keeping their identity confidential and minimising potential risks from the research (Cohen et al., 2018; Creswell & Creswell, 2018; Tashakkori et al., 2021). Consequently, no personal identity has or will be disclosed in the data or data presentations. Deletion of identities, in particular, deletion of names and addresses, was implied in order to maintain the anonymity of the study participants (Cohen et al., 2018; Creswell & Creswell, 2018; Tashakkori et al., 2021). Their confidentiality was ensured by using pseudonyms for the participants (Cohen et al., 2018; Creswell & Creswell, 2018; Tashakkori et al., 2021).

As for the survey, the study participants were informed that their participation in the research was entirely voluntary, and they would not be identified in the final data analysis. They also had the option of declining their participation by not completing the questionnaires. The collected data has been stored securely on the password-protected network for the purposes of this dissertation work and will be destroyed three years after the completion of the study.

Benefits and risks in any kind of study is a significant aspect of research ethics that provides participants with a deeper understanding of the potential issues they may face during their participation in a given study (Cohen et al., 2018; Creswell & Creswell, 2018; Tashakkori et al., 2021). Another point to mention is that, in a study, there should be a balance between its risks and benefits, that is, research without any potential benefit, and in general, any research is worthless if it is too risky. The main benefit for the study participants has been the opportunity to share their beliefs, thoughts, and perspectives in regard to the suggestions for improving their pre-service teacher education practices for inclusive education.

This study had minimal risks for the participants. Participants were reminded that volunteering for the study would not impact their status or affect any benefits they receive as

a student at their educational facility. It is acknowledged that the study participants may have felt uncomfortable talking about specific topics or experiences and the challenges they might have faced. To eliminate this stress, it was crucial to remind participants that no responses would be judged or criticised. The collected data will be stored securely on the password-protected hard drive and will be destroyed three years after the end of the study based in accordance with the university regulations.

3.9 Conclusion

This chapter has presented the methodology in regard to the exploration of Kazakhstani pre-service teachers' beliefs about students with SEN, as well as their inclusion in mainstream classrooms. First, the concept of a paradigm that positions the research approach within the ontology and epistemology of the study was discussed. Further, justifications for adopting mixed-methods inquiry were provided. Then, the third section of the chapter delivered a thorough discussion of the methods by presenting an overview and description of the participants and sampling, instrument development, data analysis approaches, as well as the validity and reliability issues. The data collection in the first phase of the study involved an online survey which was sent to 12 HEIs across the country and 796 pre-service teachers responded to the survey. The quantitative data analysis included descriptive and inferential statistical analysis, where qualitative data to open-ended questions were coded manually and was subject to content and frequency analysis. The second phase of the study involved online semi-structured interviews with 12 pre-service teachers, and thematic analysis was conducted with the collected data. Finally, the ethical considerations were presented in this chapter. The findings from Phase 1 quantitative data are presented in the following chapter and the findings from Phase 2 qualitative data are presented in Chapter 5.

Chapter 4. Quantitative Findings

This chapter presents the findings derived from the quantitative analysis of the 796 completed surveys obtained during the quantitative phase of the research at 12 different universities across Kazakhstan in relationship to pre-service teachers' beliefs about students with SEN and their inclusion in mainstream classrooms; their readiness and self-efficacy to implement inclusive teaching practices; and the ideas they propose to change their initial teacher education programs to help them be better prepared to teach in inclusive environments.

The chapter is organized into six sections. The first section provides an analysis of responses to the My Thinking About Inclusion (MTAI) survey, which was used to explore pre-service teachers' beliefs about inclusion. Both univariate and multivariate analyses of survey data demonstrated positive views about the inclusion of children with SEN to mainstream schools in Kazakhstan, but participants reported challenges regarding their confidence with practical classroom skills for inclusion.

The second section of this chapter uncovers the factors influencing pre-service teachers' beliefs about including children with SEN in mainstream classrooms. The findings of this study indicate that neither demographic nor educational characteristics appear to have an impact on the views of pre-service teachers from Kazakhstan about including children with SEN in regular classes.

In the third section, the analysis of the responses to the Teacher Efficacy for Inclusive Practices (TEIP) survey is represented, which focuses on pre-service teachers' self-efficacy to work in inclusive classrooms. Overall, the findings suggest that pre-service teachers feel confident in managing classroom behaviour, cooperating with colleagues, and implementing diverse teaching and assessment approaches. However, they expressed comparatively lower

confidence in implementing inclusive instructions, especially in designing tasks that would meet the individual needs of students with SEN.

The fourth section presents factors influencing pre-service teachers' self-efficacy beliefs. The findings suggest that female pre-service teachers had higher self-efficacy and inclusive cooperation beliefs than their male counterparts. Special education majors exhibited poorer self-efficacy views than other majors in a variety of domains, with those from Joint-Stock Universities having the lowest self-efficacy for working in inclusive environments.

The fifth section demonstrates responses to the open-ended questions included in the survey, where participants shared their suggestions on how ITE programmes could prepare them better for their future careers. According to the results, pre-service teachers are satisfied with their ITE programmes, but they recommend enhancing practical training by giving students real-world experience in inclusive classrooms. They also want more knowledge on how to teach students with SEN.

Finally, section six provides a summary of the quantitative data findings and overall concluding remarks of the chapter.

4.1 Pre-service Teachers' Beliefs about Students with SEN and Their Inclusion

Descriptive statistics of central tendency (i.e., mean) and spread (i.e., standard deviation) were used in this study to provide an overview of pre-service teachers' beliefs about children with SEN as measured by the MTAI scale. Before performing statistical analyses, a total score for teachers' beliefs about inclusion was calculated, summing up the scores of the 28 items of the MTAI after reversing negatively worded items[1]. Also, relevant subscales items were summed to yield a score for core perspectives (items 1-12, range 12-

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[1] MTAI reversed items: 2, 3, 7, 8, 9, 14, 15, 19, 22, 23, 25, 26, and 28.

60), expected outcomes (items 13-23, range 11-55), and classroom practices (items 24-28, range 5-25).

In general, the responses of the pre-service teachers across Kazakhstan showed positive core perspectives on inclusion and children with SEN *(M = 39.15; SD = 3.99)*. Also, they hold positive views on the expected outcomes of inclusive education *(M = 35.06; SD = 3.48)*. However, the participants' responses in the subscale measuring their ability to work in inclusive classrooms as reported in the classroom practices scale were less positive, with means only slightly above the midpoint of the scale *(M = 13.53; SD = 1.95)*, thus indicating pre-service teachers' hesitant views regarding their classroom practices skills (See Table 6).

Table 6

Descriptive Statistics on Beliefs about Inclusion

Sub-scales	Items	M	SD
Core Perspectives	12	39.15	3.99
Expected Outcomes	11	35.06	3.48
Classroom Practices	5	13.53	1.95
Total Beliefs about Inclusion	28	87.85	6.14

4.1.1 Core Perspectives

Twelve items of the survey instrument were included to measure pre-service teachers' core perspectives towards inclusion. Table 7 presents the means and standard deviation for each item in the core perspectives subscale. The results indicate that pre-service teachers support inclusion and believe that an equal educational opportunity should be given to every child (Item 4, *M* = 3.91; *SD* = .87). They also believe that inclusion brings certain benefits for parents of children with SEN (Item 5, *M* = 3.81; *SD* = .87). In general, they hold positive views about children with SEN and their inclusion and hold a prevailing opinion that "The best way to begin educating children in inclusive settings is just to do it" (Item 10, *M* = 3.79;

SD = .87). According to the responses, pre-service teachers are less positive about the need to learn more about the effects of inclusive classrooms before inclusive classrooms take place on a large-scale basis (Item 9, *M* = 2.06; *SD* = .80).

Table 7

Descriptive Statistics on Core Perspectives

#	Statement	M	SD
Item 4	Children with special education needs should be given every opportunity to function in an inclusive classroom.	3.91	.87
Item 5	Inclusion can be beneficial for parents of children with special education needs.	3.81	.87
Item 10	The best way to begin educating children in inclusive settings is just to do it.	3.79	.87
Item 1	Students with special needs have the right to be educated in the same classroom as typically developing students.	3.61	1.04
Item 11	Most children with special needs are well-behaved in inclusive education classrooms.	3.44	.80
Item 6	Parents of children with special needs prefer to have their child placed in an inclusive classroom setting.	3.43	.83
Item 12	It is feasible to teach children with average abilities and special needs in the same classroom.	3.36	.92
Item 2	Inclusion is NOT a desirable practice for educating most typically developing students.	3.22	.98
Item 3	It is difficult to maintain order in a classroom that contains a mix of children with special education needs and children with average abilities.	2.99	1.02
Item 8	The individual needs of children with disabilities CANNOT be addressed adequately by a regular education teacher.	2.71	.93
Item 7	Most special education teachers lack an appropriate knowledge base to educate typically developing students effectively.	2.61	.96
Item 9	We must learn more about the effects of inclusive classrooms before inclusive classrooms take place on a large-scale basis.	2.06	.80

4.1.2 Expected Outcomes

Eleven items of the survey instrument were included to measure pre-service teachers' expected outcomes towards inclusion, which are expectations and views regarding the influence of educational practices and outcomes on students with SEN. Table 8 presents the

descriptive statistics for each item in the expected outcomes subscale. The means of the pre-service teachers' responses were, in general, similar to the core perspectives subscale. The highest means were achieved for items 13 and 17, demonstrating that pre-service teachers in this study believe that inclusion has positive social outcomes on children with special needs. Moreover, the responses of the pre-service teachers in the sample illustrate that they generally agree that inclusion enhances the self-esteem of children with SEN (Item 18, $M =$ 3.56; $SD = .82$), and they develop a better self-concept (Item 20, $M = 3.52$; $SD = .80$). Also, the analysis found that the lowest mean in the subscale is associated with items 14 $(M = 2.66$; $SD = .85)$ and 15 ($M = 2.72$; $SD = .87$), signifying that pre-service teacher expresses their support for inclusive education practices rather than educating children with SEN separately and they support the view that children SEN would not be isolated or ignored by their peers.

Table 8

Descriptive Statistics on Expected Outcomes

#	Statement	M	SD
Item 13	Inclusion is socially advantageous for children with special needs.	3.68	.79
Item 17	Inclusion promotes social independence among children with special needs.	3.62	.76
Item 18	Inclusion promotes self-esteem among children with special needs.	3.56	.82
Item 20	Children with special needs in inclusive classrooms develop a better self-concept than in a self-contained classroom.	3.52	.80
Item 16	The presence of children with special education needs promotes acceptance of individual differences on the part of typically developing students.	3.46	.81
Item 21	The challenge of a regular education classroom promotes academic growth among children with special education needs.	3.41	.80
Item 23	Typically developing students in inclusive classrooms are more likely to exhibit challenging behaviors learned from children with special needs.	2.86	.89
Item 22	Isolation in a special class does NOT have a negative effect on the social and emotional development of students prior to middle school.	2.81	.90
Item 19	Children with special needs are likely to exhibit more challenging behaviors in an inclusive classroom setting.	2.75	.86
Item 15	Children with special needs are likely to be isolated by typically developing students in inclusive classrooms.	2.72	.87
Item 14	Children with special needs will probably develop academic skills more rapidly in a special, separate classroom than in an inclusive classroom.	2.66	.85

4.1.3 Classroom Practices

Five items of the survey instrument were included to measure pre-service teachers' classroom practices towards inclusion. Table 9 represents the descriptive statistics for each item in the classroom practices subscale. The highest mean in the subscale was reported for item 24 ($M = 3.32$; $SD = .96$) and item 27 ($M = 3.21$; $SD = .87$), which suggests that pre-service teachers are considerably concerned about the time and effort required to include children with special needs into the mainstream classroom. At the same time, pre-service

teachers tend to believe that parents of children with SEN do not require higher support

demands in comparison to parents of typically developing children. On the other hand, the

lowest mean in the subscale is associated with item 28 ($M = 2.20$; $SD = .85$), indicating that

pre-service teachers feel confident in their ability to manage inclusive classrooms and they do

not see the responsibility of teaching assistants in the form of providing support only for

children with SEN, but supporting the whole class.

Table 9

Descriptive Statistics on Classroom Practices

#	Statement	M	SD
Item 24	Children with special needs monopolize teachers' time.	3.32	.96
Item 27	Parents of children with special needs present no greater challenge for a classroom teacher than do parents of a regular education student.	3.21	.87
Item 25	The behaviors of students with special needs require significantly more teacher-directed attention than those of typically developing children.	2.42	.87
Item 26	Parents of children with special education needs require more supportive services from teachers than parents of typically developing children.	2.38	.86
Item 28	A good approach to managing inclusive classrooms is to have a special education teacher be responsible for instructing the children with special needs.	2.20	.85

This section reported the univariate analysis of student teachers' beliefs about

children with SEN in the sections of core perspectives, expected outcomes, and classroom

practices. In general, the findings suggest that pre-service teachers hold positive views on

inclusion and children with SEN. Overall, they support the large-scale implementation of

inclusive education and believe that every child should be given an equal opportunity to be

educated in regular classrooms. The analyses identified that pre-service teachers believe

inclusive education practices benefit children with SEN as it enhances the development and

satisfaction of their social needs. Also, the findings suggest that teachers feel uncertain about

their responsibility in inclusive classrooms, particularly about the time and attention required by children with SEN, as they believe children with SEN require more support than typically developing students. The respondents have also indicated that they do not believe they will experience any challenging relations with parents of children with SEN, as they are of the belief that not only parents of children with SEN but also parents of children with typical development may request more teacher support. Finally, pre-service teachers view the role of teaching assistants as supporters to the whole class rather than only assisting children with SEN.

4.2 Factors Influencing Pre-Service Teachers' Beliefs about Children with SEN and Their Inclusion

This section presents the results of a series of inferential analyses aimed at exploring the influence of Kazakhstani pre-service teachers' demographic variables (i.e., gender) and education-related factors (i.e., major and type of university) on their beliefs about the inclusion of children with SEN in mainstream schools.

4.2.1 The Effect of Gender on Pre-Service Teachers' Beliefs about Inclusion

To explore whether gender influences Kazakhstani student-teachers' beliefs about inclusion, a series of independent-sample t-tests were conducted to compare the responses of male and female ITE students in the three MTAI (Core Perspectives, Expected Outcomes, Classroom Practices) and the total score for Total Beliefs about Inclusion. The independent variable was gender, and the dependent variables were computed from the score for each subscale in the questionnaire and the total score.

The results demonstrated that there were no statistically significant differences across gender for any of the dependent variables (Core Perspectives, Expected Outcomes, Classroom Practices, and Total Beliefs about Inclusion) (see Table 10).

Table 10

The Effect of Gender on Pre-Service Teachers' Beliefs about Inclusion

	Male		Female					
	M	*SD*	*M*	*SD*	*df*	*t*	*p*	*d*
Core Perspectives	38.44	3.69	39.21	4.00	709	-1.51	.15	.00
Expected Outcomes	34.35	3.63	35.14	3.47	698	-1.77	.08	.00
Classroom Practices	13.88	2.01	13.49	1.94	724	1.60	.11	.00
Total Beliefs	87.16	5.61	87.88	6.17	656	-.89	.38	.00

4.2.2 The Influence of University Degree on Pre-Service Teachers' Beliefs about Inclusion

A series of One-way Between-subjects Analysis of Variance was conducted to explore the impact of university majors on levels of Core Perspectives, Expected Outcomes, Classroom Practices, and Total Beliefs about Inclusion. Subjects were divided into three groups according to their major (Group 1: Natural and Technical Sciences; Group 2: Humanities and Social Sciences; Group 3: Special Education). The results revealed that there were no statistically significant differences across university majors for any of the dependent variables (see Table 11).

4.2.3 The Impact of University Type on Pre-Service Teachers' Beliefs about Inclusion

A series of One-way Between-subject Analyses of Variance (ANOVA) was run to establish if there is a statistical difference in Core Perspectives, Expected Outcomes, Classroom Practices, and Total Beliefs about Inclusion across types of university. Participants were divided into four groups based on the type of university they attended: Group 1: National University; Group 2: State University; Group 3: Joint-stock University; Group 4: Private University. The independent variable of this cluster of analysis was University Type with the four above-mentioned values. As for the dependent variables, they were computed from total scores in Core Perspectives, Expected Outcomes, Classroom

Practices and Total Beliefs about Inclusion. No statistically significant differences were observed between the responses of students attending different types of universities for all the dependent variables (see Table 12).

In general, the findings of this study suggest that no demographic- or education-related factor seems to have any influence on the beliefs of Kazakhstani pre-service teachers about the inclusion of children with SEN into mainstream classrooms.

Table 11

The Influence of the Major on Pre-Service Teachers' Beliefs about Inclusion

	Natural and Technical Sciences		Humanities and Social Sciences		Special Education		df	F	p	η2
	M	*SD*	*M*	*SD*	*M*	*SD*				
Core Perspectives	39.75	3.96	39	4.08	38.74	3.70	2, 667	3.06	.05	.01
Expected Outcomes	35.03	3.32	35.19	3.56	34.83	3.47	2, 659	.59	.58	.00
Classroom Practices	13.46	1.68	13.48	1.91	13.75	2.30	2, 686	1.20	.30	.00
Total Beliefs	88.44	6.22	87.76	6.23	87.44	5.96	2, 617	1.08	.34	.00

Table 12

The Impact of the University Types on Pre-Service Teachers' Beliefs about Inclusion

Variable	National University		State University		Joint-stock University		Private University		df	F	p	η2
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*				
Core Perspectives	39.42	4.31	39.06	3.84	38.68	3.62	39.02	4.27	3, 693	.74	.53	.00
Expected Outcomes	34.78	3.37	35.09	3.59	35.39	3.35	35.95	3.69	3, 682	1.95	. 12	.00
Classroom Practices	13.47	1.71	13.69	1.95	13.44	2.33	12.98	2.95	3, 707	2.55	.06	.01
Total Beliefs	87.79	6.55	87.97	5.97	87.43	5.64	87.93	6.70	3, 641	.16	.93	.00

4.3 Pre-service Teacher Self-Perceived Competence in Inclusive Education

The Teacher Efficacy for Inclusive Practices (TEIP) was used in this study to measure Kazakhstani pre-service teachers' perceived preparedness and self-efficacy beliefs to work in inclusive environments. The scores from the six items that make up each subscale of the questionnaire (i.e., Behaviour Management, Cooperation Efficacy, Efficacy to Use Inclusive Instructions) were computed by summing up the scores of the responses of the participants to the corresponding items in the subscale. Also, a total score for teacher-perceived self-efficacy for inclusive education was calculated by summing up the scores of all items of the TEIP.

Table 13 presents the descriptive statistics for the three TEIP subscales of the questionnaire, and the total self-efficacy beliefs score. This is the first time that the TEIP questionnaire has been used in the context of Kazakhstan. Therefore, it is not possible to compare the scores in our sample with previous studies to determine whether pre-service teachers' self-efficacy beliefs about working in an inclusive environment are comparatively high or low. Still, considering the range of the Likert scale in the instrument (from 1 "strongly disagree" to 6 "strongly agree") and the direction of the scoring, the TEIP total score ($M = $ 82.05, $SD = $ 11.12) indicated pre-service teachers in this study had a relatively high level of self-efficacy for inclusive practices. However, the levels of perceived teaching efficacy related to managing behaviour were the lowest ($M = $ 26.42, $SD = $ 4.16), while the highest levels of confidence were related to the use of inclusive instruction ($M = $ 28.27, $SD = $ 4.17).

Table 13

Descriptive Statistics on Self-Efficacy

Sub-scales	Item	M	SD
Behaviour Management	6	26.42	4.16
Cooperation Efficacy	6	27.41	4.27
Efficacy to Use Inclusive Instructions	6	28.27	4.17
Total Self-efficacy	18	82.05	11.12

4.3.1 Behaviour Management

Six items of the survey instrument measure pre-service teachers' behaviour management in inclusive classrooms. Table 14 contains the descriptive analyses for each item in the behaviour management subscale. Mean scores suggest that, overall, pre-service teachers report self-efficacy beliefs beyond the middle point in the Likert Scale (from 1 to 6). They seem particularly confident about getting children to follow the classroom rules (item 11, $M = 4.72$, $SD = 0.95$), although slightly less prepared to deal with students who are physically aggressive (item 17, $M = 4.24$, $SD = 1.15$). Although still positive, pre-service teachers are less confident about making expectations about student behaviour clear in their practice (item 1, $M = 4.20$; $SD = 1.06$).

Table 14

Descriptive Statistics on Behaviour Management

#	Statement	M	SD
Item 11	I am able to get children to follow classroom rules	4.72	.95
Item 2	I am able to calm a student who is disruptive or noisy	4.48	1.00
Item 8	I can control disruptive behavior in the classroom	4.41	1.06
Item 7	I am confident in my ability to prevent disruptive behavior in the classroom before it occurs	4.39	1.04
Item 17	I am confident when dealing with students who are physically aggressive	4.24	1.15
Item 1	I can make expectations clear about student behavior	4.20	1.06

4.3.2 Cooperation Efficacy

Six items of the survey instrument were included to measure pre-service teachers' self-efficacy to cooperate with others in inclusive classrooms. Table 15 displays the means and standard deviation for each item in the cooperation efficacy subscale. The findings suggest that pre-service teachers feel confident about collaborating with other professionals to design educational plans for children with SEN (item 12, $M = 4.69$; $SD = 1.04$) and teach students with disabilities (item 13, $M = 4.69$; $SD = 1.02$). Also, they are prepared to assist

families of children with special needs (item 4, $M = 4.61$, $SD = 1.00$) and make parents

comfortable visiting schools (item 3, $M = 4.59$, $SD = 1.00$). However, they seem to feel less

prepared to share information with others about inclusive policies (item 16, $M = 4.37$; $SD = 1.07$).

Table 15

Descriptive Statistics on Cooperation Efficacy

#	Statement	M	SD
Item 12	I can collaborate with other professionals (e.g., itinerant teachers or speech pathologists) in designing educational plans for students with disabilities	4.69	1.04
Item 13	I am able to work jointly with other professionals and staff (e.g., aides, other teachers) to teach students with disabilities in the classroom	4.69	1.02
Item 4	I can assist families in helping their children to do well in school	4.61	1.00
Item 3	I can make parents feel comfortable coming to school	4.59	1.00
Item 9	I am confident in my ability to get parents involved in school activities of their children with disabilities	4.47	1.01
Item 16	I am confident in informing others who know little about laws and policies relating to the inclusion of students with disabilities	4.37	1.07

4.3.3 Efficacy to Use Inclusive Instructions

An additional six survey items were included to measure pre-service teachers'

efficacy in using inclusive instructions. Table 16 presents the means and standard deviation

for each item for the efficacy to use the inclusive instructions subscale. The mean scores in

this subscale are the highest of all three subscales. Pre-service teachers are particularly

confident about applying various teaching methods: group works, assessment strategies, and

alternative ways of explanations of the subject matter, which are evidenced in the highest

scores in item 14 *(M = 4.80; SD = .95)*, item 15 *(M = 4.80; SD = .95)*, and item 18 *(M = 4.75; SD = .96)*. In general, pre-service teachers feel confident about their professional pedagogical

training regarding teaching approaches and assessment strategies. Pre-service teachers tend to be slightly less confident in accommodating every learner's needs, in particular, the needs of students with disabilities (item 10, *M* = 4.59; *SD* = 1.00).

Table 16

Descriptive Statistics on Efficacy to Use Inclusive Instructions

#	Statement	M	SD
Item 14	I am confident in my ability to get students to work together in pairs or in small groups	4.80	.95
Item 15	I can use a variety of assessment strategies (for example, portfolio assessment, modified tests, performance-based assessment, etc.)	4.77	.94
Item 18	I am able to provide an alternate explanation for example when students are confused	4.75	.96
Item 6	I can provide appropriate challenges for very capable students	4.71	1.00
Item 5	I can accurately gauge student comprehension of what I have taught	4.61	.97
Item 10	I am confident in designing learning tasks so that the individual needs of students with disabilities are accommodated	4.59	1.00

This section reported univariate analyses of pre-service teachers' self-efficacy beliefs to work in an inclusive environment that consisted of behavioural management, efficacy to cooperate with others, and the efficacy to use inclusive instructions. Overall, pre-service teachers tend to feel prepared to collaborate with colleagues and families to support students with SEN, apply diverse teaching and assessment approaches for the inclusion of these children in mainstream classrooms, and ensure students follow the classroom rules. However, they seem to be less confident in managing disturbing classroom behaviour, especially in dealing with physically aggressive children and providing clear expectations to control this behaviour. Also, they tend to feel ill-prepared to share knowledge about laws and policies relating to inclusive education and designing learning tasks that would meet all individual needs of students, particularly the needs of students with SEN.

4.4 Factors Influencing Pre-Service Teachers' Self-Efficacy

The influence of demographic variables of the survey respondents such as gender, major, and type of university on Kazakhstani pre-service teachers' self-efficacy beliefs to work with children with SEN in inclusive classrooms is reported in this section.

4.4.1 The Effect of Gender on Pre-Service Teachers' Self-Efficacy About Teaching Children with SEN

An independent-samples t-test was conducted to examine gender differences in pre-service teachers' self-efficacy beliefs about teaching children with SEN. The independent variable was gender, and the dependent variables were computed subscale scores (behaviour management, cooperation efficacy, efficacy to use inclusive instructions, and total self-efficacy) in the questionnaire.

The results showed that there was a statistically significant difference in Cooperation Efficacy across genders, t (73.08) = -2.23, p = .03. Female pre-service teachers reported statistically significantly higher cooperation self-efficacy beliefs (M = 27.54, SD = 4.17) compared to males (M = 26.09, SD = 5.01). The magnitude of the differences in the means, however, was small (d = .01). No significant effects of gender on Behaviour Management, Efficacy to use Inclusive Instructions, and Total Self-Efficacy Beliefs were found (see Table 17).

Table 17

The Effect of Gender on Pre-Service Teachers' Self-Efficacy Beliefs

	Male		Female					
	M	SD	M	SD	df	t	p	d
Behavior Management	26.47	4.40	26.38	4.11	633	.16	.87	.00
Cooperation	26.09	5.01	27.54	4.17	73.08	-2.23	.03	.01
Inclusive Instructions	27.87	5.01	28.29	4.08	634	.05	.46	.00
Total Self-Efficacy	80.11	12.85	82.17	10.92	608	-1.33	.18	.01

4.4.2 The Impact of Major on Pre-Service Teachers' Self-Efficacy about Teaching Children With SEN

A series of five One-way Between-subject Analysis of Variance (ANOVA) was run to determine the effect of university majors on pre-service teacher self-efficacy beliefs about teaching students with SEN. Participants were divided into three groups, based on their university major: Group 1: Natural and Technical Sciences; Group 2: Humanities and Social Sciences; Group 3: Special Education. The independent variable of this cluster of analysis was Major, with the three above-mentioned variables. As for the dependent variables, they were computed from total scores in Behaviour Management, Cooperation Efficacy, Efficacy to Use Inclusive Instructions, and Total Self-Efficacy.

Interestingly, the findings demonstrated that students majoring in a Special Education degree reported lower self-efficacy beliefs about teaching students with SEN compared to those in a Natural and Technical Sciences or Humanities and Social Sciences degree.

First, there was a statistically significant difference in *Behavioural Management* self-efficacy scores across the major groups [F (2, 597) = 9.04, p < .001, η^2 = .03]. Post-hoc comparisons using the Tukey HSD test indicated that students in Natural and Technical Sciences majors (M = 27.45, SD = 3.53) reported statistically higher self-efficacy beliefs than those in Humanities and Social Sciences majors (M = 26.13, SD = 4.12; p < .01) and in Special Education majors (M = 25.44, SD = 4.55; p < .001) (see Figure 5).

Figure 5

The Influence of the Major on Behaviour Management
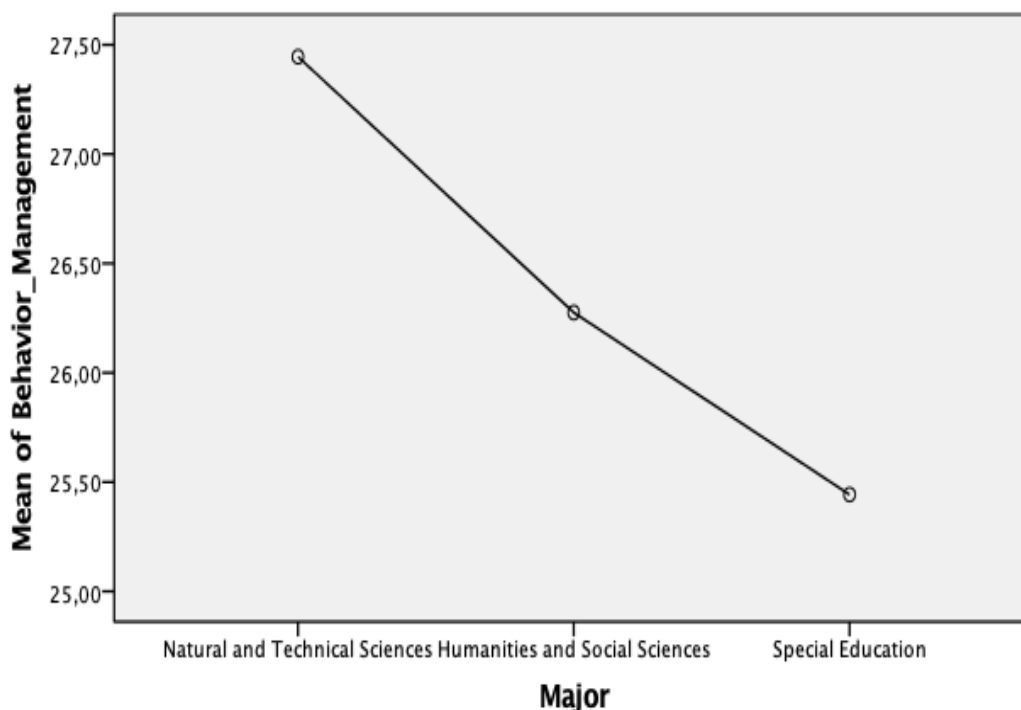
Secondly, there was a statistically significant difference in the reported cooperation self-efficacy beliefs across the three university major groups [F (2, 599) = 8.79, p < .001, η^2 = .03]. Post-hoc comparisons using the Tukey HSD test indicated that pre-service teachers in Special Education majors (*M* = 26.31, *SD* = 4.93) reported statistically significant lower *Cooperation* self-efficacy scores than students in Natural and Technical Sciences majors (*M* = 28.33, *SD* = 3.87; *p* < .000) value and students in Humanities and Social Sciences (*M* = 27.49, *SD* = 3.84; *p* < .05). No differences between self-efficacy cooperation beliefs were found between students in Natural and Technical Sciences and Humanities and Social Sciences majors (see Figure 6).

Figure 6

The Influence of The Major on Cooperation Efficacy
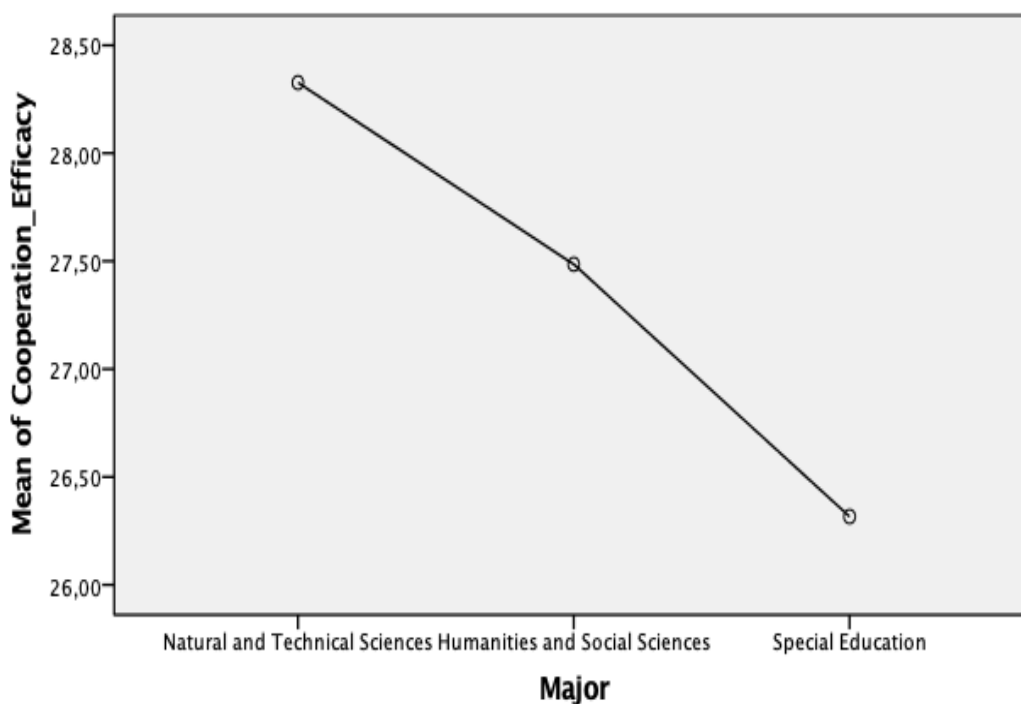
The same was true for pre-service teachers' self-efficacy beliefs about using inclusive instructions [F (2, 599) = 22.93, $p < .001$, $\eta^2 = .07$]. Post-hoc comparisons using the Tukey HSD test indicated that students in Special Education majors ($M = 26.44$, $SD = 4.71$) scored statistically significantly lower at the $p < .001$ value compared to students in Natural and Technical Sciences majors ($M = 29.44$, $SD = 3.35$) and students in Humanities and Social Sciences majors ($M = 28.58$, SD = 3.84). No statistically significant difference was found between students in Natural and Technical Sciences and Humanities and Social Sciences majors (see Figure 7).

Figure 7

The Influence of the Major on Efficacy to Use Inclusive Instructions
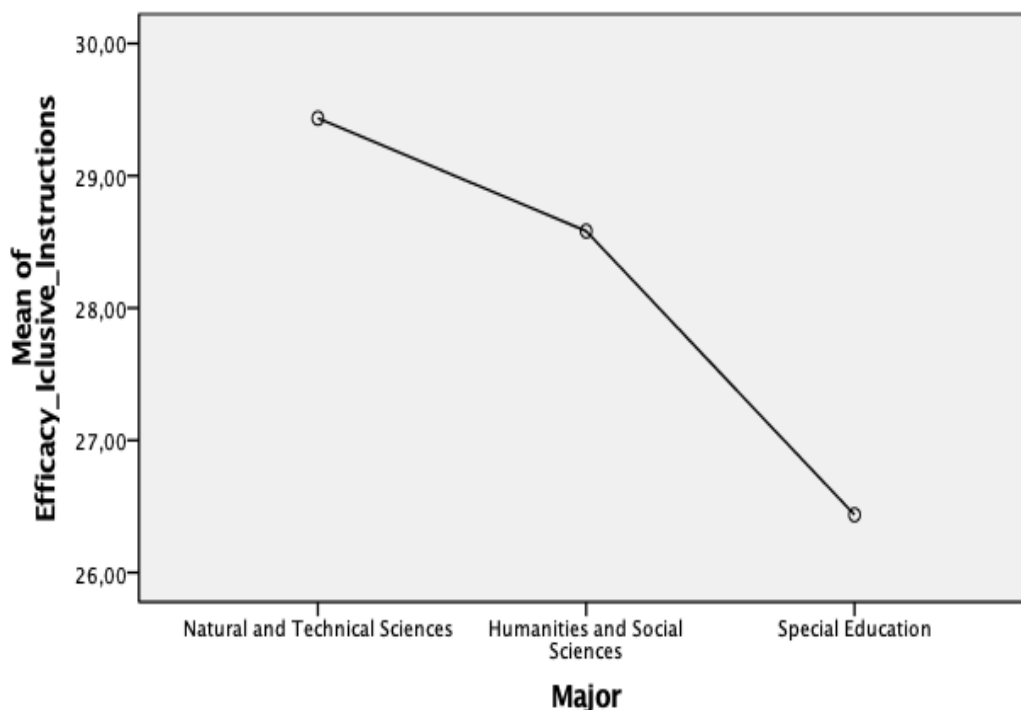
There was also a statistically significant effect of university major on total self-efficacy beliefs about teaching students with SEN [$F(2, 573) = 16.11$, $p < .001$, $\eta^2 = .05$]. Post-hoc comparisons using the Tukey HSD test indicated that the *Total* self-efficacy beliefs of pre-service teachers in Natural and Technical Sciences majors ($M = 85.18$, $SD = 9.36$) were statistically higher than those students in Humanities and Social Sciences majors ($M = 82.31$, $SD = 10.24$; $p < .05$) and students in Special Education majors ($M = 78.06$, $SD = 12.54$; $p < .001$). Also, the total self-efficacy beliefs of teachers in Special Education majors were significantly lower than the self-efficacy beliefs of students in Humanities and Social Sciences majors (see Figure 8).

Figure 8

The Influence of The Major on Total Self-Efficacy Beliefs
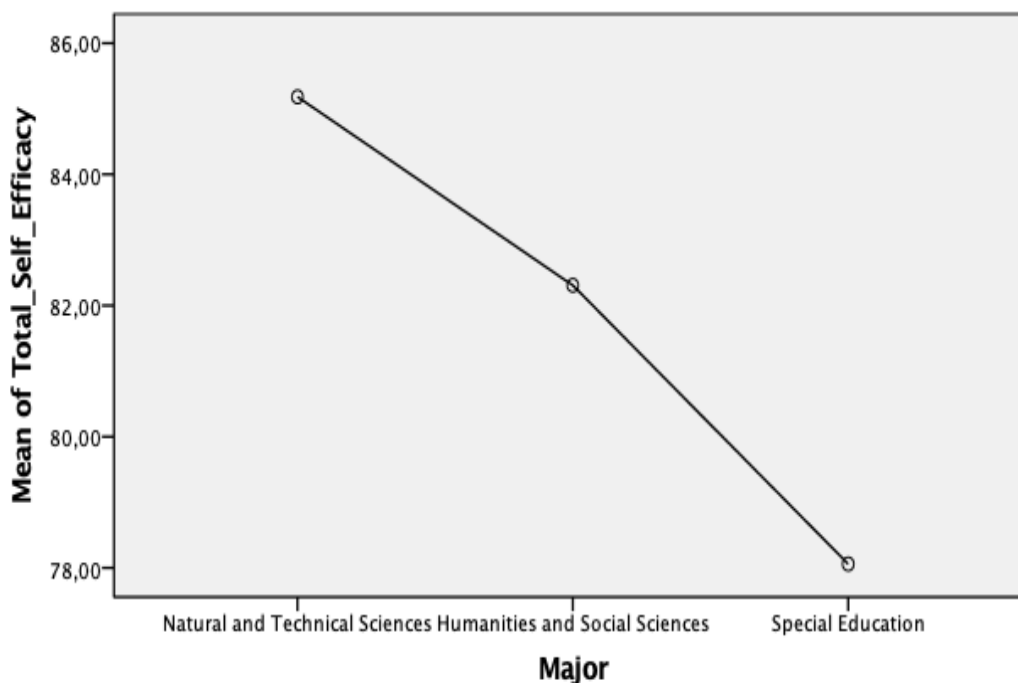
4.4.3 The Impact of University Type on Pre-Service Teachers' Self-Efficacy about Teaching Children with SEN

A series of One-way Between-subject Analysis of Variance (ANOVA) was run to establish if there is a statistical difference in Behaviour Management, Cooperation Efficacy, Efficacy to Use Inclusive Instructions, and Total Self-Efficacy about Inclusion within groups of university type. Participants were divided into four groups: Group 1: National University; Group 2: State University; Group 3: Joint-stock University; Group 4: Private University. The independent variable of this cluster of analysis was University Type with the four above-mentioned values. As for the dependent variables, they were computed from total scores in Behaviour Management, Cooperation Efficacy, Efficacy to Use Inclusive Instructions, and Total Self-Efficacy.

Overall, the findings indicated that the pre-service teachers studying in Joint-stock Universities tend to have lower self-efficacy beliefs in comparison to the future teachers

studying in Private and National Universities. On the contrary, no statistically significant differences in self-efficacy beliefs were identified compared to pre-service teachers studying in State Universities.

There was a statistically significant difference in *Total* self-efficacy belief scores across the University Types groups [F (3, 592) = 5, p = .002, η^2 = .02]. Post-hoc comparison using the Tukey HSD test indicated that the total self-efficacy beliefs of pre-service teachers at Joint-stock University (M = 79.01, SD = 11.39) were statistically lower than in National University (M = 83.76, SD = 10.39) at the p < .01 value, and Private University (M = 85.25, SD = 8.83) at the p < .05 value (see Figure 9).

Figure 9

The Influence of The University Types on Total Self-Efficacy Beliefs
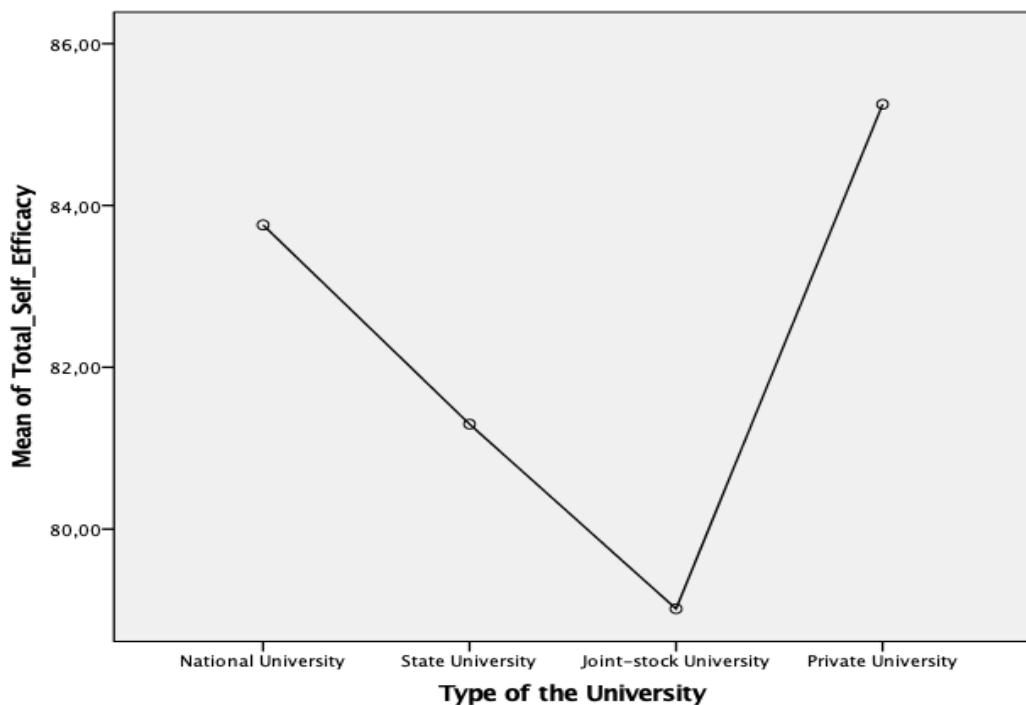
Moreover, there was a statistically significant difference at the p < .01 level in Behavioural Management score for the University Types groups [F (3, 617) = 3.82, p < .01, η^2 = .02]. Post-hoc comparison using the Tukey HSD test indicated that the behavioural

management of pre-service teachers at National University ($M = 27.16$, $SD = 3.82$) was statistically higher than in Joint-stock University ($M = 25.31$, $SD = 4.40$) at the $p < .01$ value (see Figure 10).

Figure 10

The Influence of The University Types on Behaviour Management
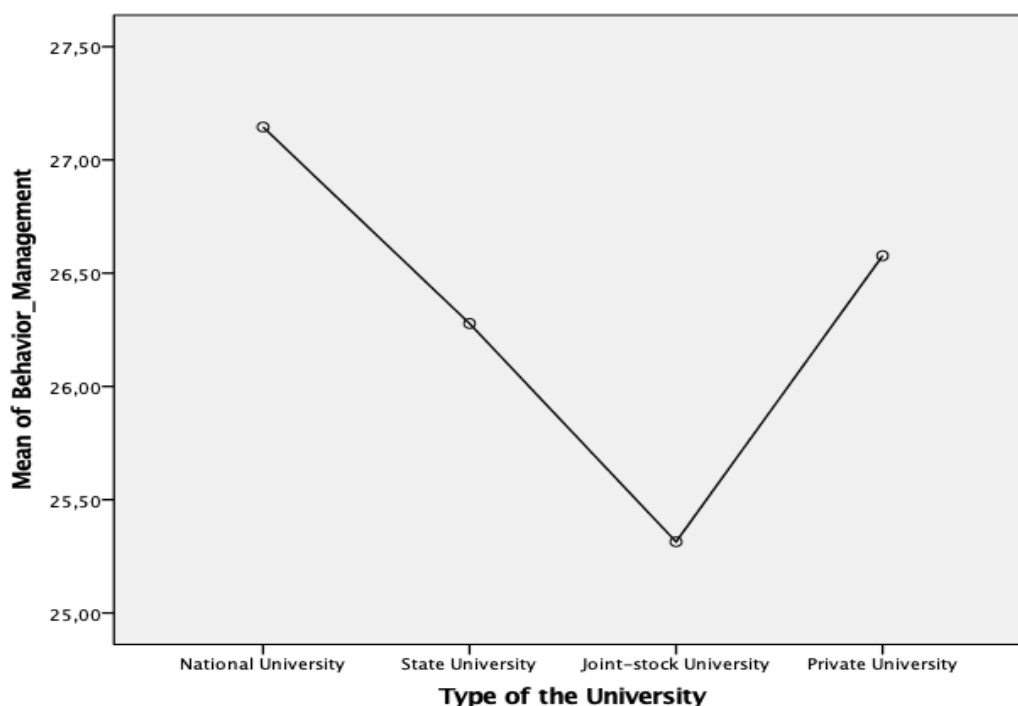
There was also a statistically significant difference at the $p < .05$ level in Cooperation self-efficacy belief scores across the University Types groups [F (3, 619) = 3.39, $p = .02$, $\eta^2 =$ .02]. Post-hoc comparison using the Tukey HSD test indicated that the pre-service teachers' cooperation efficacy in Joint-stock University ($M = 26.41$, $SD = 4.63$) was statistically lower than in Private University ($M = 28.59$, $SD = 3.96$) at the $p < .05$ value. The mean scores for the National University ($M = 27.82$, $SD = 4.03$) did not differ significantly from either State University ($M = 27.20$, $SD = 4.40$) ($p = .36$), Joint-stock University ($p = .08$), or Private University ($p = .67$). Similarly, no statistical differences were found in mean scores for the

State University (*M* = 26.58, *SD* = 4.21) and Joint-stock University (*p* = .51), as well as State and Private Universities (*p* = .15) (see Figure 11).

Figure 11

The Influence of the University Types on Cooperation Efficacy
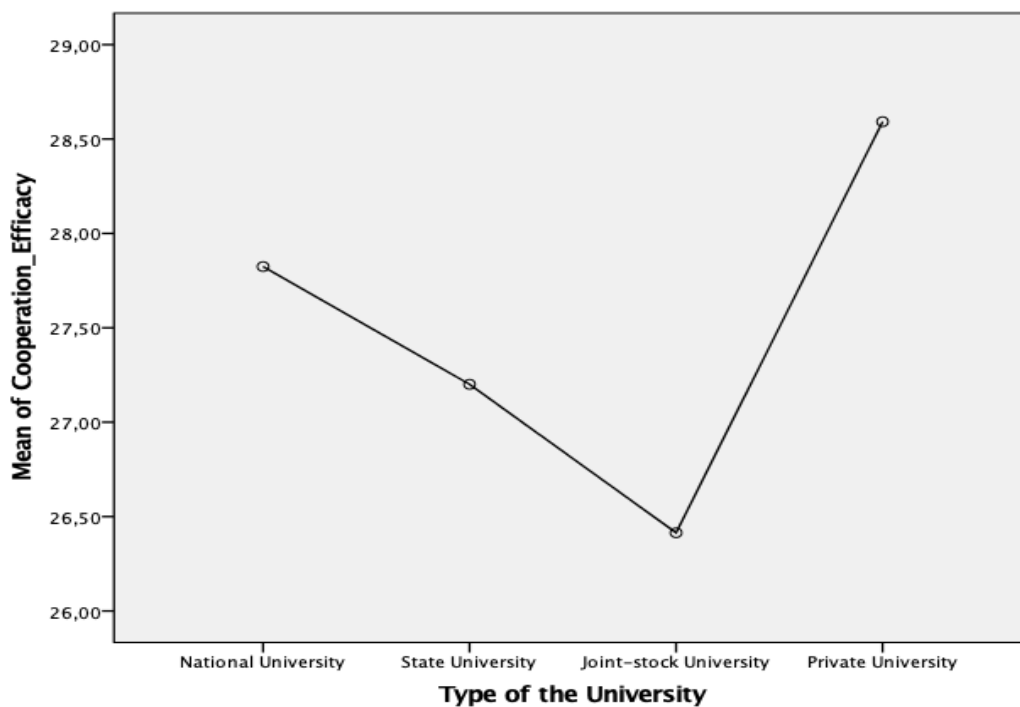
There was a statistically significant difference in self-efficacy beliefs to use Inclusive Instructions scores across students in different university types [F (3, 618) = 6.97, p < .011, η^2 = .03]. Post-hoc comparison using the Tukey HSD test indicated that the Efficacy of using Inclusive Instructions of pre-service teachers in Private Universities (*M* = 30.28, *SD* = 2.85) was statistically higher than in State Universities (*M* = 27.97, *SD* = 4.48; *p* < .001), and in Joint-stock University (*M* = 27.18, *SD* = 4.37; *p* < .000). Also, the mean score in National University (*M* = 28.73, *SD* = 3.71) was statistically higher than in Joint-stock University at the p < .03 value (see Figure 12).

Figure 12

The Influence of the University Types on Efficacy to Use Inclusive Instructions
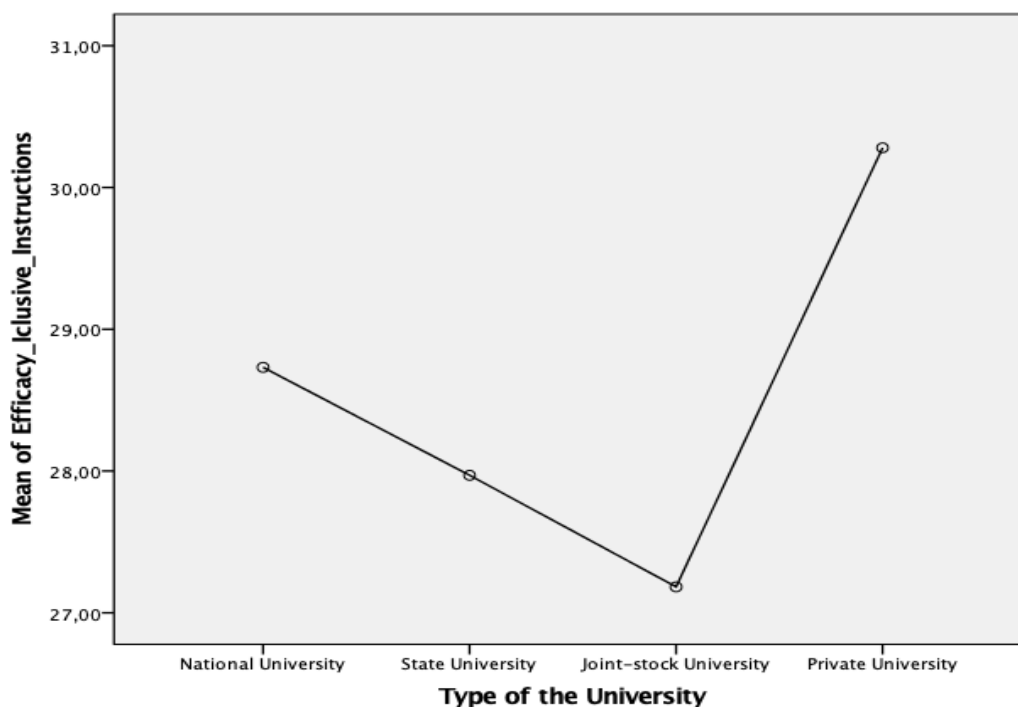
In summary, the findings indicated that female pre-service teachers hold higher self-efficacy and inclusive cooperation beliefs compared to male participants. However, this result should be viewed cautiously, as only 10% of the study participants were males. Moreover, the survey results revealed that, interestingly, pre-service teachers in Special Education majors hold lower self-efficacy beliefs in behavioural management, inclusive cooperation, use of inclusive instructions, and total self-efficacy beliefs than those in Natural and Technical Sciences and Social Sciences and Special Education. Furthermore, pre-service teachers studying in Joint-Stock Universities showed the lowest self-efficacy beliefs in working in inclusive settings compared to National, State, and Private Universities. These findings were explored in more detail in the second phase of the study (i.e., qualitative).

4.5 Pre-Service Teacher Perceptions about Initial Teacher Education Programmes

In order to examine pre-service teacher perceptions of how ITE programmes could prepare them better for including students with SEN in mainstream classrooms, participants were asked to respond to two open-ended questions. These items requested participants to elucidate their perceptions on the following matters: (1) "Three things I like best about the way how my university prepares me to work in an inclusive environment"; (2) "What three changes would you like to see at your university in order to get prepared to work in an inclusive environment adequately?" Participants' responses to these two open-ended responses were manually coded and further described using a frequency distribution analysis. By methodically examining the language used in the replies, content analysis was used to pinpoint particular themes. The open-ended replies were then quantitatively analysed by giving these themes numerical codes. The coded data were then statistically analysed. Out of 796 total survey responses, only 100 responses (13%) were received to these open-ended questions.

4.5.1 University Preparation

The first open-ended question requested students to share three things they enjoy about how their universities prepare them for their future work. Table 18 presents a descriptive data analysis of the survey results. Most pre-service teachers mentioned things they enjoyed in their teacher preparation programmes, such as the experience of diverse moral values such as love, friendship, freedom, open-mindedness, etc. Participants also felt satisfied with their ITE teachers and their knowledge, as well as the teaching approaches that their course instructors had implemented. They also mentioned their practicum as one of the essential aspects of their curriculum. Other suggestions on aspects of the programme pre-service teachers appreciated were the programme about inclusion, their university environment, and the support they received at HEIs.

Table 18

I Like Best About My University Preparation…

Preservice teachers' responses	Percentage	Frequency count
Moral values	38%	38
Teaching approaches	31%	31
Provided knowledge	30%	30
ITE Teachers	21%	21
Practicum	20%	20
Education about Inclusion	14%	14
Environment	14%	14
Support	6%	6
None and don't know	5%	5
Resources/Teaching materials	5%	5
Conducting research	3%	3
Unsatisfied	3%	3
Collaboration	2%	2
Didn't know anything about Inclusion and doubt it	2%	2
Peers	2%	2
Technologies	2%	2

4.5.2 Changes in ITE Programmes

The second open-ended question was about the changes current pre-service teachers desire to see at their universities. Table 19 presents a descriptive data analysis of the findings on the suggestions to improve the ITE programmes provided by the pre-service teachers. A considerable proportion of the responses referred to changes in practicum, i.e., students were eager to have placements and obtain real-life experience by working at inclusive schools. Further, students expressed their desire to have more training on inclusive education and teaching approaches. Interestingly, pre-service teachers also mentioned the role of ITE teachers and the necessity to have more experienced and qualified faculty members at their universities, contradicting to some extent the previous findings where the respondents highlighted their satisfaction with the current faculty and knowledge being provided.

Table 19

Changes I Would Like to See at My University…

Preservice teachers' responses	Percentage	Frequency count
Practicum	35%	35
Training on Inclusion	24%	24
Teaching approaches	14%	14
ITE Teachers	11%	11
No changes needed	11%	11
Teaching Materials	9%	9
I don't know	8%	8
Infrastructure	5%	5
Active Engagement	4%	4
Proper knowledge	4%	4
Parents' involvement	2%	2
Accepting students with SEN	1%	1
Collaboration	1%	1
New Technologies	1%	1

All in all, pre-service teachers appear satisfied with their current ITE programmes. They particularly acknowledged receiving adequate preparation for their future career that includes moral values, teaching approaches, and pedagogical knowledge. As for the ITE improvement suggestions, most of the respondents noted the crucial role of practicum, i.e., the theoretical knowledge they receive within the framework of their ITE programmes needs to be further consolidated with real-life experiences and hands-on activities by working in inclusive classrooms. Also, future teachers have highlighted the importance of gaining more knowledge on inclusive education, especially teaching approaches for children with SEN.

4.6 Conclusion

This chapter presented the quantitative data findings that focused on pre-service teachers' beliefs about inclusion and their self-efficacy beliefs about working in inclusive settings using the MTAI and TEIP scales and the factors influencing such beliefs. Also, it

accounted for the findings on pre-service teachers' satisfaction with their current ITE

programmes and possible suggestions for improvement of these programs.

The results of the MTAI scale showed that pre-service teachers hold positive beliefs

about inclusion and children with SEN, with positive scores on core perspectives and

expected outcomes. However, their beliefs about classroom practices were less positive,

indicating a hesitation in their ability to work in inclusive classrooms. The study also found

that pre-service teachers disagree with the statement that more research is needed before the

large-scale implementation of inclusive education.

In addition, the results of this survey instrument demonstrated that pre-service teachers

in this study have positive expectations and views towards inclusion in education. They

believe that inclusion has positive social outcomes on children with special needs and

enhances their self-esteem and self-concept. They also support the view that children with

SEN should not be isolated or ignored by their peers and express their support for inclusive

education practices rather than educating them separately. Moreover, the survey results

suggest that pre-service teachers are aware of the importance of inclusion in the classroom

and are concerned about the time and effort required to include children with SEN. However,

they tend to believe that parents of children with SEN do not require higher support demands

compared to parents of typically developing children. Additionally, pre-service teachers feel

confident in their ability to manage inclusive classrooms and do not see the responsibility of

teaching assistants as providing support only for children with SEN but supporting the whole

class.

The results of the inferential analyses in this study suggest that gender and education-

related factors such as university major and type do not significantly influence Kazakhstani

pre-service teachers' beliefs about the inclusion of children with SEN in mainstream schools.

These findings imply that, regardless of their gender or educational background, pre-service

teachers in Kazakhstan hold similar perspectives, expectations, and classroom practices when it comes to the inclusion of children with SEN.

Likewise, the study found that Kazakhstani pre-service teachers have a relatively high level of self-efficacy for inclusive practices when using the Teacher Efficacy for Inclusive Practice (TEIP) questionnaire. The highest levels of confidence were related to the use of inclusive instruction, while the lowest levels were related to behaviour management. However, it should be noted that this is the first time the TEIP questionnaire has been used in the context of Kazakhstan, so it is not possible to compare the scores with previous studies. Additionally, pre-service teachers reported feeling confident about collaborating with other professionals, assisting families of children with SEN, and using various teaching methods in inclusive classrooms. Overall, the findings suggest that pre-service teachers in Kazakhstan have a positive self-efficacy belief about working in inclusive environments but may need further support and training in behaviour management.

Along the same line, the results of this study indicate that demographic variables such as gender and major can have an impact on Kazakhstani pre-service teachers' self-efficacy beliefs about working with children with SEN in inclusive classrooms. Specifically, the findings show that female pre-service teachers report higher cooperation self-efficacy beliefs compared to males, while students majoring in Special Education reported lower self-efficacy beliefs compared to those in Natural and Technical Sciences or Humanities and Social Sciences majors. These findings suggest that more attention should be paid to the role of demographic variables in shaping pre-service teachers' self-efficacy beliefs and that special education programmes should be designed to increase self-efficacy beliefs in students pursuing special education majors.

Similarly, there was a statistically significant difference in the reported cooperation self-efficacy beliefs, self-efficacy beliefs about using inclusive instructions, and total self-efficacy beliefs about teaching students with SEN across the three university major groups.

Specifically, pre-service teachers in Special Education majors reported lower scores in these areas compared to students in Natural and Technical Sciences majors and students in Humanities and Social Sciences majors. Additionally, the total self-efficacy beliefs of pre-service teachers in Natural and Technical Sciences majors were found to be higher than those of students in Humanities and Social Sciences majors and students in Special Education majors. These findings suggest that university majors may play a role in shaping pre-service teachers' self-efficacy beliefs about teaching students with SEN. This requires further investigation.

Also, the study found that pre-service teachers studying in Joint-stock Universities tend to have lower self-efficacy beliefs when compared to those studying in National and Private Universities. Additionally, the study revealed a statistically significant difference in Total self-efficacy belief scores, Behavioural Management scores, and Cooperation self-efficacy belief scores across the different University Types groups. These findings suggest that the type of university pre-service teachers study at can have an impact on their self-efficacy beliefs and behaviour management skills. In addition, there is a statistically significant difference in self-efficacy beliefs in using inclusive instructions among students of different university types. Specifically, pre-service teachers in private universities had the highest efficacy in using inclusive instructions, followed by national universities, state universities, and joint-stock universities in that order. These results suggest that pre-service teachers' confidence in using inclusive teaching strategies may be influenced by the university they attended.

Finally, the results of this study show that pre-service teachers have a positive perception of their university's preparation for working in an inclusive environment. They highlighted the importance of diverse moral values, knowledgeable faculty members, and practical experience as key elements of their teacher preparation programmes. However, they also expressed a desire for more real-life experience in inclusive settings through practicum

placements and more training on inclusive education and teaching approaches. Additionally, some pre-service teachers expressed a need for more experienced and qualified academic staff at their universities. These findings highlight the need for universities to continue to prioritize and improve their instruction and support the inclusion of students with SEN in mainstream classrooms in their teacher preparation programmes.

In the second phase of the study, an in-depth exploration of the findings was achieved by conducting qualitative research in the form of in-depth interviews with pre-service teachers. The aim of this phase was to gain a deeper understanding of the pre-service teachers' beliefs about students with SEN and their inclusion in mainstream schools. The next phase of the study aimed to provide a more comprehensive understanding of the findings obtained in the first phase and to contribute to the development of effective policies and practices to support inclusion and the education of students with SEN in Kazakhstan.

Chapter 5. Qualitative Findings

This mixed-methods study aimed to explore the beliefs of pre-service teachers about teaching students with special educational needs (SEN) and their inclusion in mainstream schools. Understanding these beliefs is beneficial in determining pre-service teachers' readiness to teach in inclusive classrooms and how offering a course on Inclusive Education (IE) in the Initial Teacher Education (ITE) programmes facilitates their preparation for inclusive teaching. In addition to collecting data via a survey, the researcher conducted 12 semi-structured interviews with pre-service teachers for the qualitative phase of the study. The findings from these interviews were analysed through data selection, coding, pattern detection, and categorisation. The coding procedure was divided into two cycles: the first cycle, which called for the creation of seven subcategories, and the second cycle, which necessitated further data analysis and synthesis. The contents of the discovered items were organised in various ways during the post-coding and pre-writing stages of analysis. Emerging themes are grouped into three key major categories connected to the research questions: beliefs about students with SEN and their inclusion, pre-service teacher preparation, and improvements needed in ITE.

The findings of this chapter are presented in three main sections that represent three major themes. The first theme, beliefs about students with SEN and their inclusion, sought to understand the pre-service teachers' perceptions of students with SEN and the challenges they may face in inclusive classrooms. In general, the study participants expressed support for inclusive education in mainstream schools, highlighting its benefits for children with SEN. They believed that inclusion provided equal opportunities for quality education, promoted social development through peer interactions, and fostered acceptance and open-mindedness among students. They also emphasised the positive impact of inclusion on academic achievement and long-term well-being for students with SEN. The pre-service teachers identified various barriers to inclusion, including school-related challenges such as limited

funding and inadequate school facilities. They also mentioned issues with unqualified in-service teachers, which affect the quality of education. Additionally, there is restricted awareness about inclusive education and negative attitudes towards including students with SEN. Beyond the school context, societal and family-related barriers were also highlighted as obstacles to inclusive education.

The second theme, pre-service teacher preparation, discusses the extent to which the pre-service teachers felt prepared to teach in inclusive classrooms and whether the IE course provided affected their preparation. In general, the results indicated that future teachers feel uncertain about their preparedness to instruct in inclusive classrooms. This uncertainty stems from their limited understanding of the unique qualities of students with SEN, as well as their reduced confidence in managing classroom dynamics and addressing challenging behaviour. Additionally, their lack of hands-on experience teaching students with SEN and the significance of working collaboratively with various stakeholders contribute to this lack of confidence.

The final theme enabled the participants to offer suggestions that would improve their experience with the ITE programme to better prepare teachers for inclusion. The study uncovered that most inclusive education (IE) modules were taught for a single term, typically during the later stages of ITE programmes, and the specific content of these modules differed among universities. However, despite these variations, participants acknowledged the positive impact of IE modules on their beliefs regarding inclusion. In terms of recommendations for enhancing ITE programmes, prospective teachers emphasised the need for improved mentorship programmes, longer school placements to gain practical experience in teaching within inclusive classrooms, and enhanced content in IE modules that covers a wider range of teaching methods and approaches applicable to inclusive settings.

Figure 13 displays the major themes identified in the qualitative data analysis.

Figure 13

Qualitative Findings Themes

Qualitative Findings Themes

The qualitative findings provide a deeper understanding and context for the numerical data, complementing the quantitative findings (Tashakkori et al., 2021). The findings from this study provide valuable insights into pre-service teachers' beliefs about students with SEN and their inclusion in mainstream schools. They also highlight the need for further research in this area to understand better the factors that contribute to pre-service teachers' readiness to teach in inclusive classrooms and how to improve ITE programmes to facilitate this. The qualitative findings of this study complement the quantitative data with new perspectives, explanations, and understanding regarding the pre-service teachers' beliefs about students with SEN and their readiness to work in inclusive classrooms. The results of this study can be used to inform the development of ITE programmes and support the preparation of future teachers for inclusion in Kazakhstan and Central Asia.

5.1 Pre-Service Teachers' Beliefs about Students with SEN and Their Inclusion

The beliefs of pre-service teachers regarding students with SEN are vital in the promotion and successful implementation of inclusive education (Avramidis et al., 2000; MacFarlane & Woolfson, 2013; Miesera & Gebhardt, 2018; Sanger, 2017; Sharma & Sokal, 2016). The overarching objective of this study was to gain insight into pre-service teachers' beliefs towards students with SEN and their inclusion within the context of Kazakhstan. Additionally, the study aims to identify potential barriers and facilitators for inclusion within this context, which can inform the development of ITE programmes and contribute to preparing future teachers for inclusion. The following subsections present the findings regarding the pre-service teachers' views on inclusion in the context of Kazakhstan.

5.1.1 A Conceptualisation of Inclusive Education

The majority of participants were aware of the concept of inclusive education and of some international and local educational policies to include students with SEN in mainstream schools, even though half of the respondents had not taken any course or module in inclusive education throughout their initial training up to the time they were interviewed.

The findings illustrate that pre-service teachers in Kazakhstan have diverse conceptualisations of inclusive education that can be categorised into two groups. On the one hand, most participants operationalised inclusive education as the process of including children with SEN in mainstream schools and classrooms. In most cases, they did not specify what they meant by children with SEN. However, further probing suggested that by SEN they mostly think of children with a variety form of abilities in a continuum going from those with low cognitive ability (i.e., disability) to those with high cognitive skills (i.e., gifted and talented): "*Inclusive education is the education of children with disabilities*" *(P2)*. P9 concurred with this when they stated: "*My understanding, for example, is an individual training of children with unique talents.*" By taking these ideas into account, some pre-service

teachers expressed the necessity to be ready to teach those children by applying diverse approaches to meet learners' individual needs:

Some children among us can be very educated, and [teachers can] apply the usual methods; it can be somewhat dull if we use the same techniques to teach all children. In this regard, it is necessary to use different unique methods and techniques. (P12)

Moreover, the concept of students with SEN, especially children with disabilities, is vastly linked to their medical conditions and viewed as a form of a deficit: *"There are, for example, people who are basically, well, a child with cerebral palsy. It is very unfortunate that such a diagnosis, yes, but you are not different from others, you just have the disease"* (P 1). It is notable that the study participants did not acknowledge the presence of other forms of diversity beyond this deficit perspective, failing to acknowledge socio-economic, ethnic and linguistic diversity, for example. Consequently, the interviewees did not make any mention of children with learning difficulties and disadvantages, suggesting a potential gap in awareness and understanding of these issues among the interviewees.

On the other hand, several participants associated inclusive education with promoting social justice and the defence of human rights for all children, regardless of their abilities, conditions, and contexts. They viewed inclusion as a fundamental right for quality education for every child: *"Inclusive education means that all children have the right to learn, despite physical or mental limitations" (P8).* One of the participants referred to the Constitution of the Republic of Kazakhstan in this direction, which grants free and equal access to education for all children: *"Inclusive education means that everyone should have access to the same quality of education according to the Constitution of General Education; everyone should have a certain level of education" (P12).*

5.1.2 Benefits of Inclusive Education for Students with SEN and Beyond

This section delves deeper into the potential benefits of implementing inclusive education as perceived by pre-service teachers. The analysis of the interview data revealed a

wide range of opinions that prospective teachers had about children with SEN and the benefits of inclusive education. The study participants highlighted several noteworthy benefits of inclusion, such as its positive social effects, the rise in societal acceptance of children with SEN, and its long-term advantages, such as improved academic performance and opportunities for postsecondary education at HEIs.

Social Impact of Inclusion for Children with SEN. First and foremost, inclusion was viewed by pre-service teachers as a beneficial form of education for children with SEN. It provides them with an opportunity to gain quality education at an equal condition with students with typical development. Also, one of the participants noted that studying in an inclusive classroom would be helpful for children with SEN as they could be a role models for other children with SEN and motivate them to strive for excellence in their studies:

> *I think it will be helpful for children with SEN, as when they succeed at school, they may play a role model for other SEN children, and the excellent point is that the next child wants to follow their example and grow in the same way. (P6)*

Similarly, the interviewees explicitly discussed society's significant role for students with SEN and their parents. By gaining an opportunity to study in mainstream schools, children with SEN are believed to benefit significantly from their peers. Specifically, by collaborating and communicating with their peers, children with SEN can develop social and soft skills, such as communication, teamwork, emotional intelligence, and adaptability, that enable them to interact effectively and adapt to real-world situations: "*Children need an environment so that they do not grow up in their isolated environment but communicate and meet other children to develop better in a society*" *(P3)*. In general, inclusion facilitates the social development of children with SEN by providing them with an opportunity to build a network of peers and friends from diverse social backgrounds. Thus, socialisation was acknowledged as one of inclusive education's main benefits.

Enhancement of Acceptance and Open-Mindedness Towards Students with SEN.
The participants believe that the inclusion of students with SEN into mainstream schools
facilitates greater acceptance and open-mindedness toward children with SEN by the wider
population. Likewise, almost all participants expressed their positive views about inclusive
education as it can benefit society:

> *I think it helps to form the right attitude. Because when we see, for example, children*
> *with special needs, we feel compassion. But some may not like it. So, I think we should*
> *see them equally and work with them. I think it will be helpful for all of us. (P4)*

Also, the interview participants indicated that inclusive education could bring equity
and equality for children with SEN and their parents and children with typical development.
They noted that inclusion instils a sense of equality and social acceptance of children with
SEN when including them in mainstream schools. Equity is achieved, according to
participants, by meeting the individual needs of all children in the same classroom.

Long-Term Benefits of Inclusion and Its Impact on Students with SEN. According
to the participants' points of view, inclusive education is also beneficial in the long term. It
provides children with SEN an opportunity to obtain academic and social skills, making it
possible to continue their education:

> *I understand this is an excellent idea because I know several stories from when*
> *children studied in a [regular] class; this was not in Kazakhstan but in China, if I'm*
> *not mistaken. And a child with Down's syndrome, who studied in an inclusive class,*
> *went to university, got a full red diploma by their standards, and is helping his mother*
> *with finances and providing general support [to their family]. (P11)*

Students with SEN learn fundamental concepts and develop vital life skills in
inclusive classrooms, promoting personal development and increasing their likelihood of
success in both academic and societal situations. Moreover, students with SEN are able to
continue their educational journey and access a wider range of academic and professional

opportunities thanks to inclusive education, which fosters their academic progress and offers the required accommodations and assistance. This component of inclusive education not only gives students with SEN the tools to further their academic goals but also improves their chances of finding jobs in the future and participating in society.

In general, it is important to highlight that even though 40% of the interviewees were first-and second-year pre-service teachers who had not yet had any official training on inclusive education, an important finding was revealed by their responses. Despite their limited experience to Inclusive Education training, these participants had a consistent tendency to voice positive opinions on the concept of inclusion and its benefits. This finding underscores the potential importance of intrinsic tendencies and preconceived notions among future teachers. This might provide a promising basis for the ongoing advancement of inclusive practices in ITE programmes.

5.1.3 Barriers to Inclusion

Despite the perceived benefits, it appears that implementing the inclusive education process is, to some extent, challenging. The interview participants shared their views on the barriers to inclusive education implementation at the school, family, and social levels. The participants explicitly discussed the following challenges: limited funding and school facilities, negative attitudes towards the inclusion of students with SEN, restricted awareness about inclusive education, unqualified teachers for inclusion, and the low quality of education.

School-Related Barriers. The pre-service teachers indicated several school-related barriers to implementing inclusive education. These are issues concerning the school facilities, quality of education, in-service teachers' preparedness, and overall negative attitudes towards children with SEN.

Limited Funding and School Facilities. Most of the interview participants acknowledged poor financial support and lack of facilities for inclusion as one of the main

challenges for inclusive education implementation. Starting with simple ramps followed by necessary facilities that require careful budgeting were identified as common challenges: "*First, there can be many financial problems, either with equipment or quality teachers' provision*" (P12). P3 concurred with the idea of having quiet rooms for children:

> *When inclusive education is introduced, there should be some sensory rooms where a child can just sit, lie down, and look at something there because it is necessary to discharge the brain (to have a rest), not only for children with disabilities but also for normal children. (P3)*

Unqualified Teachers for Inclusion. The majority of pre-service teachers emphasised their concerns regarding their future capacity as in-service teachers to work in an inclusive setting. They expressed their doubts about in-service teachers' adequate preparation and ability to meet the needs of students with SEN and teach the whole class at the same time. Their responses indicated that most in-service teachers are not adequately trained to teach in inclusive classrooms: *"We do not have such teachers who are directly qualified in this area"* (P8). P1 concurred with this by emphasising the importance of educating teachers about diverse types of children, their special needs, and how to provide support for all students:

> *Our teachers are not prepared because, for example, if just a person sits in a wheelchair, then yes, I think he has a preserved intellect, and everything will be all right with that. And if the child has autism, if the child is feeble-minded, or has more psychiatric diseases with an emphasis on the intellect, then the teacher simply cannot cope with this (P1).*

They were also deemed to possess limited methodological knowledge and teaching approaches. Thus, the interviewees expressed the need to educate in-service teachers before implementing inclusion: "*Before introducing inclusive education, we need to straightforwardly educate teachers themselves about the characteristics of children*" (P3).

Decreased Quality of Education. Furthermore, several pre-service teachers expressed concerns about a possible decline in the quality of education in inclusive settings, as they believe that the inclusion of students with SEN may hinder academic progress and negatively impact other students' learning, ultimately reducing the quality of education. One of the interview participants assumed that inclusion would be a burden for teachers as well as for children with typical development as educating children with SEN might "monopolise" teachers' time and their attention:

> *The children themselves, who are, well, not only special children but normal children, will also suffer from this. Because no one will teach them, teachers will be focused on preserving the health of everyone around them rather than on teaching (P1).*

Restricted Awareness about Inclusive Education. Five pre-service teachers highlighted the issue of unawareness about inclusion and unpreparedness for inclusive education as another factor in redressing the enactment of inclusive education. Two participants noted that they had not even heard about inclusion prior to their courses at university: *"I didn't know what it was at all. And when I had already begun to study this discipline, I got to know more [about inclusion]"* (P1). P11 supports this idea as follows: *"Until the moment this questionnaire was sent to us, we were not even notified on this topic. We never had a conversation about this."* Consequently, the interviewees suggested the need to increase awareness about inclusion among teachers and the mainstream as a way forward to promote inclusive education in Kazakhstani schools:

> *I also think that not only teachers, but the whole society should be ready for this. So, I think that we need more promotion about inclusive education because very few people know about it. And it seems to me that no one thinks about it until they come across it [inclusion]. (P10)*

Negative Attitudes Towards the Inclusion of Students with SEN. Some participants explicitly expressed their negative views of inclusion related to the challenges of including

children with diverse cognitive abilities in a classroom. These participants raised concerns about the possible influence on the learning environment as a whole and the capacity of teachers to successfully meet the various requirements of all students:

If intellectual abilities are impaired, then I do not know. I just do not understand how the intellectual abilities of all children can be combined into an equal class. There will no longer be inclusive education; this is nonsense. (P1)

Some people with disabilities are not yet fully developed; for example, when they study with healthy children at school, they may be left behind when they cannot cope with their school programmes. That is why I think it is better to teach such children at home. (P9)

These participants consider inclusive practices to be incompatible with the needs of children with SEN, as they believe that mainstream schools, and more generally, ordinary classrooms, are not appropriately equipped to meet the needs of children with SEN: "*I would not mind if they had an integrated education: if they went to mainstream school in these schools, they would just have separate classes*" (P1). P2 has also expressed her doubts regarding the inclusion of children with SEN in regular classrooms: *"I support the idea of inclusion, but I think it could be even better if [students with SEN] study separately because a lot of attention is paid to that child"*. These concerns are based on practical aspects of implementing inclusive education rather than on ideological arguments against inclusion.

Overall, even though a large number of participants expressed positive beliefs about inclusion, it is crucial to note that some had concerns about the implementation of inclusive education in practice, particularly when considering students with severe disabilities. These concerns were expressed by both early-stage (1-2 year) and advanced-stage (3-4 year) pre-service teachers, demonstrating the persistence of these concerns throughout ITE process.

Society-Related Barriers. A number of participants mentioned that some society-related factors may hamper the implementation of inclusive education in the Kazakhstani context. This included the social isolation of children with SEN by their peers, other parents, and even teachers.

Even though most of the interview participants hold favourable attitudes towards children with SEN, some of them expressed their doubts about including students with SEN in mainstream schools as they believed it could bring some negative experiences for children with SEN in the form of exclusion and bullying by their peers, which can eventually impact negatively on their mental health*: "Students might not get along well or even be excluded (meant SEN students)" (P2).* P9 concurred with this by explaining that peer social exclusion might be traumatic for children with SEN: *"They will have feelings, for example, shame. There are feelings of depression and anxiety."*

The study participants also highlighted that society is not ready for inclusion in most situations and is more likely to display undermining views toward children with SEN. This is further explained by providing an example of parents of children with typical development in mainstream schools: "*Some people don't like it; they don't want to be around students with SEN, they don't want to study with them" (P6).* This is supported by P1 explaining parents' worries:

> *We had many debates with teachers that the parents themselves are against; half of the parents are against inclusion. They understand how much teachers will stop teaching children and just look after their health so that no one gets hurt. (P1)*

Family Related Barriers. Finally, barriers related to the family of children with SEN were discussed as one of the impeding factors for their inclusion into mainstream schools in Kazakhstan. The study participants noted that parents or other close family members of a child with SEN might focus excessively on their child's special needs, which can unintentionally lead to their exclusion and isolation from other children with typical

development. This can negatively impact the child's socialisation. For instance, one of the interviewees mentioned that some parents do not accept that their child has non-typical development and are trying very hard to cure them of that non-typicality to turn them into typical development and spend much effort on *"curing"* them. The more the parents draw attention to the difference between their children with SEN, the more unintentionally isolated they are from their peers. Interviewees believed that this might result in significant attention being given to the child in society and parents placing extensive focus on the child's special needs:

> *In Europe, there is no such thing as if a child is sick or has speech problems, he will be dragged to specialists as we do [in Kazakhstan]. We are obsessed with it. That is why [in the European context] the special needs of this person [a child with SEN] are not the central focus, and if it is, the person is not viewed as sick. (P1)*

Another interviewee underlined the issue related to the limited access to information about supporting programs for children with SEN and their family members across the country, as there is a scarcity of information and campaigns about existing social projects intended to support children with SEN.

Overall, the findings revealed that pre-service teachers in Kazakhstan, whether in the early stages (1-2 years) or later stages (3-4 years), had similar concerns about the challenges of inclusion. These common concerns highlight how pervasive the challenges are in the field of inclusive education, regardless of how far along the participants are in their teacher preparation courses. The fact that these concerns are consistent throughout the various phases of ITE programmes indicate that Kazakhstan's educational system encounters systemic issues and perceived challenges that call for attention and focused interventions in order to improve the prospect of inclusive education and successfully implement its practices.

5.2 Pre-Service Self-Efficacy Beliefs to Work in Inclusive Classrooms

The interviews revealed that many participants expressed low self-efficacy for working in inclusive classrooms. This seems to be a result of inadequate preparation for inclusion, overwhelming responsibility, and insufficient support from the university and school administration. Nevertheless, all interviewees expressed willingness to support children with SEN and do their best in inclusive settings.

5.2.1 Readiness to Teach in Inclusive Classrooms

The study participants indicated their lack of readiness to teach in an inclusive classroom due to their limited knowledge about the characteristics of children with SEN, their needs, and appropriate approaches for teaching them. Specifically, many participants expressed a lack of understanding of the diverse range of needs and abilities of children with SEN and how these needs may vary from child to child. They also noted limited knowledge about the different types of SEN and the specific challenges that each type may present. *"I don't think I'm ready. Because even though I have knowledge in theory, I do not know how I can apply it in practice. Because theory is one thing and practice is another" (P12).* Additionally, many participants expressed unfamiliarity with the appropriate teaching strategies and accommodations that may be needed to support children with SEN in the classroom. P11 concurred by stating that due to the lack of hands-on experience in working with children with SEN:

> *I don't know how confident I will be, but there is an approach for each child, and this approach can be found. As I do not have any experience working with such children, I cannot even say anything. (P11)*

The study participants indicated their inexperience regarding the strategies for addressing the needs of children with SEN and appropriate pedagogical approaches. Specifically, some participants expressed a lack of understanding of how to effectively address the unique needs of children with SEN in the classroom. They acknowledged that

they needed knowledge about how to differentiate instruction, create individualised learning plans, and use appropriate accommodations and modifications to support the learning of children with SEN. Participants also highlighted the need for knowledge about specific pedagogical approaches that can be used to support children with SEN. They recognised the importance of understanding different methodologies, such as differentiated instructions and how to apply them to support children with SEN in the classroom: *"I think that my knowledge is not enough" (P10,)* and

> *I am a speech therapist, if I, for example, go to work in a school, and there will be inclusive education, I will be given children with a developmental norm and without a developmental norm. There is a need to strengthen the knowledge of the child's illness and the diagnosis because if I do not know these basics, I will not be able to work on their sound because I do not know the reason for the absence of this sound. (P1)*

Furthermore, the participants also mentioned a lack of knowledge about how to create an inclusive classroom environment that is welcoming and supportive of all students, regardless of their abilities. They acknowledged that they need to know how to create a curriculum that considers all students' needs and how to provide appropriate support and accommodations to children with SEN.

5.2.2 Inclusive Classroom Management

The pre-service teachers acknowledged encountering various challenges, including limited methodological training and classroom management skills, leading to low self-efficacy. Adequate methodological training in their ITE could help them build solid pedagogical knowledge about inclusive education: *"But there are no specific methods. For instance, if there is a child with Down's Syndrome, how to work with him? I do not know".* *(P1).* This is in line with P12: *"I think it also requires some experience. I still have not thought about how to manage it [classroom]. If that happens, I will try to apply what I have learned from the theory".* Despite possessing positive beliefs about inclusion, the pre-service

teachers expressed less confidence in their skills and knowledge to manage disruptive classroom behaviour and meet students' individual needs due to the lack of practical skills. More specifically, the programmes on IE at universities appear not to provide professional development concerning practical skills and knowledge on teaching practices in inclusive classrooms, such as classroom management and techniques and approaches to educating students with diverse capabilities.

5.2.3 Internship and Experience in Working with Children with SEN

Participants in this study expressed their concerns regarding their ability to work in inclusive settings due to their limited field experience in teaching children with SEN. Only a few have had personal experience either studying or working with children with SEN. However, about half of the interviewees have learned about inclusion during their courses on Inclusive Education during their ITE. For instance, P8 says: *"I have volunteered and worked as an animator at a school of volunteers, where I played the role of a Snegurochka (Snow Maiden) for children with disabilities".* Similarly, P4 noted that she encountered some challenges during her internship at school, as it was the first time, she had an opportunity to teach a student with SEN in a mainstream school:

> *There was a student in the class who had special educational needs. I did not*
> *know that at first. When I finished the lesson and worked with all the children,*
> *only that girl was different and did not want to be included … I started thinking*
> *about that, as this student's perception was quite different. She understood a*
> *little later than the other children. I realised that I was considering only one*
> *level of students during the lesson. I ignored that child. That experience made a*
> *big impression on me. (P4)*

As illustrated above, only one of the pre-service teachers has had the experience of working with a child with SEN during her internship at a school. However, most of the study participants have not had a chance yet to work in inclusive classrooms and interact with

children with SEN. Moreover, their internship experiences seem to be diverse and vary across years of study, universities, and majors. The regulations and processes of the universities and internship placement locations, the accessibility of resources and assistance, and the knowledge of the supervising lecturers and mentors are likely some of the contributing elements to this. The pre-service teacher's particular degree may also have an effect on their internship experience.

Pre-service teachers majoring in special education (speech therapists and defectologists) have had the experience of interacting with and teaching students with SEN, whereas, as has been highlighted above, a significant number of interviewees have not had any experience of teaching in an inclusive setting throughout their four years of studies at their respected higher educational institutions. The internship experiences that pre-service teachers have may have an impact on their self-efficacy beliefs because they provide them with the chance to advance their knowledge and abilities and boost their confidence in their capacity to deal with students with SEN.

Almost all participants shared that they have had placements at schools. Pre-service teachers usually undergo short-term placements in schools during their first academic years, where they largely observe the mentoring teachers and the classes they are assigned to. These early assignments do not seem to provide pre-service teachers adequate opportunities for practice or hands-on learning, which might result in improved self-efficacy perceptions. *"In the second year, the fourth semester… and mainly the emphasis was on observing the teaching of the teacher" (P8).* P6 concurred with this, stating: *"On my first year, we went in the winter… We went for two weeks to find out how teachers interacted with their students."* Pre-service teachers, however, reported receiving more rigorous preparation during their third and fourth years of study, giving them the chance to work with mentors and teach students for a month. These more extensive internships give future teachers more opportunities for practice and application of their knowledge, as well as more feedback, which could boost

their self-efficacy beliefs. *"In the third year, we had a month of practice. And in the fourth year, it was from the second semester" (P4).* Students majoring in Special Education reported having more specific experiences than those majoring in General Education, which translated into additional opportunities to work with students with SEN and to advance their knowledge and abilities in this field, which may result in better self-efficacy views than those majoring in general education. However, these findings contradict the quantitative data results, which indicate that a significant portion of pre-service teachers majoring in Special Education showed lower levels of self-efficacy.

5.2.4 Collaboration with Colleagues and Other Stakeholders

The pre-service teachers participating in the study also highlighted the crucial role of cooperation with colleagues and parents in supporting students with SEN and promoting inclusion as an integral part of their self-esteem. They noted that effective collaboration among all stakeholders, including psychologists, special education teachers, school administration, and parents, is essential in providing the best possible support for students with SEN. One participant, P3, underlined the value of collaboration with school administration, teachers, psychologists, and speech therapists, claiming: *"First of all, there should be work with a teacher, a psychologist, and a speech therapist, and school management" (P3).* This emphasis on collaboration and cooperation among different professionals was seen as beneficial for all stakeholders, including students with SEN, their parents, and teachers. The pre-service teachers remarked that cooperation and teamwork among peers might contribute to developing a supportive and welcoming classroom atmosphere where all pupils are made to feel important and appreciated. They agreed that collaborating closely with other experts might aid in removing obstacles and preconceptions as well as fostering acceptance and understanding of diversity.

The pre-service teachers recognised the value of experts pooling their knowledge and skills to understand the needs of students with SEN better and create effective support plans

for them. They also highlighted how crucial it was to include parents in the process since they play a significant role in the support system of children with SEN. Working closely with parents helps teachers better understand each child's unique requirements and offer the right kind of assistance both at home and at school.

5.2.5 Support for Students with SEN

The findings suggest that despite their relatively low self-efficacy in working in inclusive settings, future teachers are willing to support all students and address their differing needs. Pre-service teachers were interviewed about their strategies and suggestions for creating an inclusive classroom environment. The findings of the study revealed that future teachers recognised the crucial role of society, particularly the role of peers and a positive atmosphere in the classroom, in supporting students with SEN. Many of the interviewees highlighted the significance of support provided by peers, parents, and teachers for children with SEN:

> *I think it is great to bring the team together… if I were, for example, the class teacher, I would put my effort so that children could rely on me as a person, not just as a class teacher. (P1)*

One of the leading suggestions from the pre-service teachers was to treat all students equally and prepare the whole class to support students with SEN. They believed that it is important to prepare the classroom and the school for such students and to provide additional training to other students to familiarise the children with them. As one of the interviewees stated:

> *I am ready to help as much as I can because you must treat them equally. As an educator, I want to teach the lesson so that it is easy to explain by getting to the level where the student can understand as much as possible when he comes to school and wants to learn. I think there should not be any restrictions or neglect. (P4)*

Another pre-service teacher emphasised the importance of psychological support and sincere discussions with the whole class so that all students are prepared to study in inclusive classrooms. P3 noted:

The most important thing is to prepare the classroom, to prepare the school for such a child, that is, not just let him sit in class on September 1, but at least bring the child, do some fifteen to twenty minutes of additional training, make the children familiar with him (P3).

Overall, the results of this study show that future teachers are prepared to help all students and respect their diversity, even if they have relatively low self-efficacy for working in inclusive environments irrespective of their year of study. The pre-service teachers were prepared to make the required efforts to accommodate children with SEN and understood the need to foster an inclusive atmosphere in their classrooms.

5.3 The Role of Initial Teacher Education on Inclusive Education

The extent of pre-service teachers' preparation courses builds their knowledge and capacity to work in inclusive classrooms and influences their beliefs and self-efficacy toward children with SEN. Put simply, the more pre-service teachers obtain knowledge about inclusion, the more they hold favourable views towards it (Woodcock, 2012). In this context, initial teacher education plays a critical role in instilling confidence and practical knowledge in working with children with SEN in an inclusive environment (Haugh, 2003; Sharma et al., 2008).

This section presents pre-service teachers' perceptions of how ITE contributes to preparing them to teach in inclusive environments. Specifically, pre-service teachers highlighted the importance of having the inclusive education course as it broadened their horizons about inclusion and, to some extent, changed their views towards children with SEN. Moreover, the interview findings indicate several challenges future teachers encounter within

the framework of their ITE programmes: limited hours and lack of methodological training and classroom management, which results in less in-depth knowledge about inclusion and low self-esteem to work in inclusive classrooms among future teachers.

5.3.1 The Inclusive Education Module in ITE Programmes

The majority of participants in the research had been exposed to the concept of inclusive education almost solely through a single module on inclusion as part of their ITE curriculum at their HEIs, as discussed in the interviews with pre-service teachers. Participants expressed worries about their degree of readiness to work in an inclusive setting as this module was only offered during their last years of study, often in the third year and for one semester. It is critical to note that the module on inclusive education is generally offered for one term, mainly in the third year of the ITE programme. Since the module runs for only one semester, the students have a chance to learn about the basic principles of inclusive education. Notably, the limited hours of the inclusive education module seem to lead to inadequate preparation for future teachers.: *"Not much time is dedicated to this course, but it is still kind of a topical issue, and that is why we go through this discipline" (P8).*

The study also revealed that modules on inclusive education varied from university to university. Some universities provided students with theoretical information about the concept of inclusion through lectures based on traditional teaching methods, while others offered a broader perspective on inclusion and even explored the reforms regarding inclusive education in the context of Kazakhstan:

> *In general, we have learned what inclusive education is, its importance, and its impact on society. We also looked at the problems in some schools and how ready Kazakhstan is to introduce inclusive education. Looking at the answers now, we can say that by 2025 Kazakhstan will be able to implement inclusive education fully. (P12)*

Additionally, some pre-service teachers noted that they were exposed to videos and lectures mainly focusing on other international contexts rather than those relevant to

Kazakhstan: *"The teachers send us lectures, video lectures, and assignments, including some practical concepts, where we need to provide some reasonings, it turns out the tasks are based on our opinion and reasoning abilities"* (P8).

Those who completed the inclusive module highlighted that they gained basic theoretical knowledge about the concept of inclusion and inclusive education:

> *We learned a little about evaluating them and working with them only in theory. What kind of games to organise, and how to look at them, but in theory. There are so many topics, and we even skipped some of them. In general, we gained a specific understanding. But I think it is challenging to cover it entirely in one semester. (P12)*

Participants acknowledged that the learning they obtained was overly theoretical, superficial, and shallow and that their inclusive education courses were insufficient for practical aspects of inclusion: *"We learn about inclusion only by knowing the terms, only by knowing the terms and discussing them among ourselves" (P4).* They also highlighted that the concept of inclusion and including children with SEN was mainly referred to as including children with diverse forms of disability: *"We are taking the discipline of inclusive education now, and this is about special needs, the disabilities" (P8).*

Despite these limitations, the study participants recognised the advantages of including such a module within their ITE curriculum. The programme assisted them in expanding their understanding of inclusion and in developing favourable opinions of students with SEN enrolled in regular classrooms. They also acknowledged the significance of treating children with SEN equitably and the necessity of a diverse society to meet their unique requirements and capacities:

> *I understood that it is not about disability but about special needs and abilities. And the need to treat them equally, to treat them in any case on an equal footing with*

people in modern society… my attitude to look at them as an average, healthy,

average person was formed. (P4)

This is concurred by P10*:*

I am taking this course now. I have learned a lot about it [inclusion] by now, and to be

honest, I had never thought about it before. So, up until this year, I started taking this

course, and only after that I started to think about it and realise that there are people

and you have to help them, you have to include them in society, and so on. And before

that, I did not think about it at all. (P10)

5.3.2 Participants' Suggestions on How to Improve ITE Programmes for Inclusive Education

The study participants expressed a range of suggestions for improving their ITE programmes to better prepare them for the inclusion of students with SEN. This section elaborates on those suggestions, which include developing a mentoring culture between pre-service and in-service teachers; adjusting school placement terms by providing a hands-on experience through developing collaborations with mainstream schools; providing more in-depth pedagogical knowledge in methodological training and teaching approaches in inclusive classrooms, and modernising current university teaching methods by employing engaging teaching approaches.

Mentorship. Several respondents have underlined the importance of having a school mentor who could provide some guidance to newly admitted early career teachers: *"From the first lessons, I think there should be a specialist who will have to guide and give direction"* *(P11).* They noted that mentors played a crucial role during their internships. Mentoring could also be taken in the form of seminars, guest lectures, and conferences: *"The wisdom of experienced teachers, such as interviews or seminars, in my opinion, conferences, could be*

beneficial for us" (P5). Thus, mentors' advice and support in their future workplaces would set a path towards successful teaching and continued growth.

School Placements. Equally important to note is that most study participants highlighted the significant role of practice at schools. Some of them mentioned that having an opportunity to have an internship at schools after each theoretical course would increase their professional capacities and provide them with hands-on experience:

> *When we were taught courses, we only had theoretical knowledge. Then, we went to practice; we faced some challenges. We did not know how or what to do. And if only we had practised right after the theoretical course, I think we would have achieved better results. It would be better to have not only theoretical knowledge but also practice. (P4)*

Also, some of the interviewees mentioned that more internship or practicum experience hours would increase their self-esteem and self-efficacy and prepare them for their future careers: "*I think we should have paid more attention to that practice in some of our lessons" (P2).*

Consolidation of Teaching Methods and Practical Activities. A substantial number of participants voiced concerns about their pedagogical competence and their perceived capacity to teach in inclusive classrooms. These worries stemmed from their awareness of potential knowledge gaps and constraints on their capacity to meet the different requirements of students with a range of abilities and learning styles in an inclusive educational setting: "*We seem to lack knowledge on teaching methods, working with children, giving them the right direction, and explaining the lesson to them" (P4).* As a suggestion, they voiced their eagerness to have more courses on teaching methods and approaches in inclusive classrooms: "*In general, I think there should be courses that teach us how to work with children. Because possessing knowledge and teaching are two different things" (P12).* The study participants expressed their willingness to gain knowledge and skills from their teachers/faculty members

and practising professionals, including psychologists who would support them based on their expertise: "*We only knew the terms and discussed them among ourselves… For example, I would like to work with a psychologist who will tell us more about working with children and using particular methods in education*" (P4).

Raising Interest Among Pre-service Teachers. The pre-service teachers explicitly expressed their suggestions to improve teaching approaches at HEIs. The future teachers noted that they would like to study in a more engaging environment, where teachers/faculty members encourage learners' interests by using modern teaching approaches and technologies such as "video lectures", "round-table discussions", "conferences, and seminars with prominent people and researchers from different fields". In general, the learning process should be appealing to the pre-service teachers, as several participants mentioned that the current lectures at their HEIs tend to be unengaging and are mostly taught in a traditional way: *"I think it would be better to use new methods at the university" (P8).* P7 agreed with this by saying: *"We often study based on a certain book at the university. Still, it's not interesting… and if there were different methods, like games, presentations, project work, the lessons would be delivered more engagingly to students."*

Participants shared an interesting observation on pre-service teachers' dissatisfaction with the faculty members' assessment methods. One of the participants mentioned that even assessment strategies employed by faculty members do not satisfy the needs of pre-service teachers as they seem to be outdated and inadequate to fulfil the demands of contemporary educational practises:

> *I think that every methodological plan should be revised. In fact, most of the time, everything seems to be old, and we even need to introduce an updated assessment system, as teachers are still accustomed to the old system (P5).*

By the same token, the interviewees highlighted the crucial role of their universities' learning environment and facilities. They expressed their eagerness to study in comfortable

study spaces that are designed in a modern way: "*There are a lot of students at the university, but nothing is done for their convenience; for example, if we want to study independently or create a separate project, there is no such place" (P5).*

With attention to the schedule, some participants noted that it was overloaded with "unnecessary" courses. They expressed their willingness to study courses based on their interests rather than being overwhelmed with subjects they believe they will not need in the future: "*We study the topics, and sometimes it seems to me that I do not need it. And why do we go through it? I even do not know, and I just do not like the system of education" (P8).* Similarly, P7 stated:

> *We still have a lot of extra lessons at the university. For example, we are future English language teachers and have to study "Abai studies", which is unrelated to our profession. Instead, it would be better to increase the hours of our core subjects or add other lessons directly related to our work (P7).*

They noted that they lacked knowledge about children with SEN, knowledge about diverse medical aspects and educational support for children:

> *We need additional education; it depends on what kind of limitations the child has. For example, if I have a student with disabilities, such as hearing or other problems. It would be necessary to take additional courses regarding this problem, including medical knowledge. (P8)*

5.4 Conclusion

In conclusion, this study aimed to explore the beliefs about inclusive education among pre-service teachers in Kazakhstan. The chapter presented qualitative data findings from 12 semi-structured interviews and are in line with the research questions that aimed to examine 1) pre-service teachers' beliefs about students with SEN and their inclusion in mainstream classrooms; 2) pre-service teachers' self-efficacy beliefs to work in inclusive settings; and 3)

factors influencing pre-service teachers' beliefs, and 4) pre-service teachers' reflection on their ITE programmes and suggestions for further improvements. Table 20 presents an overview of this chapter's qualitative findings, themes and sub-themes.

Table 20

List of Qualitative Findings Themes and Sub-Themes

Pre-Service Teachers' Beliefs about Students with SEN and Their Inclusion		
A conceptualisation of Inclusive Education		
Benefits of Inclusive Education for Students with SEN and Beyond	Social Impact of Inclusion for Children with SEN Enhancement of Acceptance and Open-mindedness Towards Students with SEN Long-Term Benefits of Inclusion and Its Impact on Students with SEN	
Barriers to Inclusion	School-Related Barriers	*Limited Funding and School Facilities* *Unqualified Teachers for Inclusion* *Decreased Quality of Education* *Restricted Awareness about Inclusive Education* *Negative Attitudes Towards the Inclusion of Students with SEN*
	Society-Related Barriers	
	Family Related Barriers	
Pre-Service Self-Efficacy Beliefs to Work in Inclusive Classrooms		
Readiness to Teach in Inclusive Classrooms Inclusive Classroom Management Internship and Experience in Working with Children with SEN Collaboration with Colleagues and Other Stakeholders Support for Students with SEN		
Pre-Service Teacher Preparation for Inclusive Education		
The Inclusive Education Module in ITE Programmes		
Participants' Suggestions on How to Improve ITE Programmes for Inclusive Education	Mentorship School Placements Consolidation of Teaching Methods and Practical Activities Raising Interest Among Pre-service Teachers	

Even though almost half of the participants had not taken a course or module on inclusive education during their initial training up until the time of the interview, the majority of them were somewhat familiar with the idea of inclusive education and some international and local educational policies to include students with SEN in mainstream schools. The findings revealed that pre-service teachers in Kazakhstan have two distinct conceptualisations of inclusive education. On the one hand, many of the participants operationalised inclusive education as the process of integrating children with SEN into regular classes and schools. They saw these students as having a range of issues, ranging from poor cognitive ability (i.e., disability) to high cognitive abilities (i.e., gifted and talented). Additionally, a number of participants connected inclusive education to the advancement of social justice and the preservation of children's human rights, irrespective of their circumstances, conditions, or skills. It is significant to highlight that the participants in the study did not mention the presence of other types of diversity beyond cognitive ability, such as socioeconomic, linguistic, and various learning challenges. In order to gain a deeper knowledge of inclusive education and be able to address the varied needs of all children in their classrooms, the study emphasises the need for more in-depth training and instruction for pre-service teachers.

Also, the findings show that pre-service teachers view inclusion as a beneficial form of education for students with SEN. It was argued that students with SEN have the chance to receive a quality education on an equal basis and build valuable social and soft skills via interaction with their classmates. The participants stressed the beneficial contribution that society plays in fostering social growth, and acceptance, for children with SEN. The respondents also noted that by addressing the unique needs of each child in a classroom, inclusive education would promote fairness and equality for children with SEN and their parents. The long-term benefits of inclusion were also emphasised, with pre-service teachers noting that it provides children with SEN an opportunity to obtain academic and social skills, thus giving them the opportunity to continue in higher education. Overall, the study highlights

the importance of inclusive education in promoting social development and acceptance for children with SEN and providing them with opportunities to achieve their full potential.

At the same time, implementing inclusive education has been identified as a challenging process by the study participants. They shared their perspectives on the obstacles to the implementation of inclusive education in schools, families, and society. School-related barriers include issues concerning the school facilities, quality of education, in-service teachers' preparedness, and overall negative attitudes towards children with SEN. The pre-service teachers also highlighted the need for more funding, facilities, and teacher training to overcome these barriers in order to make inclusive education successful. Society-related barriers, such as social isolation and negative attitudes towards inclusion, were identified as impeding factors for inclusive education. Participants also highlighted the importance of family-related factors, such as parents' focus on their child's special needs, in negatively impacting the child's opportunities for socialisation.

Secondly, this study highlights pre-service teachers in Kazakhstan report low self-efficacy for working in inclusive classrooms. The findings indicate that these teachers have low confidence in their abilities due to several factors. Firstly, they receive inadequate preparation for inclusion, resulting in a lack of knowledge about the characteristics of children with SEN and appropriate teaching strategies. They also lack an understanding of the diverse needs and abilities of children with SEN and struggle to create an inclusive classroom environment. Despite these challenges, the participants express a willingness to support children with SEN and work in inclusive settings. Furthermore, the study reveals that pre-service teachers lack the necessary training and skills to effectively manage inclusive classrooms. Limited methodological training and classroom management skills contribute to their low self-efficacy. The study suggests that teacher education programmes should provide adequate training in inclusive education to help teachers develop the required pedagogical knowledge and practical skills. Additionally, the participants have limited field experience

working with children with SEN, which further undermines their confidence. The quality of internship experiences varies among universities and majors, with factors such as resource availability and supervising lecturers influencing the experience. The study also highlights the importance of collaboration and cooperation among pre-service teachers and other stakeholders. Effective teamwork with colleagues, psychologists, special education teachers, and school administration is crucial in understanding the needs of students with SEN and developing effective support plans. Involving parents in the process is also emphasized, as they play a significant role in supporting children with SEN.

Thirdly, the study found that pre-service teachers in Kazakhstan have received limited training and practical experience in inclusive education. The module on inclusion, which is part of their teacher education programme, is typically taught in their third year and lacks practical content. Despite its shortcomings, the module has helped build their knowledge and positive attitudes toward students with SEN. It is crucial to underscore that not all participants had finished the Inclusive Education course. This limitation is acknowledged in the study, and while the findings are compelling, caution must be used in interpreting them because of the small number of individuals who actually completed the course (seven out of 12 participants). The results may not be representative of the whole cohort of pre-service teachers, although they provide insightful data bout the perspectives and beliefs about inclusion who have undertaken the course. The study recommends that teacher education institutions in Kazakhstan provide more practical training on inclusive education, extend the duration of the inclusion module, foster mentoring relationships between pre-service and in-service teachers, adjust school placements for collaboration, enhance pedagogical knowledge, and employ more engaging teaching methods. Overall, the suggestions highlight the need for a comprehensive and practical approach to inclusive education in ITE programmes.

The discussion chapter will thoroughly analyse these key findings in the context of the prior literature and the research questions.

Chapter 6. Discussion

This chapter reflects on the findings of the quantitative and qualitative data that have been presented in the previous chapters. It provides an in-depth synthesis of the data results and a comprehensive discussion of the pre-service teachers' beliefs about children with special educational needs (SEN) and their inclusion in mainstream classrooms. Bandura's (1986) social cognitive theory (SCT) formed the basis of the theoretical framework for this study. According to this theory, individuals are influenced by a reciprocal relationship between their behaviour, beliefs, and environment (Bandura, 1986; 1997; 2005). This interaction makes individuals both the products and producers of their environment. This study focused on exploring the reciprocal relationships between the determinants of beliefs, behaviour, and the environment.

The chapter is organised into five sections that are aligned with the research questions and the theoretical framework. The first section provides a discussion on pre-service teachers' beliefs about students with SEN and their understanding of the concept and knowledge about inclusive education, as well as the benefits and challenges of implementing inclusive education. The second section discusses pre-service teachers' self-efficacy beliefs in regard to working in an inclusive classroom setting. This section is divided into three sub-sections: pre-service teachers' beliefs about inclusive instruction, classroom behaviour management, and collaboration in inclusive settings. The third section discusses the factors influencing pre-service teachers' beliefs. The final section elaborates on suggestions provided by pre-service teachers to improve initial teacher education (ITE) programmes. Finally, concluding remarks are presented in the summary section of this chapter.

6.1 Pre-Service Teachers' Beliefs about Students with SEN

There is a widespread agreement that teachers play a critical role in the success of their students and are capital to creating an ethos of inclusion in their classrooms (Haugh,

2003; MacFarlane & Woolfson, 2013; Miesera & Gebhardt, 2018). Teachers' beliefs about children are generally accepted as significant driving factors in implementing inclusion (Avramidis & Norwich, 2002; Sanger, 2017; Sharma & Sokal, 2016; Specht et al., 2016). This study complements previous studies by providing an account of the beliefs of future Kazakhstani teachers about children with SEN and their inclusion in regular classrooms. In line with the theoretical framework presented in chapter two, a belief was conceptualised in this study as a three-dimensional construct that encompasses (1) pre-service teachers' beliefs about students with SEN, (2) pre-service teachers' beliefs about self, and (3) pre-service teachers' beliefs about their teaching practices. In the following section, detailed discussions of the quantitative and qualitative findings are presented concerning the pre-service teachers' beliefs about inclusive education and children with SEN.

6.1.1 Beliefs held by pre-service teachers regarding students with SEN

The results of the current study indicate that pre-service teachers generally hold positive views about children with SEN and their inclusion in regular classrooms. This concurs with research findings in countries such as Canada, the Netherlands, and the UK (Avramidis & Norwich, 2002; Dorji et al., 2021; Essex et al., 2021; Khochen & Radford, 2012; Subban & Sharma, 2006). It is important to admit that both in Kazakhstani and international contexts, the findings reveal that inclusion is seen favourably by a significant portion of pre-service teachers, mainly in its theoretical nature (Essex et al., 2021). This consistency raises the possibility that there is a general tendency towards a positive perception of inclusion among studies, supporting the idea that inclusion is commonly seen as a good concept among future teachers. Based on the responses of the participants on the My Thinking about Inclusion (MTAI) scale, the findings suggest that the pre-service teachers had positive core perspectives on children with SEN and their inclusion. Similarly, the qualitative data complemented this result by indicating that three-quarters of the interviewed pre-service teachers support inclusion as it provides equal rights for education for all children and helps

create positive attitudes in society toward children with SEN. Indeed, some pre-service teachers tended to view inclusion from a rights-based framing of inclusion, i.e., the human rights perspective, acknowledging that the right to education is a fundamental right that a human being is entitled to. The findings of the study revealed that future teachers believe the prospect of being educated facilitates growth. Therefore, learning opportunities in the same educational setting should be given to everyone and stress the importance of inclusion from the perspectives of equality and equity for all children. This social justice viewpoint is consistent with the United Nations Convention on the Rights of People with Disabilities (CRPD), which affirms that people with disabilities have the right to high-quality, inclusive, and equal education (United Nations, 2006). Hence, pre-service teachers who conceptualise inclusion from a social justice perspective can contribute positively to the implementation of inclusive practices in their future classrooms. Nevertheless, the participants of this study were unable to elaborate further regarding inclusion as means of equal participation by all classroom members. It is essential to realise that inclusion upholds equality by providing students with SEN access to mainstream school education. In contrast, equity is preserved by providing fairness in meeting the individual needs of every child (Graham, 2020). Although this may be true, inclusion is not only about providing physical access to mainstream schools, but it also implies the creation of an environment based on equity where every child participates in the learning process (Ainscow & Sandhill, 2010; Graham, 2020; Slee, 2011; 2018).

Moreover, knowledge about inclusion is an inevitable aspect of developing future teachers' competency to work in an inclusive environment (Adams et al., 2021; Rouse, 2008; Srivastava et al., 2015). This study revealed that most participants were aware of inclusion and inclusive education. Inclusion is generally viewed as educating children with diverse cognitive abilities in mainstream schools that require specific teaching approaches based on individual needs. However, their conceptualisation of inclusive education is in its infancy, and

it is limited in at least three ways: 1) deficit-based notions of inclusion, 2) segregation of gifted and talented students in specialised schools, and 3) neglect of multiple forms of diversity.

Deficit-Based Notions of Inclusion. The semi-structured interview findings suggest that most pre-service teachers in Kazakhstan conceptualise inclusive education from a medical perspective. In the medical model, children that require additional educational support are seen as lacking and in need of specific medical interventions (Thomson, 2013). This perspective has been influenced by what Clough and Corbett (2012) referred to as the "psycho-medical legacy" of inclusion (p. 11). From this perspective, people with disabilities are considered to be "in deficit" and in need of "special" education (Clough & Corbett, 2012, p. 11).

The qualitative data collected in this study revealed that the participants viewed children with SEN as having diverse forms of disabilities, such as autism, cerebral palsy, and various cognitive challenges. The participants believed that these children needed specific treatment and that their teachers should possess certain skills to teach them effectively. Consequently, their understanding of inclusion and inclusive education was deficit-driven, with a focus on the medical perspective.

Teacher conceptualisations of inclusion based on sickness, vulnerability, and deficit are common in many other contexts. For instance, Essex et al. (2021) found that an overwhelming majority of teachers in England defined inclusion predominantly around a "deficit-based notion of inclusion", i.e., low ability and its influence on learning capacity (p. 1438). Similarly, in the context of Ghana, 84% of pre-service teachers in the study defined inclusion as means of welcoming all students "despite their disability" (p. 436), and students with SEN were often identified as those with "visual and hearing impairments" (Nketsia & Saloviita, 2013, p. 437). These examples demonstrate how widespread the deficit-based notions of inclusion are around the world. Studies confirm that narrow and deficit-based

perceptions of students with SEN affect pedagogical interventions, i.e., it influences by shaping the learning and teaching provisions in schools and school policies regarding the inclusive education (Essex et al., 2021).

In the context of Kazakhstan, the findings can also be a result of the Soviet cultural views that continue impacting general attitudes towards children with disabilities by viewing them from the perspectives of deficit (Helmer et al., 2020; Makoelle, 2020; Rollan & Somerton, 2019; Stepaniuk, 2019). It is essential to realise that children with special needs in this context, based on their medical conditions, have been traditionally segregated from their peers in correctional institutions with the ultimate goal of treating and correcting them (Passeka & Somerton, 2022; Stepaniuk, 2019). This widely spread view traces back to the concept of "defectology," a legacy of Soviet education (Helmer et al., 2020; Makoelle, 2020; Makoelle & Somerton, 2021; Passeka & Somerton, 2022), which supports the idea that children with disabilities had to be separated and educated at particular remedial educational institutions (Phillips, 2005; Stepaniuk, 2019). As Stepaniuk (2019) promulgated, during the Soviet time, the dominant philosophy toward disability was regarded as an "individual tragedy" (p. 331). It shaped the views towards disability as a "defect" that must be identified and cured (Stepaniuk, 2019, p. 331). As part of a Soviet legacy, the Russian word "invalid" is used toward people with disabilities, thus embedding negative connotations towards them as "incapable" people (Stepaniuk, 2019, p. 332). This view has been widely integrated into the educational system across the post-Soviet states, further isolating children with disabilities from society by viewing them as incapable members (Passeka & Somerton, 2022; Stepaniuk, 2019).

Segregation of Gifted and Talented Students in Specialised Schools. The participants of the study tended to define students with SEN as those with specific disabilities. Still, some of the participants acknowledge another category of students with SEN as those with a higher cognitive capability, including gifted and talented children, who require

particular teaching methods and approaches to realise their learning potential. This is not surprising, considering the long tradition of segregating students with high cognitive abilities and capacities in specialised schools for gifted children in Kazakhstan (Yakavets, 2014; Rollan 2021). The state has heavily invested in the education of gifted students as these children are viewed as a source of a future highly skilled workforce driving forward the development of the country's economy (Almukhambetova & Hernández-Torrano, 2021). Thus, the interviewees assume that talented children need a unique approach to their education, which implies adapting school programmes for each student's needs and using differentiated teaching strategies in the schooling process. This is consistent with Hernández-Torrano et al. (2019), who found that in-service teachers in Kazakhstan tend to believe that education for gifted students should be provided in specialised schools because mainstream schools do not offer sufficient opportunities for talent development. It is crucial to note that initiatives in education taken in the Kazakhstani context that focuses on establishing separate schools for gifted students (such as Nazarbayev Intellectual Schools, Daryn, Zerde, Kazakh-Turkish Lyceums, and private schools such as Miras) are considered to lead to a social disadvantage and creation of elitism (Yakavets, 2014). As these schools tend to be significantly financed from the State budget, which is beneficial for gifted children who receive a high-quality education, other schools are not receiving enough of the remaining resources, thus neglecting the provision of facilities and quality education in mainstream schools (OECD, 2018). This becomes one of the barriers hindering the implementation of inclusion in regular schools.

Failure to Recognise Other Forms of Diversity. It is important to consider what pre-service teachers did not mention and acknowledge about inclusion and inclusive education. The in-depth interview results showed that the participants failed to recognise other forms of diversity. The concept of inclusion has evolved into valuing and recognising every single individual regardless of their gender, age, socioeconomic situation, ethnic and cultural

background, religion, sexual orientation, and other conditions (Galkienė & Monkevičienė, 2021; Polat, 2011). Under the OECD (2000, 2003) cross-national classifications of children with SEN, there are three categories (A, B, and C). Category A implies students with a "clear biological impairment" or disabilities (OECD, 2000, p. 31). Students who experience particular difficulties in learning are referred to as children with SEN in category B (OECD, 2000). Category C refers to those students who stem from a "social disadvantage" group of people rooted in socio-economic, linguistic, and cultural factors (OECD, 2000, p. 31). By the above-defined cross-national classification of students with SEN, it is clear that the interviewees of this study were mainly interpreting the concept of SEN as including children with biological impairments or disabilities, in line with category A. Albeit, by disregarding the needs of students from other socioeconomic backgrounds, students from various multicultural backgrounds, and students with diverse learning needs, who also require support, the overall limited conceptualisation of inclusion may obstruct the adoption and preservation of inclusive education practices. Thus, it is crucial to highlight that the pre-service teachers' narrow understanding of students with SEN is at odds with the values of inclusion. Viewing children with SEN only from the medical perspective, i.e., as people with defects and forming the perspectives of talented children, are controversial and perpetuate certain attitudes towards differences (Makoelle, 2020; Makoelle & Somerton, 2021). In this way, future teachers may unconsciously forget about all other students and their needs and will not provide proper support for other students. By accepting and meeting the needs of all children, the social response to inclusion leads to the modification of the school curriculum in order to meet the needs of children with SEN in the process of including them in mainstream schools (Clough & Corbett, 2012).

To guarantee that future teachers can successfully support all children in their classrooms, it is essential for pre-service teacher education programmes to broaden their curriculum to reflect the various dimensions of inclusion and student diversity. Programmes

can better prepare pre-service teachers with the knowledge and skills required to establish inclusive learning environments for various groups of students by offering a thorough and inclusive approach to teacher education (Florian & Camedda, 2020). This demands a revision of conventional ideas about inclusive education and an appreciation of the complex social and cultural influences on pre-service teachers' conceptions of inclusion (Florian & Camedda, 2020).

6.1.2 Benefits of Inclusive Education Perceived by Pre-Service Teachers

The quantitative and qualitative findings of this study also revealed that the majority of pre-service teachers believe inclusive education can bring various benefits to students with SEN, including the enhancement of self-esteem and self-concept of students with SEN, an opportunity to socialise with peers of the same age, increase awareness about children with SEN in society that encourages reducing stigma, and positive benefits for parents of students with SEN. The following sub-sections elaborate further on the benefits of inclusive education identified by pre-service teachers.

Social Impact of Inclusion. Pre-service teachers believe that inclusion helps increase awareness about children with SEN in society, thus leading to greater acceptance. These findings were further supported by qualitative data results, where pre-service teachers acknowledged the social impact of inclusion, i.e., an awareness about children with SEN among the public could enhance social acceptance. These findings are consistent with the current literature highlighting the social benefits of inclusion for students with SEN (e.g., Garriott et al., 2003).

The reasons outlined below could potentially explain such a trend. Overall, it is not easy to be against the principles of inclusive education, which generally defends the need to provide quality education to all students. It is widely accepted that inclusive education benefits all students as well as students with SEN (e.g., Mezzanotte, 2022). In inclusive settings, students have the chance to share knowledge, celebrate variety, and grow in empathy

and understanding of others in inclusive classrooms. Additionally, inclusive classrooms can result in better social and emotional growth for all students as well as a superior academic accomplishment (Mastropieri & Scruggs, 2017; Mezzanotte, 2022). There is also a moral and legal requirement for inclusive education. People with disabilities should be given the opportunity to pursue an education without facing discrimination, according to the Convention on the Rights of Persons with Disabilities (CRPD), which has been ratified by more than 160 nations, including Kazakhstan (OHCHR, 2022; United Nations, 2006). Inclusion in education has been underlined as a fundamental human right and as a key component of the Convention by the United Nations Committee on the Rights of Persons with Disabilities (De Beco, 2018). Moreover, Kazakhstan has been promoting the values of inclusive education for several years, and future teachers are no strangers to this reality. In addition to this, all third- and fourth-year students have taken an inclusive education module within their university ITE programmes (Nogaibayeva et al., 2017), which could have raised awareness about inclusion among future teachers in this study, thus influencing pre-service teachers' beliefs about children with SEN. It is crucial to highlight that not all participants of this study had undertaken the Inclusive Education course. The study recognizes this constraint, and although the findings are intriguing, it is important to approach them with prudence. The findings offer valuable perspectives from those who have undergone training on Inclusive Education, yet these views may not be reflective of the broader pre-service teacher cohort as a whole. The positive influence of early exposure to inclusive education principles on pre-service teachers' beliefs about inclusion has been widely documented in the literature (Miesera & Gebhardt, 2018; Sharma & Sokal, 2015). Equally important to note is that teachers' beliefs are hard to change over a short period, as they tend to remain stable over time (Kagan, 1992; Malinen et al., 2013; Tschannen-Moran et al., 1998). This view is echoed by Tait and Purdie (2000), who acknowledged that one-year teacher training courses are not enough when it comes to changing teachers' attitudes towards children with disabilities.

Enhanced Self-Esteem of Students with SEN. According to the quantitative findings, pre-service teachers believe that inclusive education enhances the self-esteem of children with SEN thus developing a better self-concept. Qualitative findings corroborated this, indicating that future teachers view inclusion to be beneficial for students with SEN, as it allows them to socialise by studying with their peers and obtaining access to mainstream education. Providing access to education in mainstream schools for children with SEN offers them an opportunity to obtain equal education prospects, socialise with their peers and develop their communication skills (Mastropieri & Scruggs, 2017; Mezzanotte, 2022). This is in line with Mezzanotte's (2022) statement, which asserts that inclusive education fosters students' socio-emotional growth and self-esteem. According to Mastropieri and Scruggs (2010), children with disabilities who attended inclusive classes outperformed those who attended segregated classrooms in terms of academic achievement, social competence, and self-esteem. In addition, the study discovered that inclusive education was linked to better social connections among students and good views about diversity (Mastropieri & Scruggs, 2010). Thus, students with SEN have the chance to engage in social relationships and form positive self-concepts through inclusive education, which not only supports academic accomplishment but also fosters social connection and self-esteem.

Moreover, the interviewees acknowledged that by gaining access to education at mainstream schools, inclusion has the potential to provide students with SEN with an opportunity to continue their education at higher educational institutions (HEIs). This is in line with previous studies confirming that children enrolled in inclusive settings are more likely to enrol and graduate from higher education (Rojewski et al., 2015). Overall, studies confirm that students with SEN placed in inclusive environments tend to show higher academic progress if differentiation and adequate teaching strategies are employed compared to their academic and social progress in special schools (Gibb et al., 2007; Hegarty, 1993; Madden & Slavin, 1983; Manset & Semmel, 1997). Therefore, better academic outcomes in

pre-university settings increase the chance of continuing education in HEIs for students with SEN. In order to assist students with SEN in gaining the skills they need to thrive in higher education and beyond, it is crucial to guarantee that they have access to the proper support services and accommodations throughout their education in mainstream schools.

Benefits for Parents of Students with SEN. Following the quantitative findings, pre-service teachers believe parents of children with SEN would not require more support than parents of children with typical development. This finding was further supported and complemented by the qualitative data results. Moreover, a significant number of participants in this study are of the opinion that the social acceptance of children with SEN and their inclusion in mainstream schools positively affects not only children with SEN but also their parents as it provides support for them. More specifically, pre-service teachers believe inclusion benefits parents of children with SEN by allowing them to engage with other parents and socialise with their children with SEN. This finding concurs with De Boer et al. (2011), who acknowledge that parents have various motives to include their children with SEN in mainstream schools; however, the primary reason is the opportunity for social participation with a group of peers for their child.

Acceptance by Peers and Danger of Being Bullied. The quantitative findings indicate that pre-service teachers believe students with SEN will not be ignored and isolated from their peers in inclusive settings. However, the qualitative findings challenge this observation as pre-service teachers expressed their concerns regarding some difficulties, such as society's unacceptance of students with SEN, especially by their peers, which may lead to bullying. According to Pijl (2005), the presence of children with SEN in mainstream schools does not always lead to their social participation, i.e., to increased contacts and friendships with their peers. Studies confirm that students with SEN tend to experience difficulties in being accepted by their peers, obtaining a "good social position", and becoming a part of a class network (De Boer et al., 2011, p. 332; see also Pijl et al., 2008; Soresi & Nota, 2000).

These findings have substantial implications. Children with SEN may suffer from consequences including low self-esteem, anxiety, despair, and poor academic achievement as a result of social exclusion and rejection. Consequently, it is crucial to provide a diverse learning environment in the classroom that encourages interpersonal communication and healthy connections among students. To assist children with SEN in social skill development and peer connection building, future teachers should be educated to encourage social skills training and promote peer support programmes (OECD, 2023). Also, it is critical to educate children with typical development about the challenges faced by their peers with SEN and to inspire them to be more accepting and helpful. Future teachers should be trained to create an atmosphere that is cultivating wider acceptance of student diversity and instils values encouraging and helpful for students with SEN (Cerna et al., 2021; OECD, 2023).

Overall, pre-service teachers in Kazakhstan believe inclusive education brings many benefits for students with SEN and their families. These include positive social impact by raising awareness about students with SEN, increased self-esteem of students with SEN, benefits for parents of children with SEN, and social acceptance of students with SEN, particularly by their peers. However, the participants also identified a series of challenges related to the unreadiness of society for inclusion, as there is limited awareness about inclusion and children with SEN. This might negatively affect the acceptance of children with SEN by their peers and parents of children with typical development. The following sections further delve into the anticipated challenges of implementing inclusive education from pre-service teachers' perspectives.

6.1.3 Challenges Implementing Inclusive Education Perceived by Pre-Service Teachers

A considerable amount of literature confirms that pre-service teachers experience challenges in teaching in inclusive classrooms, such as a lack of resources, support, and teacher training (Avramidis & Norwich, 2002; Headden, 2014; Kaufman & Moss, 2010; Kwok, 2021). Based on data analysis, four major challenges have been identified in pre-

service teachers' experiences teaching in inclusive classrooms in Kazakhstan. These challenges are predominantly related to 1) insufficient preparedness of in-service teachers; 2) impediment of other students' academic progress; 3) family-related barriers, and 4) environment-related issues such as inadequately equipped school facilities and a limited budget for inclusion.

Unqualified In-Service Teachers at Mainstream Schools. The qualitative findings revealed a range of concerns expressed by future teachers. The unpreparedness of mainstream schools' in-service teachers for inclusion, in general, was identified as the most significant constraint. According to the qualitative data, pre-service teachers are concerned about being able to meet the individual needs of students in inclusive settings due to their limited knowledge and training on inclusion. Previous research has also confirmed that teachers tend to be reluctant to include students with SEN in their classrooms due to insufficient training, difficulty in monitoring the class, and decreased academic achievement of the whole class (Forlin et al., 2008; Florian & Camedda, 2020). The lack of preparation of in-service teachers might negatively influence pre-service teachers during their placements at mainstream schools. In-service teachers are role models for pre-service teachers during their school internships, so their limited preparedness to manage inclusive classrooms and meet the needs of all students might not provide the best example for future teachers.

Negative Impact on Academic Achievements of The Whole Class. Several participants voiced worry about the possible detrimental effects of inclusive education during the semi-structured interviews. They made the argument that teachers might need to devote more time and attention to students with SEN, which might make it more difficult for them to help the other students in the class effectively. This result is in line with earlier research findings of pre-service teachers' views toward inclusive education (Civitillo et al., 2016; Essex et al., 2021; Lambe, 2011; Odongo & Davidson, 2016; Rihter & Potočnik, 2022). According to Civitillo et al. (2016) and Essext et al. (2021), some pre-service teachers thought

that including children with SEN in mainstream classrooms would be difficult for other students since it would put them at a disadvantage by hindering the opportunities for high-achieving students. According to Odongo and Davidson (2016), pre-service teachers lacked the knowledge and practical abilities necessary to fulfil the various needs of individual students in inclusive settings. Similarly, Lambe (2011) found that pre-service teachers had doubts about the value of inclusive education since they considered it to be a challenging and time-consuming procedure.

A possible explanation of the current finding may be an overemphasis on academic results and educational performance across schools in Kazakhstan. As Hajar et al. (2023) admitted, entry to highly selective institutions and universities is becoming more competitive in Central Asia. Correspondingly, an excessive focus on academic performance leads to pressure on schools to support students in their quest to earn the points required for admission to universities (Hajar et al., 2023). Alternatively, in the Western context, Essex et al. (2021) conclude that future teachers are mainly concerned about the practical issues of differentiation rather than prioritising meaningful and reflective learning. To be specific, future teachers tend to focus on addressing the supposed deficiencies of students with SEN in the light of assessment pressure. Moreover, the implementation of differentiation strategies where pre-service teachers apply certain tasks based on the abilities of learners and perceive students with SEN as low-ability learners lead to a restriction of those students' potential and, in general, the implementation of restricted curriculum (Essex et al., 2021).

The finding that some pre-service teachers consider inclusive education to be a possible barrier to high-quality education underscores the demand for appropriate education and assistance to allay their concerns. Particularly, inclusive education training that offers a thorough awareness of the various requirements of individual students and efficient classroom management techniques must be included in pre-service teacher education programmes (Civitillo et al., 2016; Lambe, 2011). Such training can increase pre-service teachers' self-

efficacy and confidence in their ability to meet the needs of all children, including those with SEN. Also, providing teachers with opportunities for continued professional development can assist them in gaining more knowledge and expertise in inclusive education strategies and promote the implementation of inclusive education policy in regular classrooms (Sahli Lozano et al., 2021; UNESCO, 2018).

Difficulties in Including Students with Diverse Abilities. Pre-service teachers were equally concerned about the challenges of including children with diverse abilities in the same classroom and meeting their individual needs. This concurs with previous findings, where future teachers generally acknowledge student characteristics as a challenge depending on the severity of a disability, potential danger to other students from a student with SEN, and fear of the general classroom achievement decreasing (Braunsteiner & Mariano-Lapidus, 2021; Civitillo et al., 2016). Pre-service teachers need to possess the knowledge and abilities necessary to satisfy the requirements of all students in their classes, including those with SEN, as the field of education continues to change. To achieve this, it is essential that teacher preparation programmes include more in-depth courses on inclusion that particularly address the varied features of students with SEN and efficient methods for satisfying their needs (Florian & Camedda, 2020). Future teachers seem to need more confidence in meeting the needs of students in their classrooms, so more in-depth modules about inclusion delving into diverse characteristics of students with SEN and practices of meeting their needs are required.

Family-Related Barriers. Family-related barriers were considered another challenge for including children with SEN in mainstream classrooms. The semi-structured individual interviews revealed that some pre-service teachers view parents and close family members as responsible for hindering inclusion, as they unintentionally exclude their children with SEN. More specifically, some participants acknowledged that parents of students with SEN tend to focus on their child's disability and highlight the need for special attitudes and treatment in the classroom. This is in line with Gibb et al. (2007), who acknowledged that parental anxiety

and concerns lead to certain challenges to the inclusion process. The study discovered that many parents worry that their children with SEN may be stigmatised or excluded in regular educational settings (Gibb et al., 2007). A study by Palmer et al. (2001) reported similar parental concerns, where parents expressed their worries about the inadequacy of the curriculum at mainstream schools for children with SEN and that students with SEN might not receive support and assistance like in special schools. Family-related obstacles can result in exclusion and obstruct the inclusion process, making it difficult to include children with SEN in regular schools. To allay their worries and deepen their knowledge of inclusive education, parents and other members of the immediate family need to participate in the inclusion process through the establishment of a three-party collaborative partnership encompassing parents, mainstream schools, and support personnel (Gibb et al., 2007). All parties engaged in the inclusion process should collaborate to ensure the successful inclusion of students with SEN in mainstream classrooms.

Environment-Related Barriers. It is crucial to consider all the potential obstacles posed by the environment in which the school functions when discussing the successful implementation of inclusion in mainstream classrooms. The successful implementation of inclusion might be hampered by a number of environmental conditions, according to the results of in-depth semi-structured interviews.

The lack of preparedness of mainstream schools, particularly in terms of the resources and facilities available, was one of the major issues that were highlighted. The budgets of many schools may be constrained, which can make it challenging to offer the tools and assistance needed to promote inclusion, including specialised tools and supplies, as well as the staff's required education and training. Many schools may also experience issues with their internal infrastructure and physical amenities. For instance, certain educational institutions could lack the facilities or funding required to accommodate students with disabilities or to offer customised training for students. The interviewees also highlighted that

certain schools might not have the support and leadership required to implement inclusion successfully. A lack of explicit regulations and procedures, as well as a lack of support from the school administration and community, fall under this category.

In general, the ability of educators to successfully implement inclusion in mainstream classrooms depends on their knowledge and expertise, but it also depends on the facilities, resources, and support provided by the school environment (Hemmingson & Borell, 2002; Law et al., 1999; Pivik, 2010; Powell, 2015; Priyanka & Samia, 2018). According to the results of in-depth semi-structured interviews, many schools have challenges because of budgetary constraints, a lack of resources, and a lack of support and direction. Addressing these barriers and providing the necessary resources and support will be essential for the successful implementation of inclusion in mainstream schools.

6.1.4 The Personal Factors Dimension of SCT: Exploring Pre-Service Teachers' Beliefs

Overall, the above-presented conclusions lead to the interpretation of pre-service teachers' beliefs about inclusion as (1) the narrow conceptualisation of inclusion that is predominant in the post-Soviet context, (2) the fact that teachers' beliefs are difficult to change, and (3) teacher professional development is a process, and pre-service teachers are at an early stage in this process. To summarise the issue of future teachers' beliefs, I would like to refer to Bandura's (1986; 2001) Social Cognitive Theory, which consists of three major dimensions: personal factors, behaviour, and environment (see Figure 3 in Chapter 2). It is crucial to highlight the reciprocity and bidirectionality of the theory (Bandura, 2005) leading to the development of a holistic teacher ready to work in an inclusive environment. The personal factors dimension consisted of pre-service teachers' beliefs about students with SEN and their self-efficacy beliefs, which were examined within the framework of this study.

In accordance with the SCT, the personal factors encompassing pre-service teachers' knowledge about inclusive education and their beliefs about students with SEN affect pre-service teachers' behaviour and classroom practices. More specifically, pre-service teachers'

practices of inclusion (behaviour) are deemed to be constructed through their knowledge and conceptualization of inclusion, as well as their beliefs about the benefits and challenges of inclusion. As the findings of this study indicate, pre-service teachers' narrow conceptualisation of inclusion, which is mainly based on a medical, deficit-based perspective, may result in prejudices, misconceptions, and ineffective practices that might obstruct the use of inclusive practices in the classroom. Nevertheless, most study participants expressed positive beliefs about students with SEN, which, in turn, can foster inclusive education and supportive classroom environment by encouraging positive interactions and relationships among all students. By fostering accurate knowledge, positive beliefs, and inclusive conceptualisation, pre-service teachers are more likely to engage in behaviours that promote the inclusion and success of all students, including those with SEN.

6.2 Pre-Service Teachers' Beliefs about Self

This section discusses the findings on pre-service teachers' self-efficacy beliefs about inclusive education. It is divided into three subsections elaborating on 1) pre-service teachers' self-efficacy beliefs about using learning strategies in an inclusive environment, 2) pre-service teachers' self-efficacy beliefs about managing classroom behaviour, and 3) pre-service teachers' self-efficacy beliefs about collaboration with other stakeholders.

6.2.1 Pre-Service Teachers' Self-Efficacy Beliefs about Modified Instructions Meeting the Needs of All Students

Quantitative findings revealed that pre-service teachers have relatively high self-efficacy beliefs about working in inclusive settings. More specifically, they expressed confidence in applying various teaching approaches, including pedagogical knowledge and assessment approaches. However, they reported lower self-efficacy regarding using modified instructions and meeting the needs of students with disabilities. The qualitative findings are consistent with these results. Pre-service teachers elaborated in the interviews that although

they were able to treat students equally by creating and supporting an inclusive environment in their classrooms, they would be reluctant to work in inclusive settings due to their limited confidence in their capacity to meet the individual needs of students with SEN.

Similar findings were testified by the OECD (2019b) TALIS report, where despite teachers' higher level (70%) of confidence to promote positive relationships among students, fewer teachers held positive self-efficacy to adapt their teaching (59%). A plausible explanation for this finding might be that there is little training on methods and approaches to teaching students with diverse abilities, such as differentiated instruction and universal design for learning at HEIs. This is testified by the pre-service teachers of this study disclosing that the courses on inclusive education were provided for only one term during their final years of studies (third or fourth year), which consisted mainly of theoretical aspects of inclusion. Most future teachers expressed the necessity of having more practice-based courses about inclusion that could prepare them to work in inclusive classrooms. Moreover, few participants acknowledged obtaining practical knowledge and skills during the inclusive education modules.

Previous studies found that educators' preparedness for inclusive education correlates with their experiences of completing a university course on inclusive education (Avramidis & Norwich, 2002; Goddard & Evans, 2018; Sharma et al., 2008; Sharma & Nuttal, 2016; Sharma & Sokal, 2015; Zagona et al., 2017). As Kiel et al. (2020) uncovered, future teachers' stronger self-efficacy is favourably associated with their capacity to better implement inclusive education by employing differentiated instruction and diverse teaching approaches. This finding is consistent with previous research, indicating that if pre-service teachers experience deficiencies in their ITE programmes, then they are more likely to be less optimistic about their abilities to meet the needs of students with SEN in mainstream classrooms (Costello & Boyle, 2013; Forlin et at., 2008; Woodcock, 2011). Hence, due to the lack of adequate preparations, future teachers will probably experience lower efficacy in

using differentiated instruction and universal design for learning that meet the needs of diverse learners.

Bandura's SCT (1977) posits that teachers' self-efficacy accounts for an individual's confidence in their ability to lead learners to success. Previous research has clearly indicated that teachers' beliefs about themselves influence their behaviour and actions, affecting students' motivation and performance (Bandura, 1988; Kiel et al., 2020; Mojavezi & Tamiz, 2012; Skaalvik & Skaalvik, 2007). Teachers with higher positive self-efficacy beliefs are more likely to use effective learning strategies, which is considered a good predictor of inclusive education implementation (Caprara et al., 2006; Sahli Lozano et al., 2021; Soodak et al., 1998). Moreover, according to Bandura's (1977; 1988) self-efficacy theory, teachers gain more confidence through more years of teaching experience. Thus, pre-service teachers increase their self-efficacy beliefs as they obtain more teaching experience (Devi & Ganguly, 2022). Bandura (1988) asserted that an individual's strong self-efficacy beliefs facilitate their attention on further development and mastery of their skills. On the contrary, those with weaker self-efficacy beliefs tend to dwell on their lack of or weak capabilities (Bandura, 1988). That is, an individual's beliefs are significant factors determining their actions and behaviour (Bandura, 1988). These findings provide valuable insights into the potential challenges and benefits associated with inclusive education. Therefore, the theory highlights the need to address the personal factors that can facilitate the development of effective inclusive practices in pre-service teacher education programmes. The study also emphasises the necessity for ITE programmes to address a wide variety of inclusion-related topics in order to boost pre-service teachers' self-efficacy and capacity for implementing inclusive practices.

6.2.2 Pre-Service Teachers' Self-Efficacy Beliefs about Behaviour Management

Pre-service teachers demonstrated comparatively lower self-efficacy beliefs in their capacity to manage behaviour, according to the quantitative findings. Future teachers

admitted to being unprepared to manage disruptive classroom behaviour or implement various behaviour management strategies. More specifically, future teachers expressed a lack of confidence in dealing with physically aggressive students and making clear expectations about learners' classroom behaviour. The in-depth semi-structured interview results align with the quantitative findings. Participants highlighted the lack of knowledge about addressing the needs of students with SEN and limited hands-on experience, which affects their confidence.

Similar results were revealed in the Canadian context with the implementation of the Teacher Efficacy for Inclusive Practice (TEIP) scale, where pre-service teachers expressed concerns about their abilities to deal with disruptive and aggressive behaviours (Friesen & Cunning, 2020). The students who indicated the most anxiety about managing disruptive behaviours later admitted that their worry was caused by a lack of first-hand knowledge of such circumstances (Friesen & Cunning, 2020). Therefore, Friesen and Cunning (2020) suggested applying the universal design for learning (UDL) concepts, such as providing knowledge in a variety of formats, giving students alternatives for showcasing their learning, and sparking their interest, as it is believed to be able to improve student's access to the curriculum, and this strategy may assist in reducing disruptive behaviours.

Moreover, the previous study suggested that teachers with high teaching self-efficacy were capable of implementing a wide range of behaviour management strategies, which contradicts the results of the current study (Main & Hammond, 2008; Mergler & Tangen, 2010; Park et al., 2016; Woolfolk et al., 1990). According to Almong and Shectman (2007), educators with high self-efficacy in inclusive practice undoubtedly have more appropriate strategies for addressing the students' behavioural issues. A possible explanation for the finding of this study could be rooted in the limited content of the course on inclusive education being introduced to future teachers. Such limited exposure might derive from insufficient training about inclusion, predominantly classroom and behaviour management training in inclusive settings, that could possibly fail to instil higher self-efficacy beliefs

among future teachers. As O'Neill (2016) contends, the implementation of a course on classroom and behaviour management tends to increase pre-service teachers' self-efficacy beliefs rather than embedding a topic on classroom and behaviour management in any other courses. Also, according to TALIS 2018 report, behavioural issues may be a result of various undiagnosed SEN-related issues (OECD, 2019b). Thus, OECD (2019b; 2020) highlights that teacher training programmes should invest in educating future teachers to detect and have testing services to identify students with SEN. Overall, the results of this study suggest that Kazakhstani ITE programmes need to integrate a separate classroom and behaviour management module in the curriculum to prepare pre-service teachers to meet the diverse needs of children with SEN to give them the skillset to manage the classroom effectively.

Furthermore, the MTAI scale showed that pre-service teachers were concerned about the effort required to include students with SEN in general classrooms. The qualitative findings substantiate this finding, as future teachers expressed their concerns about handling various students' needs requiring more time and effort and being unable to manage students' deviant behaviour. This, in turn, as they expressed, might negatively impact the whole classroom's academic achievement. The findings of this study concur with an international study on future teacher candidates' readiness to work in inclusive schools, where the study participants were from the USA and Austria (Braunsteiner & Mariano-Lapidus, 2021). The study revealed that student-related characteristics, such as severe forms of disability, students who may present danger to others, and students impacting lower academic achievement in the classroom, were identified as the main reasons for not welcoming inclusion among respondents. The authors argue that such a narrow conceptualisation of inclusion (viewing students with SEN from a deficit perspective) contradicts inclusion's positive praxis (Braunsteiner & Mariano-Lapidus, 2021). Additionally, Øen and Krumsvik (2022) promulgate that teachers often tend to reject students with challenging behaviour as they were claimed to pose problems for other students, for teachers and cause a challenge to the social

order. Such an approach to challenging behaviour led to dilemmas of focusing on either knowledge goals or holistic development of a student, as well as focusing on meeting the individual needs of a student or of the whole group by implementing a universal approach (Øen & Krumsvik, 2022).

Also, the results revealed that future teachers feel confident in their capacity to manage inclusive classrooms with the support of teaching assistants. Based on a systematic review of the literature, Øen and Krumsvik (2022) argue that teachers who struggle with implementing inclusive ethos tend to adopt individualistic approaches without considering the context causing challenging behaviours among students. Therefore, students with various challenging behaviours are typically outsourced to "experts" (Øen & Krumsvik, 2022, p. 424). Moreover, having special education teacher or teaching assistants responsible for instructing students with SEN in this study may be explained by pre-service teachers' hesitancy to take full responsibility for students with SEN. Therefore, future teachers tend to delegate responsibility to other experts, such as teaching assistants who were trained to work with children with SEN and would take over the responsibility of them in the classroom. This is in line with the findings in the Dutch context, where pre-service teachers' beliefs reflected concerns regarding accepting the full responsibility of inclusive education implementation in their classrooms (Civitillo et al., 2016).

In accordance with the SCT, pre-service teachers' lower self-efficacy in managing classroom behaviour, especially lower confidence in dealing with aggressive and deviant learners, may lead to reduced effectiveness and weak performance of future teachers in the classroom (Bandura, 1988). As Bandura (1988) asserted, an individual with stronger self-efficacy beliefs tends to have wider career aspirations and prepare better for their profession, and on the contrary, those with lower self-efficacy tend to limit their capabilities due to self-doubt rather than inability. Accordingly, pre-service teachers with lower self-efficacy beliefs in terms of managing classroom behaviour and meeting the individual needs of diverse

students are likely to limit their capabilities due to self-doubt. As a result, pre-service teachers with low self-efficacy may find it difficult to plan and execute suitable accommodations and modifications, and children with SEN may not receive enough assistance to fulfil their unique requirements. This may cause achievement disparities and poorer educational outcomes for students with SEN by preventing them from getting the modifications or adjustments required to access the curriculum and fully engage in classroom activities. Furthermore, pre-service teachers' lower self-efficacy beliefs may hinder their capacity to build positive relationships and foster an inclusive learning environment where all learners are respected and valued.

6.2.3 Pre-Service Teachers' Self-Efficacy Beliefs About Collaboration

The findings revealed two significant aspects of collaboration that positively affect pre-service teachers' self-efficacy: 1) collaboration with colleagues and school administration; and 2) collaboration with parents by providing support to parents of children with SEN and making their school visits more comfortable.

The quantitative findings revealed the confidence of the pre-service teachers to collaborate with their colleagues and other professionals to design educational plans. Pre-service teachers possess a high level of confidence and willingness to cooperate with colleagues to design appropriate educational plans and meet the needs of their students. This aligns with the qualitative findings suggesting that future teachers acknowledged that collaboration with their peers and school administration would positively affect their self-efficacy beliefs. Cooperation with other professionals is admitted, allowing future teachers to share their knowledge and learn new skills. This is in line with previous research, where Guo et al. (2011) acknowledged that collaboration plays a vital role in facilitating teachers to improve their teaching skills and thus positively impact their self-efficacy. Studies suggest that collaboration among staff is a solid predictor of successful classroom instruction implementation by teachers (McGinty et al., 2008; Park et al., 2016).

Similarly, the quantitative findings showed that the pre-service teachers felt confident about their capacity to assist parents of children with SEN and make them comfortable visiting the school. On the same note, according to the interview results, the pre-service teachers remarked that parents' support and assistance would positively affect their confidence. Similar findings have been presented by D'Haem and Griswold (2017), where pre-service teachers acknowledged the importance of collaboration with parents. However, the future teachers emphasised a one-way collaboration, i.e., from teachers to parents, where teachers can communicate and transfer information about students' academic and socio-emotional development (D'Haem & Griswold, 2017). D'Haem and Griswold (2017) admitted that their study participants did not view collaboration with parents as giving them a voice and a leadership role by retrieving information from parents about their child's development and discussions of the school curriculum. This is in line with the findings by Somerton et al. (2021) in the Kazakhstani context, where collaboration with parents was mainly described as a two-way communication mainly regarding the children's behaviour rather than educational processes and aims. Somerton et al. (2021) concluded that there is little expectation of parental involvement in collaboration, and the provision of their voices needs to be further encouraged. Moreover, stakeholder collaboration, especially parental collaboration, needs to be more systematic and consistent, involving their voices in planning the educational goals and processes of the individual education plan for students with SEN (Somerton et al., 2021).

The ability and confidence to work with parents and families are crucial for future teachers. This has been integrated into the *Profile for Inclusive Teacher Professional Learning* developed by European Agency for Special Needs and Inclusive Education (2022). Pre-service teachers should be able to give voice to parents and families by effective communication and collaboration with them, respecting their cultural and social backgrounds, engaging parents and families in the process of supporting students, understanding parents' and families' own realities, and facilitating school-parent partnerships (European Agency for

Special Needs and Inclusive Education, 2022). Also, Devi and Ganguly (2022) stress the importance of liaison with parents, as they can share crucial information about their children (their interests, dislikes, and learning styles) that can be considered and integrated into the lesson plans. Therefore, the current study's results regarding the cooperation with parents lead to the conclusion that current ITE programmes must instil positive beliefs at the level of cooperation by integrating modules on the strategies for working with parents and parents with diverse backgrounds that are accompanied by authentic practice and formal assessment of gained knowledge and skills.

Finally, both quantitative and qualitative findings indicated pre-service teachers' lower self-efficacy in sharing information about existing policies on inclusive education. Lower confidence in disseminating knowledge about inclusive education policies may result from limited training at ITE programmes in Kazakhstani universities. This was evident during the in-depth interviews, where the pre-service teachers acknowledged having limited skills and practice-based knowledge to work in inclusive classrooms. Also, the future teachers were unable to elaborate on the existing policies about inclusion and its practices during the semi-structured interviews. Loreman et al. (2005) and Oswald and Swart (2011) concur with this finding by acknowledging the significant role of education about inclusive education policy and legislation about inclusive education, which has the potential to increase positive beliefs about including children with SEN in mainstream classrooms and growth in the level of comfort by pre-service teachers in their work in inclusive settings. Sharma and collaborators have strongly acknowledged that the better teachers are prepared for their careers, the more positive their views about children with SEN (Sharma et al., 2003).

In accordance with SCT, the behaviours of pre-service teachers are impacted by both their interpersonal contacts with others and their own personal traits and beliefs (Bandura, 2005). Relationships with different stakeholders, such as co-workers, school administration, and parents of children, can have an impact on pre-service teachers' behaviours. As the

majority of pre-service teachers acknowledged their confidence to cooperate with colleagues, this may foster a collaborative and supportive atmosphere that motivates future teachers to pursue professional development. They could cooperate on lesson planning and classroom management while exchanging concepts, methods, and resources. Similarly, pre-service teachers' interactions with administrators, such as principals, managers, and other administrative employees, may also influence their behaviour. Pre-service teachers' feelings of belonging, job satisfaction, and drive to perform well may all be influenced by supportive and encouraging connections with the management of their schools. Moreover, it is possible to promote parental involvement, support, and engagement in pre-service teachers' attempts to educate their students by fostering relationships with parents that are based on trust, respect, and good communication. SCT emphasises the crucial role of considering the social interactions and collaboration aspect of pre-service teachers while analysing their behaviours and professional growth (Bandura, 1986).

It is important to note that this study focuses on the pre-service teachers undergoing their ITE programmes. ITE is a complex system interrelated with various stakeholders, the aim of which is to contribute to the development of specific knowledge and skills among future teachers (Burns & Koster, 2016). It is an inevitable and integral part of the whole education system that leads to the further, continuous development of teachers (OECD, 2019a). Nevertheless, the findings related to the participants' responses to aspects such as inclusive instruction strategies, classroom management, classroom practices, and collaboration can hypothetically predict future teachers' behaviour in inclusive settings. The overall findings of this study emphasise the significance of investigating pre-service teachers' beliefs about inclusive education within the context of the personal factors dimension of SCT. Teacher education programmes may better educate future teachers to operate in inclusive contexts and advance inclusive practices by recognising and addressing the personal factors that influence teachers' beliefs and behaviours.

6.3 Factors Influencing Pre-Service Teachers' Beliefs about Students with SEN and Self-Efficacy Beliefs

This section discusses the findings regarding the factors that influence pre-service teachers' beliefs. In general, previous studies have confirmed that several socio-demographic and contextual aspects, including gender, nationality, socio-economic situation, level of education, and experience of working with people with disabilities, impact pre-service teachers' knowledge and beliefs about inclusive education (Forlin et al., 2009; Griful-Freixenet et al., 2021; Vantieghem et al., 2018). Teachers' beliefs about inclusion are also affected by the nature and severity of the disability of students with SEN, the level of teacher training, and the availability of relevant resources (Bradshaw & Mundia, 2006; Stella et al., 2007). Similar findings have been confirmed in this study. The discussion of the findings related to the factors influencing pre-service teachers' beliefs about students with SEN and their self-efficacy beliefs are divided into three subsections that deliberate on the impact of demographic factors such as gender, major, and type of university on pre-service teachers' beliefs.

6.3.1 Gender

The quantitative results of the MTAI scale demonstrated that gender does not affect pre-service teachers' beliefs about students with SEN and their inclusion, which implies that male and female pre-service teachers have comparable perceptions of the skills of children with SEN. This is positive since it implies that future teachers of both genders are equally likely to offer inclusive instruction and support to students with SEN. However, the results of the TEIP scale showed that female pre-service teachers hold higher cooperative self-efficacy beliefs compared to males, although the magnitude of the difference was small. Male participants constituted only 10% of the total number of participants. That is why this finding should be considered with caution. At the same time, it is important to note that in numerous countries, the teaching profession is predominantly pursued by females in comparison to their

male counterparts, and Kazakhstan is not an exclusion (OECD, 2019b). This prevailing gender imbalance has long been a persistent global trend. A previous study confirmed that female pre-service teachers hold a higher "inclusive growth mindset" and strongly believe in their capacity to collaborate effectively with their colleagues (Ismailos et al., 2022, p. 1). Yada et al. (2021) concluded that female pre-service teachers tend to dedicate more time and effort to teaching than male pre-service teachers.

6.3.2 University Major and Type

Overall, the results of this study suggest that university majors (i.e., Natural and Technical Sciences, Humanities and Social Sciences, and Special Education) do not have an impact on pre-service teachers' beliefs about students with SEN and their inclusion in regular classrooms. Similarly, the type of university students was enrolled in (i.e., Private, Joint-stock, National, and State Universities) did not demonstrate an influence on teachers' beliefs about students with SEN and their inclusion in mainstream schools. However, university type was identified as a contextual variable influencing future teachers' self-efficacy beliefs. More specifically, this study found that the pre-service teachers studying in Joint-stock universities demonstrated lower total self-efficacy beliefs and self-efficacy in cooperation, behavioural management, and using modified instructions in inclusive classrooms. This finding is noteworthy because it implies that pre-service teachers' self-efficacy views may be impacted by the type of HEIs they attend, which may then impair their capacity to teach and support students with SEN successfully. The study highlights the necessity for HEIs that provide ITE programmes to be aware of any potential effects on pre-service teachers' self-efficacy beliefs according to the type of university. It also emphasises the value of providing pre-service teachers with hands-on experience, mentorship, feedback, and professional development opportunities to strengthen their self-efficacy beliefs and ensure they are prepared to deliver high-quality instruction and assistance to children with SEN.

Conversely, this study revealed that university majors significantly influenced pre-service teachers' self-efficacy beliefs. This suggests that the particular major pre-service teachers select may have an impact on how confident they are in their capacity to teach students with SEN. The pre-service teachers majoring in Special Education demonstrated the lowest self-efficacy beliefs in behaviour management, cooperation, and using instructions in inclusive settings. They also showed the lowest scores in overall self-efficacy beliefs. Ironically, it was discovered that the only group in this study to claim to have experience dealing with students with SEN was future teachers majoring in Special Education, as indicated during the interviews. Since pre-service teachers specialising in special education are expected to deal primarily with children with SEN, this finding is alarming. This finding contradicts previous research that found special education teachers tend to have broader knowledge, experience, and practice to support the inclusion of children with SEN (Gehrke & Cocchiarella, 2013; Sahli Lozano et al., 2021). For instance, in a Slovenian context, Rihter and Potočnik (2022) concluded that pre-service teachers majoring in special education have more course modules on teaching students with SEN and experience throughout school placements. Therefore, their experience impacted increased self-efficacy and pre-service teachers majoring in special education feel, in general, more competent to teach students with SEN (Rihter & Potočnik, 2022). A possible explanation for this contradictory finding is that special education teachers in Kazakhstan, such as speech therapists and defectologists, are predominantly trained to work with individual students with SEN in segregated learning environments rather than teaching in inclusive settings (Iarskaia-Smirnova, 2011; Passeka & Somerton, 2022; Somerton et al., 2021; Stepaniuk, 2019; Yurchak, 2005). This may be due to the long history of defectology in the country, as the Soviet traditional approach was to segregate children with diverse forms of special needs in separate educational institutions (Makoelle & Somerton, 2021; Passeka & Somerton, 2022). Most likely, pre-service teachers majoring in special education lack general pedagogical skills to manage regular school

classrooms. This was confirmed in the interviews by the special education pre-service teachers, who indicated that they mostly had school placements where they worked only with children with SEN by supporting them rather than teaching the whole class. Moreover, most educators believe special schools are responsible for educating children with SEN in separate institutions (Inclusion Handicap, 2017). The study emphasises the significance of ITE programmes to address the lower self-efficacy beliefs of pre-service teachers majoring in Special Education and to provide all pre-service teachers with the opportunity to increase their self-efficacy beliefs in order to deliver inclusive education to all students.

Additionally, pre-service teachers majoring in Natural and Technical Sciences showed statistically higher total self-efficacy beliefs than those majoring in Special Education and Humanities and Social Sciences. These findings could be related to the type of university pre-service teachers are being educated in and the institutional support for implementing the inclusion course. For instance, most respondents who indicated Natural and Technical Sciences majors were students of several National and Private universities in Kazakhstan. In contrast, the representatives of Humanities and Social Sciences and Special Education majors were mainly from State and Joint-Stock universities. This leads to an assumption that National and Private universities have established and maintained positive self-efficacy beliefs about inclusion among pre-service teachers within IE modules. Also, it is crucial to highlight that in 2019, all 25 HEIs that used to be Republican State enterprises responsible for managing the economy of Kazakhstan were transformed into non-profit joint-stock companies. The State now holds 100% participation in the authorised capital of these HEIs (Kazakhstan Today, 2019). Nevertheless, the relatively recent changes in university status, where State universities transitioned to Joint-stock universities, may not have affected to dramatic changes within university programmes. Another explanation for higher self-efficacy beliefs among pre-service teachers majoring in Natural and Technical Sciences is most likely that STEM teachers tend to have a solid grasp of and confidence in the subject matter they are

teaching. A stronger degree of confidence in their teaching abilities may have resulted from their major's provision of practical laboratory experiences and problem-solving opportunities that helped them build their critical thinking and practical skills. Their self-efficacy views may also be influenced by other variables, including the degree of encouragement and criticism they receive from teachers and peers, as well as their prior experiences in learning and teaching.

6.3.3 Other Factors

The qualitative findings of this research facilitated an in-depth exploration of the factors influencing pre-service teachers' beliefs, such as student-related attributes and the content of the IE module in ITE programmes. In-depth interviews with the pre-service teachers revealed that student-related attributes such as the severity of student disability and their needs are more likely to require more teachers' time and effort. Also, the overall academic performance and accomplishments of the whole class might be lower due to the needs and abilities of students with SEN. Also, students' deviant behaviour and students who may exhibit disruptive behaviours have been identified as dominant factors challenging the inclusion of students with SEN in mainstream classrooms. The contextual elements presented above might have a detrimental effect on pre-service teachers educating students with SEN in terms of their sense of self-efficacy. For instance, when working with children whose disabilities are more severe and take more time and effort, future teachers may feel overburdened and lacking in confidence to offer adequate assistance and modifications. The sense of helplessness and discouragement brought on by such low self-efficacy beliefs may result in pre-service teachers feeling less motivated to engage in inclusive practices.

On a positive note, the qualitative findings showed that the content of ITE programmes influences future teachers' beliefs. Several participants noted that the ITE programme impacted their perceptions of inclusion, as their initial negative attitudes towards including children with SEN in mainstream classes changed throughout the course. The result

matches those observed in an earlier study by Vandervieren and Struyf (2021), finding that the ITE programme in Belgium positively impacted pre-service teachers' attitudes toward inclusive education and offered "added value" to their programme (p. 1536). However, it is crucial to highlight that only 60% of interview participants in current study had undertaken the Inclusive Education course during their ITE programmes. While the results offer valuable perspectives from course-takers, they may not necessarily generalize to the broader pre-service teacher community.

6.4 Pre-Service Teachers' Suggestions to Improve Initial Teacher Education Programmes

The investigation of open questions in the survey revealed three main ideas the pre-service teachers thought would improve their educational experience: 1) additional training on inclusion, 2) better teaching practices within HEIs, and 3) school placement support in early degree stages. These findings were further confirmed in in-depth semi-structured interviews, where the pre-service teachers shared their concerns and suggestions about the improvements of ITE programmes that could enhance their capabilities to work in an inclusive classroom.

6.4.1 Enhancement of Inclusive Education Programmes within ITE

There is agreement among the research community that teacher training courses on inclusion and teaching approaches in inclusive classrooms help guide and prepare pre-service teachers for future work (Mintz, 2022; OECD, 2023; Sharma & Nuttal, 2016; Symeonidou, 2022; Vandervieren & Struyf, 2021). The findings revealed that pre-service teachers would like to have more education in (1) the diversity or different learning characteristics of students with SEN and (2) teaching strategies to meet the needs of students with SEN.

Specifically, the semi-structured interview results revealed that the pre-service teachers admit to having limited knowledge about the different characteristics of children with SEN. The pre-service teachers explained that they were reluctant to work in inclusive

classrooms due to the limited preparation and knowledge about the characteristics and learning needs of students with SEN. The study participants highlighted the dearth of knowledge they obtained within the framework of the IE module in the ITE programmes. Seven participants mentioned taking a course on inclusive education and acknowledged that future teachers were taught about inclusion for only one semester, which was mainly theoretical in its content. More in-depth knowledge of teaching diverse students is needed. This finding is in line with Keppens et al. (2019), asserting that ITE programmes offer limited preparation for pre-service teachers in addressing diversity. Mintz (2022) concedes that HEIs tend to provide little consideration about knowledge provision on various features of needs categories and approaches to effectively meeting students' needs with specific learning barriers. Although, there is a debate about the provision of "propositional" and "critical or sociological" perspectives on inclusive education (Mintz, 2022, p. 6), where ITE programmes were suggested to focus on offering an opportunity to reconsider difference as an attribute of all learners and diversity as a prospect for all (European Agency for Development in Special Needs Education, 2022). Mintz (2022) argues that limited propositional knowledge of diverse characteristics of students with SEN derived from psychology denies the potential benefits for those students in the form of academic and social development. Likewise, the 'Profile for Inclusive Teacher Professional Learning' highlights the significance of teachers' awareness of diverse perspectives and their intersections in order to represent all learners by having interdisciplinary and intercultural interchange on diversity issues and implementation of universal design models, sign language skills, and awareness of various forms of discrimination (European Agency for Development in Special Needs Education and Inclusive Education, 2022).

Based on the frequency of responses to the open-ended question in the survey, pre-service teachers highlighted the necessity of having more training on teaching methods in inclusive classrooms to meet the needs of all students. This is consistent with the interview

findings, stressing the insufficient time dedicated to the inclusive education module and developing teaching skills for diverse classrooms. Future teachers request more courses on teaching methods and approaches in inclusive settings, due to which most study participants expressed their apprehensive attitudes concerning their readiness to work in an inclusive environment. Further, the future teachers expressed that they needed more methodological support and knowledge about behaviour and classroom management skills. Thus, no clear link between the overly theoretical nature of the content covered in the IE module and the practical aspects of teaching in inclusive settings was identified. This is in line with previous studies indicating that most pre-service teachers tend to feel inadequately prepared to work in an inclusive environment (Brownell et al., 2005; Lambe, 2011; Ismailos et al., 2022). Hemmings and Woodcock (2011) emphasised that readiness to teach in inclusive classrooms appears to be related to several factors, including seeing others' model best practice strategies in a classroom environment. At the same time, the European Agency for Development in Special Needs Education and Inclusive Education (2022) underlines that the learning process is similar for all learners, and it requires very few "special techniques", as well as adaptations of the learning process for some students contributes to forming universal teaching approaches (p. 30). This finding leads to the assumption that there is a gap between instilling positive beliefs about inclusion and inclusive practices within the framework of ITE programmes. Specifically, the study participants view inclusion as meeting the individual needs of students with SEN by focusing on characteristics of their special needs that require specific teaching methods and skills instead of embracing all learners' needs and employing a universal design for learning (UDL) that provides an opportunity for incorporation of diverse perspectives that meet the needs of all students.

The results of this study, considered through the prism of SCT, show the need for a more thorough and in-depth approach to inclusive education in pre-service teacher education programmes in Kazakhstan. The present ITE programme seems to merely cover the

theoretical components of inclusion, with little focus given to actual teaching strategies and techniques that address the variety of requirements of students, including those with SEN. In line with SCT's emphasis on the reciprocal interaction between personal and behaviour characteristics (Bandura, 2005), pre-service teachers are aware of the value of acquiring knowledge concerning inclusive education and various categories of children with SEN as comprehensive knowledge about inclusion and positive beliefs towards it further affects on their classroom teaching practices. This is consistent with SCT's emphasis on the effect of the environment on behaviour and the significance of giving pre-service teachers the opportunity to obtain adequate knowledge and skills that might influence their attitudes and beliefs about inclusion.

At the same time, it is fundamental to note that inclusive education is taking its first steps, and its focus within the Kazakhstani educational system is relatively new, so the process of upskilling pre-service teachers is anticipated to entail numerous challenges and difficulties. Therefore, it is possible to observe the positive influence of inclusive education courses in Kazakhstani HEIs, as most participants supported inclusion and acknowledged its social benefits. An inclusive education course is incorporated during the third year of pre-service teachers' studies in Kazakhstan. Although the course is taught only within a semester by providing a brief theoretical introduction to the concept of inclusion, those pre-service teachers, who have undertaken the course, tend to show positive beliefs about inclusion. However, it is hard to determine whether the IE module itself positively influences future teachers' beliefs within the framework of this study.

6.4.2 Improvement of Inclusive Education Curriculum Delivery in ITE Programmes

In addition, the study participants recommended improving the inclusive curriculum delivery in ITE programmes by implementing modern teaching methods and covering broader perspectives on inclusion; more faculty members who are qualified and experienced in inclusion and more opportunity to study core courses about inclusion.

First, pre-service teachers suggested improving the delivery of the inclusive curriculum, which could improve student engagement. It was suggested that faculty members use modern teaching approaches (such as project-based learning, inquiry-based learning, personalised learning, flipped classroom, and co-creation models) and technologies, as some participants indicated that their HEIs still implemented traditional/lecture-based teaching methods during the semi-structured interviews. Moreover, the content of the IE module seems to vary from university to university. This is confirmed by the OECD (2019a), reporting that ITE programmes differ across and within countries. The interviews in this study revealed that in some universities, IE modules were purely theoretical and delivered in accordance with traditional teaching methods. Whereas, in other universities, pre-service teachers were taught about broader perspectives on inclusion, current policies and reforms in the country, and they had a chance to discuss modern empirical studies on inclusion. However, this was a contradictory finding to quantitative results, where the future teachers indicated their satisfaction with ITE programmes, and the quality of teaching delivered by faculty members at their respected HEIs. Several reasons may be responsible for this contradictory result. Firstly, it is possible that the quantitative data captured the overall satisfaction of future teachers with the ITE programmes, and the quality of teaching delivered by faculty members. This larger viewpoint may have eclipsed any specific reservations or critiques they may have had regarding inclusive education. Additionally, it is possible that the quantitative survey was unable to capture participants nuanced or in-depth input fully. Moreover, it is crucial to take into account the possible impact of social desirability bias in quantitative responses (Nurumov et al., 2022; Tracey, 2016; Van de Mortel, 2008). Due to the perceived social desirability to express satisfaction, pre-service teachers may have felt forced to offer positive feedback on their ITE programmes and faculty members. Due to this tendency, their overall satisfaction ratings may be overestimated, and any underlying concerns they may have had about inclusive education may be hidden.

Second, the interviewees reported that assessment strategies implemented by faculty members were outdated. These findings corroborate the OECD (2019a) report, signifying that ITE programmes experience challenges of connecting "professional practice (teaching approaches and instruction) to the knowledge base" that need to be constantly updated with new research on teaching and learning (p. 79). It is argued that ITE plays a significant role and is responsible for ensuring that prospective teachers are equipped with "the most recent and the most salient" teaching and learning practices (OECD, 2019a, p. 80). Accordingly, ITE programmes are more effective when they integrate evidence-based approaches by actively implementing and weaving research in behaviour management, differentiated practices, assessment, collaboration, and family involvement (D'Augostino & Douglas, 2022; OECD, 2019a, p. 31). Specifically, more evidence is needed on the effectiveness of innovative teaching approaches changing the traditional teaching models and using various digital tools in learning (OECD, 2019a).

Additionally, the survey findings revealed that pre-service teachers preferred to have more experienced and qualified faculty members that could prepare them for their future work. This was followed up in semi-structured interviews, where the participants expressed the need to be taught by more experienced faculty members in inclusion. This finding aligns with a previous study, where Symeonidou (2022) highlighted the importance of collaboration among academic staff in order to improve the ITE programme content and infuse diverse education principles. For instance, a collaboration between faculty members specialising in inclusive education, content, and didactic-related subjects (such as Language, Mathematics, etc.), and other generic disciplines (such as curriculum studies, sociology of education, etc.) may positively impact pre-service teachers' experiences, and better prepare them for their future career (Symeonidou, 2022).

According to SCT, an individual's views and beliefs are affected by the environment, as well as their behaviour may be impacted by their experiences and observations. In the

context of pre-service teacher education programmes, future teachers' suggestions for faculty members to employ contemporary teaching techniques and technology might influence their beliefs about using these methods in their future classrooms. The highlighted need for improvements in the faculty members' use of modern teaching strategies and technology underscores the requirement for more exposure and chances for pre-service teachers to observe and implement these techniques in practice.

Third, the qualitative findings revealed that future teachers request to unload their schedule/curriculum so that pre-service teachers can study core courses in-depth. They also suggested having more elective courses related to their core subjects so that they could have a broader understanding and immersion in their future profession. These elective courses may include various modules on inclusion, classroom management, and practice-based learning. The findings of this study coincide with the OECD (2019a) report indicating that ITE programmes tend to experience challenges in providing coherent ITE curricula that are not "episodic" in nature and do not consist of several unrelated modules taught without any cooperation among instructors and faculty members. Similar to the findings of the ITE study in Japan, where the subject and pedagogical knowledge are strongly focused (OECD, 2019a), future Kazakhstani teachers are taught various modules with a focus on breadth rather than depth of obtained knowledge in ITE. In general, as a result of the narrow scope of their ITE programme training, 10% of teachers request professional development programmes covering general pedagogical knowledge that include classroom management, evaluation and assessment, and teaching students with diverse needs (OECD, 2019a).

6.4.3 School Placement and Support in Early Career Stages

Research evidence suggests the relevance of school placements in the professional development of future teachers as these provide opportunities for pre-service teachers to immerse themselves in practical experiences during their ITE, which will enhance teachers' teaching practices and beliefs (Hemmings & Woodcock, 2011; OECD, 2019b; Øen &

Krumsvik, 2022). According to the qualitative findings, pre-service teachers have school placement experiences. During their first and second year of studies, pre-service teachers usually have a short-term placement experience that lasts approximately two weeks and provides them with an opportunity to observe in-service teachers', i.e., the classroom practices of their mentors. During their final years (third and fourth year), pre-service teachers receive hands-on experience working in classrooms with students in mainstream schools for a month under the guidance of their mentors. However, there were three areas that participants were not satisfied with these school experiences: (1) the short duration of the placement experiences, (2) lack of exposure to IE contexts and experiences, and (3) the support available during placements.

The participants expressed their dissatisfaction with the duration of placement experiences. They complained about insufficient school placement hours, thus leading to limited hands-on teaching experience. The interviewees highlighted the insufficiency of time dedicated to school placements, which were only for a relatively short period: two to four weeks. Therefore, the participants expressed that the school placement period should be more structured and established at universities, with clear norms and requirements for future teachers. Dedicated personnel and resources should be available through these programmes to assist pre-service teachers during their internships. More specifically, it has been revealed that some universities offer teacher training programmes that are not as well-structured and may have fewer resources and guidance for pre-service teachers.

Ciampa and Gallagher (2018) admit that more classroom experience facilitates a higher level of self-efficacy in meeting and addressing students' diverse needs. This is supported by Woodcock et al. (2012), indicating that short-term placements are not sufficient to change pre-service teachers' self-efficacy beliefs. Thus, more hours for future teacher internships at schools are needed (O'Neill, 2016). Teachers are responsible for their continuous development by engaging in professional learning and lifelong learning

programmes to maintain and enhance inclusive practices (European Agency for Special Needs and Inclusive Education, 2022; OECD, 2019b). At the pre-service teacher stage, their depth of knowledge and a general understanding of inclusive education, special needs, and disability is lacking (Duhan & Devarakonda, 2018). Duhan and Devarakonda (2018) concluded that pre-service teachers' understanding of inclusive education is enhanced through further experience and additional training.

Moreover, the study participants expressed dissatisfaction with opportunities exposing them to inclusive education contexts and experiences. The study findings revealed that pre-service teachers had limited access to inclusive classrooms or students with SEN. Moreover, most study participants underlined that they did not have experience working with students with SEN during their school internship period. Depending on their degree and the precise emphasis of their internship, this might present various possibilities and problems for pre-service teachers. Pre-service teachers who are majoring in special education, for instance, tend to complete their internships in special education facilities and schools, whereas pre-service teachers who are majoring in general education complete their internships in mainstream classrooms. Additionally, the availability of eligible internship positions may change from year to year based on elements like the number of aspiring instructors in need of placements and the accessibility of appropriate locations. Depending on the year they conducted their internship, this might result in pre-service teachers having varied internship experiences.

These findings resonate with De Boer et al.'s (2010, 2011, 2012) research, which indicates that teachers' experiences in inclusive settings positively impact their attitudes toward inclusion. In addition, Song et al. (2019) conclude that pre-service teachers who had experience working with children with SEN tend to be more positive and confident in implementing inclusive education than those without experience working with students with SEN. Consequently, limited hours of internship or school placement, which means restricted

access to teaching students in inclusive settings, negatively impacts their self-efficacy beliefs. This is in keeping with previous research, which discovered that the teaching experience of students with SEN was the strongest predictor of teacher self-efficacy (Malinen et al., 2013). This finding leads to the conclusion that the majority of mainstream schools across the country still do not offer inclusion. Therefore, future teachers have limited opportunities to experience working in an inclusive environment during their school placements.

Finally, the interviewees were dissatisfied with the support and mentoring available during placements. The study participants stressed the crucial role of their internship experiences and guidance by their mentors or other faculty members. Interviews revealed that the pre-service teachers wanted more support during their school internships. Some participants acknowledged that their placement school mentors were not interested in investing time and supporting them and would leave them responsible for the whole class during their internship. This concern from pre-service teachers suggests that in-service teachers themselves experience certain constraints in their work, such as time constraints, being overwhelmed by paperwork, or even a lack of motivation and knowledge to share their experience, which is critical for future teachers' growth and development. Similar findings were confirmed by Vandervieren and Struyf (2021), acknowledging that in-service teachers experience struggles with establishing inclusive education ethos themselves and thus are limited to providing real-life support to future teachers. Hence, the participants suggested developing a better mentoring culture among the HEIs and mainstream schools, where experienced in-service teachers could support their future colleagues in a meaningful and helpful way. Studies confirm the challenge of achieving practical cooperation between schools and universities that could facilitate closer integration between pre-service and in-service teachers (Darling-Hammond et al., 2017; Feiman-Nemser, 2001; Mintz, 2022). As Hemmings and Woodcock (2011) highlighted, pre-service experience is one significant factor influencing future teachers' readiness to teach in inclusive classrooms. However, prospective

teachers need specific guidance demonstrating effective teaching practices by their mentors rather than "simply experiencing teaching for teaching's sake of teaching" (Woodcock et al., 2012, p. 8). The reality for most pre-service teachers is that they do not experience strong models of implementing inclusive education practices in mainstream classrooms by their mentors. Mentors play a crucial role in training and preparing pre-service teachers for their future work to implement inclusive education practices in a classroom by meeting the diverse needs of all students (Scarparolo & Subban, 2021). This finding has a clear implication for ITE programmes in Kazakhstan, which needs to provide pre-service teachers with rich experience working with children with SEN.

The study participants in this research stressed the need of encouraging collaboration between universities and schools. This is in line with SCT's emphasis on the interaction between a person's environment, personal circumstances, and behaviour. HEIs may significantly affect future teachers' beliefs about inclusive education and enhance their readiness for their future jobs by giving pre-service teachers chances to receive more hands-on experience while enrolled in ITE programmes at Kazakhstani institutions. Also, the participants suggested improved collaboration between pre-service teachers and in-service teachers to strengthen mentoring culture, in line with SCT's emphasis on the significance of observation and modelling in forming beliefs (Bandura, 2005). HEIs can further foster the growth of favourable beliefs regarding inclusive education among pre-service teachers by encouraging a culture of cooperation and mentorship.

Overall, the findings emphasise that the environment in which pre-service teachers are prepared plays a crucial role in their beliefs about inclusion and their confidence to work in an inclusive classroom. These results, which are in line with SCT's emphasis on the reciprocal relationship between behaviour, personal factors, and environment, offer valuable insights into the crucial role of school placements, university and mainstream schools collaboration, the implementation of modern teaching approaches by faculty members, and more in-depth

courses on inclusion in forming the positive beliefs of future teachers towards inclusive

education, guiding and improving ITE programmes on IE modules within the framework of

HEIs in Kazakhstan.

According to the SCT, a complex interplay between individual and environmental

influences affects pre-service teachers' behaviour (Bandura, 1986; 1988; 2005). Therefore,

this study examined how pre-service teachers' beliefs about inclusion might influence their

behaviour in inclusive classrooms. It also explored the effects of personal and environmental

variables on these pre-service teachers' beliefs.

6.6. Conclusion

Successful implementation of inclusive education substantially depends on the beliefs

of teachers providing inclusive services by meeting the diverse needs of students (Gariott et

al., 2003). Training teachers as agents of change by developing their professional knowledge

and ethos of inclusion is an essential aspect of ITE programmes (Essex et al., 2021; Valiandes

et al., 2018). Thus, exploring pre-service teachers' beliefs about inclusive education is crucial

to adjust ITE programmes that embrace principles of inclusive education, as studies

confirmed that teacher training education may shape positive beliefs or even alter negative

beliefs about inclusion (Civitillo et al., 2016; Essex et al., 2021; Lambe & Bones, 2006;

Lancaster & Bain, 2020). This study contributes to the current body of literature by exploring

Kazakhstani pre-service teachers' beliefs about inclusive education. More specifically, it

explored pre-service teachers' understanding of the concept of inclusion and beliefs about

students with SEN and their inclusion in mainstream schools in Kazakhstan. It is crucial to

acknowledge that the successful implementation of inclusive education across mainstream

schools in Kazakhstan depends on the level of preparedness of future teachers for their careers

as it is the goal for all classrooms to become inclusive. More specifically, their beliefs about

inclusive education shape the trajectory of spreading the ethos of inclusive education. The

results of this study provide a foundation for further study in this field and aid in

comprehending a variety of phenomena connected to the research questions. The following

chapter presents the concluding remarks of this study and discusses the implications for

policy and practice, research, and theory.

Chapter 7. Conclusion

This chapter presents the conclusion of the thesis by considering the empirical findings outlined in the previous chapters. It conveys an overview of the research aims and objectives and elaborates on recommendations for policy and practice, further research, and theoretical implications. Finally, the strengths and limitations of this study are acknowledged.

7.1 Key Findings in the Context of the Aim and Objectives of the Study

This mixed-method explanatory sequential study aimed to examine pre-service teachers' beliefs regarding students with SEN and their inclusion in mainstream classrooms in Kazakhstan. It also elucidated pre-service teachers' readiness and self-efficacy to work in inclusive classrooms and explored the factors affecting their beliefs. Moreover, the study examined pre-service teachers' perspectives on how the ITE programmes could better prepare them for their future careers. The empirical findings of this study provide the opportunity to contribute to the field of knowledge on inclusive education in Kazakhstan. The study provides input into the process of a critical examination that would be necessary for policymakers to take action through educational reforms and changes to current teaching and learning practices regarding the Initial Teacher Education (ITE) for inclusion. Moreover, this study paves the way for further research regarding pre-service teachers' beliefs about children with SEN, as well as their inclusion in mainstream schools in the Kazakhstani context.

This study highlights the urgent need for a transformative overhaul of teacher education in Kazakhstan, with a sharp focus on inclusive education. To achieve this, the research underscores several key recommendations: a modernization of ITE programmes to integrate inclusive teaching methods and knowledge of special educational needs, extensive training and support for pre-service teachers in behavior management and classroom control, a more holistic approach to teacher preparation emphasizing individual student development and inclusivity, enhanced support from mainstream schools, and the pivotal role of teacher

educators and faculty in promoting inclusive practices. Additionally, the study underscores the importance of Universal Design for Learning (UDL) principles, the need for improved school placements, and the crucial role of mentorship and support for pre-service teachers. By implementing these measures, Kazakhstan can better equip its future teachers to create inclusive learning environments and enhance the overall quality of education while fostering greater inclusivity within its educational system.

7.1.1 Conceptualization and Beliefs about Inclusion and Students with SEN

The results of this study indicated that most pre-service teachers were aware of inclusive education, possessed specific knowledge of inclusion and held, in general, positive beliefs about inclusive education. However, the responses also revealed that future teachers embraced traditional beliefs about inclusive education, which were conceptualised around medical perspectives towards inclusion. Specifically, inclusion was determined as means of including students with disabilities on the one side of the spectrum and high-achieving students on the other side of the spectrum. Also, a few participants conceptualised inclusion from the social justice perspective, where inclusion was believed to be a fundamental human right. These participants believed that every student should have equal access to education because they considered it to be a basic human right. Collectively, these findings imply that pre-service teachers hold a narrow conceptualisation of inclusion, primarily focusing on a deficit within a student with SEN. This may lead to challenges in implementing and maintaining inclusive practices by overlooking and ignoring other aspects of student diversity and their needs, such as students with learning needs, students from various socio-economic backgrounds, and any other individual's identity being perceived differently (Polat, 2011).

In addition, this study explored pre-service teachers' beliefs about students with SEN. To examine pre-service teachers' beliefs about students with SEN, future teachers elaborated on their perspectives on the benefits and challenges of inclusion. More specifically, the social impact of inclusion, enhancement of self-esteem of students with SEN, positive impact for

parents of students with SEN and their families, and increased open-mindedness and acceptance by peers have been identified as the main benefits of inclusion by pre-service teachers.

Among challenges, the participants acknowledged that not many in-service teachers are qualified and experienced to work in inclusive settings; inclusion may lead to a decreased academic achievement of the whole class; parents and family members may unintentionally facilitate the exclusion of their children with SEN by focusing on the deficit aspect of their child and restricting their social and educational possibilities; and some environment-related barriers such as lack of facilities and budget. Due to the family-related challenges that pre-service teachers observed, integrating parents and other close relatives in the inclusion process may assist in alleviating their worries and increase their understanding of inclusive education. Parents could receive information and assistance from teachers and school officials to better appreciate the advantages of inclusive education and their child's involvement. Parents and immediate family members' concerns should be addressed, and successful inclusion can be promoted via cooperative efforts between parents, teachers, and school administration. Also, future teachers are concerned about what they perceive as a burden in terms of extra time and effort required to teach children with SEN in inclusive classrooms. They felt that children with SEN would require more teacher attention in inclusive settings, thus decreasing the whole class performance.

7.1.2 Pre-Service Teachers' Self-Efficacy to Work in Inclusive Settings

There is overwhelming evidence that teachers' positive self-efficacy significantly impacts implementing inclusion to the greatest extent in classrooms (Acedo et al., 2009; Bosse et al., 2017; Kiel et al., 2020; Loreman et al., 2013). The insight into Kazakhstani pre-service teachers' self-efficacy revealed different demands and needs of pre-service teachers to be confident working in inclusive settings. This became evident in considering pre-service teachers' self-efficacy when implementing modified instructions, classroom management, and

their willingness to collaborate. Generally, pre-service teachers' self-efficacy in managing classroom behaviour was significantly lower than the other two dimensions of self-efficacy analysed in this study (i.e., implementing modified instructions and willingness to collaborate). Similar results have been found in other contexts, including Canada, Finland, and the USA (Friesen & Cunning, 2020; Park et al., 2016; Savolainen et al., 2012; Sharma et al., 2012). Although pre-service teachers showed confidence in applying various teaching methods in their classrooms, the participants expressed lower confidence in implementing strategies that could meet the needs of students with SEN. The data of this study show that pre-service teachers tend to have limited methodological knowledge and experience of working in inclusive classrooms, which negatively affects their beliefs about inclusion. More precisely, a lack of knowledge and expertise about inclusion seems to lower the pre-service teachers' self-efficacy beliefs. It is crucial to highlight that pre-service teachers reported the lowest self-efficacy beliefs in behaviour management, indicating lower confidence in their ability to deal with aggressive and/or deviant students. In addition, they were reluctant about inclusion due to the effort and time required to implement inclusive education due to students' various needs/disabilities and their influence on overall classroom academic achievement.

The study participants expressed the need for more knowledge about the diverse characteristics of students with SEN to meet their individual needs and apply modified instructions. At the same time, future teachers were eager to collaborate with various stakeholders, including their peers, colleagues, school administration, and parents of children with SEN. However, they wanted to be more confident in sharing information about inclusive education policies and practices, thus concluding that ITE programmes on IE should cover broader aspects of inclusion, including international studies, policies, and reforms on inclusion.

7.1.3 Factors Affecting Pre-Service Teachers' Beliefs about Working in Inclusive Settings

One of the goals of this study was to examine how socio-demographic factors such as gender, university major, and university type may influence pre-service teachers' beliefs about students with SEN and their self-efficacy beliefs to work in inclusive environments. By identifying and understanding these factors, the study aimed to provide valuable insights into how teacher education programmes can better prepare pre-service teachers to work with students with SEN and promote inclusive education. Additionally, the study aimed to identify some of the impeding factors for implementing inclusive education, which could inform policy and practice in the field.

The findings of this study revealed no statistically significant difference in male and female pre-service teachers' beliefs about students with SEN. This suggests that gender does not affect future teachers' beliefs about children with SEN. However, gender had a statistically significant effect on pre-service teachers' cooperation self-efficacy, with future female teachers demonstrating higher cooperation self-efficacy than their male counterparts. It is crucial to note that most of the current study participants were female pre-service teachers (90%), and thus, this finding should be considered with caution. The results of this study have two implications. First, it demonstrates that pre-service teachers' beliefs about children with SEN are not significantly influenced by gender. This finding is significant because it shows that educators of both genders are equally likely to provide students with SEN an inclusive education. Nevertheless, further research is required to investigate how gender affects teachers' actions and interactions with students with SEN in the classroom. Second, the study emphasises how crucial it is for pre-service teachers, particularly male teachers, to acquire collaborative self-efficacy. The capacity of future male teachers to collaborate with students in the classroom, a crucial component of offering inclusive education, may be hampered by their lower collaboration self-efficacy. To counter this, pre-service teachers' collaboration self-efficacy, particularly among male teachers, might be

improved. Teacher education programmes can incorporate training and assistance in this regard.

Also, the findings of this study revealed that university major does not affect pre-service teachers' beliefs about students with SEN but had a significant influence on their self-efficacy beliefs. Pre-service teachers majoring in Special Education demonstrated the lowest self-efficacy beliefs in comparison to future teachers majoring in Natural and Technical Sciences and Humanities and Social Sciences. Moreover, pre-service teachers majoring in Natural and Technical Sciences displayed the highest self-efficacy beliefs. The implications of this study are significant for ITE programmes. To help pre-service teachers develop their self-efficacy beliefs, teacher education programmes need to provide them with the appropriate instruction and encouragement, especially for those specialising in Special Education. This can entail giving pre-service teachers a chance to watch and interact with children with SEN, seek advice from more experienced educators, and participate in professional development activities to improve their teaching skills.

Likewise, university type was revealed to have no impact on pre-service teachers' beliefs about students with SEN. However, a significant difference was discovered regarding pre-service teachers' self-efficacy beliefs, whereas future teachers studying in Joint-stock Universities demonstrated lower self-efficacy beliefs. The implications of this study are significant for HEIs that provide ITE programmes. In order to help pre-service teachers develop their confidence in their ability to educate students with SEN, teacher education programmes must be aware of the possible effects of university type on pre-service teachers' perceptions about their self-efficacy. Lack of exposure to practical experiences, particularly with students with SEN, may be one of the reasons why pre-service teachers studying in joint-stock universities have lower self-efficacy beliefs. Thus, it is essential for universities to offer an opportunity for pre-service teachers to observe and engage with students with SEN in order to strengthen their self-efficacy beliefs. HEIs may also consider providing pre-service

teachers with opportunities for mentoring, feedback, and professional development to help them become more competent and confident educators of students with SEN. This could aid pre-service teachers in strengthening their self-efficacy beliefs and gaining a more thorough grasp of inclusive practices.

Finally, other factors such as students with deviant behaviour, the severity of disability type requiring more time and effort from teachers, and negatively impacting the academic achievement of the whole class were identified to be impeding factors for implementing inclusion. The results of this study have major repercussions for ITE programmes. Pre-service teachers must obtain all the necessary knowledge and skills from ITE programmes to communicate with a range of pupils, including those with SEN. This could involve training in effective communication strategies, evidence-based practices, and the implementation of assistive technology.

7.1.4 The Role of ITE in Preparing Pre-Service Teachers for Inclusive Education

ITE plays a crucial role in preparing pre-service teachers for inclusive education (OECD, 2023). ITE programmes that provide a strong foundation in inclusive education can equip pre-service teachers with the knowledge, skills, and attitudes necessary to work effectively with students with SEN. This includes an understanding of the principles of inclusive education, knowledge of different types of SEN, and strategies to differentiate instruction to meet the diverse needs of learners (Mintz, 2022; Sharma & Nuttal, 2016; OECD, 2023; Symeonidou, 2022; Vandervieren & Struyf, 2021). Teacher education programmes also play a critical role in developing pre-service teachers' self-efficacy to work in inclusive environments. This includes providing opportunities for pre-service teachers to gain practical experience working with students with SEN in a supportive and supervised setting. Through this experience, pre-service teachers can develop the confidence and competence necessary to work effectively with students with SEN and promote inclusive

education in their future classrooms (Øen & Krumsvik, 2022; OECD, 2019b; Hemmings & Woodcock, 2011).

The results of this study demonstrated that pre-service ITE programmes in Kazakhstan tend to be shallow and only touch upon the theoretical aspects of inclusion. More in-depth content is required regarding inclusive education policies and practices, teaching approaches and methodologies in meeting diverse students' needs, including students with SEN, and behavioural and classroom management skills. In addition, the pre-service teachers acknowledge the importance of gaining content knowledge about inclusion and diverse categories of students with SEN. Numerous research studies corroborated that more training on special and inclusive education promotes positive changes among teachers (Avramidis et al., 2000; Subban & Sharma, 2006). Thus, it is suggested to enhance ITE programmes on inclusive education by lengthening the IE module and integrating practical knowledge on features and characteristics of children with SEN and strategies and approaches in meeting their needs.

Moreover, future teachers highlighted the demand for improvements within the HEIs regarding faculty members' implementation of modern teaching approaches and technologies. There is an opportunity for improvement in the design and execution of ITE programmes, according to input from pre-service teachers regarding the necessity of enhancements in the faculty members' application of contemporary teaching methodologies and technology. It is advantageous for faculty members and students to use contemporary teaching methods and technology (Gorozidis & Papaioannou, 2014). The use of technology can improve the effectiveness and efficiency of teaching, freeing up faculty personnel to concentrate on more complex responsibilities like leading conversations and giving feedback (Fidalgo-Blanco et al., 2015). Modern teaching methods can also help faculty members improve professionally by introducing them to fresh educational ideas and teaching techniques (Emo, 2015). Higher education institutions must consider the requirements of contemporary classrooms and

provide prospective teachers with the knowledge and skills required to be successful educators. This may be accomplished by integrating contemporary teaching strategies and technology into ITE programmes and providing academic staff with the support and guidance they need to use these strategies and technologies well (D'Augostino & Douglas, 2022; OECD, 2019a).

Finally, the critical role of school placements was underlined by the study participants, who expressed the necessity of fostering collaboration between universities and schools. Longer internships at inclusive schools were highlighted as a crucial aspect of preparing future teachers for their careers so they could gain more practical experience during their ITE programmes at Kazakhstani universities. Moreover, better cooperation between in-service and pre-service teachers leading to an enhanced mentoring culture, was recommended by the participants. These findings have further implications for guiding and improving ITE programmes with IE modules within the framework of HEIs.

7.2 Implications for Policy and Practice, Research, and Theory

This research study analysed pre-service teachers' beliefs about students with SEN and their inclusion in Kazakhstani mainstream classrooms. Thus, the findings can be transferred into action for change with implications for IE in ITE policy and practice, research, and theory. The emerging implications within the framework of this study are detailed further.

7.2.1 Implication for Policy and Practice

Internationally, inclusive education, which emphasises allowing every student to fully engage in the educational process regardless of their abilities, background, and other personal and contextual factors, has gained increased prominence in recent years (Ainscow, 2020; UNESCO, 2018). ITE has a significant impact on the implementation of inclusive education and how aspiring educators will think and conduct themselves when in the classroom

(European Agency for Special Needs and Inclusive Education, 2022; Florian & Camedda, 2020; Sharma, 2012). Hence, there is a considerable opportunity to address inclusion-related concerns in ITE policy and practice. This section examines the main implications of inclusive education on ITE, such as the necessity of addressing diversity and equity in teacher preparation programmes, the role of teacher educators in promoting inclusive practices, and the significance of ongoing professional development for teachers to support inclusive classrooms.

Diversity and Equality Issues Must Be Addressed in Teacher ITE Programmes.
This study revealed that pre-service teachers possess some basic knowledge about inclusive education as most of them have taken inclusive modules within ITE programmes. However, most participants conceptualised inclusion as a form of providing access to the general education system for children with various forms of disabilities and children with high cognitive abilities, i.e., gifted children. At the same time, a few pre-service teachers conceptualised inclusion from the social justice perspective by acknowledging that education is a fundamental human right of every student. These findings conclude that pre-service teachers hold a narrow conceptualisation of inclusion, primarily focusing on a deficit within a student with SEN.

Addressing diversity and fairness in teacher training programmes is one of the main implications of inclusive education for ITE. This entails addressing concerns of race, ethnicity, language, and many types of learning styles, as well as the different needs of gifted and talented students and students with disabilities (Polat, 2011). Future educators must be aware of the various challenges that students may face and how such obstacles may restrict their capacity to engage and learn in class. Pre-service teachers' knowledge, skill sets, and beliefs will enable the learning of all students, especially those who may have traditionally been disadvantaged or excluded from education. This should be included in teacher preparation programmes. Teachers must receive learning on how to create a respectful and

motivating environment in the classroom. The policy suggestion urges the development of standards for HEIs in Kazakhstan to address the lack of support for students with SEN and the pervasiveness of misconceptions about them. Failing to offer access to rights and support services might make "social inclusion policies" worthless; the rules should ensure compliance with legal duties for equal opportunity for all students. The suggested regulations should comply with current equality laws, including the Employment Equality Act of 1998 and the Equality Act of 2004. The concerns highlighted must be carefully taken into account by policymakers, not only from a moral and legal perspective but also because failing to offer fairer and more accessible support may have adverse effects on the economy and society, such as a higher risk of exclusion, a lower rate of educational retention.

The current study found that pre-service teachers were less confident in disseminating knowledge about inclusive education policies and practices. Pre-service teachers admitted that they lacked the knowledge and practical skills necessary to operate in inclusive classrooms and could not comment on the current inclusion policies and procedures. Due to the insufficient training provided by ITE programmes at Kazakhstani universities, prospective teachers may be less confident in spreading information about inclusive education policy. Future teachers' awareness of the needs and rights of students with SEN is a crucial implication of inclusive education for ITE. Understanding the rules and regulations that uphold the rights of students with SEN and knowing how to offer all children appropriate accommodations and assistance are all part of the implications of this study. Hence, it is suggested that policymakers develop effective, equitable, open-access, and evidence-based policies that help pre-service teachers learn about students' SEN rights. It is advised that future teachers receive training on various relevant programmes about legislation, policies and practices of inclusion across the country.

Classroom and Behaviour Management. According to the findings of this study, pre-service teachers had lower self-efficacy beliefs when dealing with physically violent

pupils and setting clear expectations for student behaviour in the classroom. Also, pre-service teachers voiced worries about the amount of work needed to integrate children with SEN in regular classes, which may have a detrimental effect on the academic performance of the entire classroom. Therefore, it is imperative to provide pre-service teachers with comprehensive training and support to develop their self-efficacy beliefs in managing classroom behaviour, implementing various behaviour management strategies, and supporting students with SEN. The study results suggest that Kazakhstani ITE programmes must integrate a separate classroom and behaviour management course to prepare pre-service teachers to meet the diverse needs of children with SEN effectively. This course should include instruction on recognising students with SEN and managing their behaviour in inclusive environments. In order to help pre-service teachers to develop their confidence in handling disruptive and violent behaviours in the classroom, teacher education programmes should provide them with more hands-on experience. This might entail allowing pre-service teachers to work with students with SEN in actual classroom settings while being supervised by more experienced instructors.

Moreover, the findings indicate that future teachers tend to rely on the support of other experts, such as teaching assistants, to manage inclusive classrooms, reflecting concerns regarding accepting the full responsibility of inclusive education implementation in their classrooms. The training of teachers should be approached more holistically, emphasising each student's development in addition to knowledge goals. This will inspire future educators to embrace a more inclusive ethos and assist them in developing positive perceptions of students with SEN. Schools should offer teachers and teaching assistants enough support to assist in managing the needs of students with SEN. Instead of relying entirely on the assistance of external specialists, pre-service teachers should be urged to assume full responsibility for implementing inclusive education in their classrooms.

The Contribution of Teacher Educators to the Advancement of Inclusive Practices. The requirement that instructors be taught in inclusive teaching practices is one of the significant implications of inclusive education for ITE. Teacher educators must be ready to actively promote inclusive practices in their classrooms and across the ITE programmes to fulfil this objective. This can entail using inclusive pedagogies, case studies and real-world examples to highlight the value of inclusion and using a variety of instructional methodologies and resources. Using universal design for learning (UDL) principles to produce accessible instructional materials and utilising technology to promote student learning are examples of how to differentiate education for students with a range of abilities effectively. Additionally, teacher educators should provide an example of inclusive behaviour for their students and allow them to interact with and watch various learners in various contexts.

The Importance of School Placement (Practicum). School placements play a crucial role in the professional development of future teachers by providing opportunities for pre-service teachers to gain practical experiences during their ITE (Duhan & Devarakonda, 2018; Ciampa & Gallagher, 2018; O'Neill, 2016; OECD, 2019b; Woodcock et al., 2012). However, this study found that participants expressed dissatisfaction with the short duration of the placement experiences, lack of exposure to inclusive education contexts and experiences, and limited support available during placements. More hours for future teacher internships at schools are needed to facilitate higher self-efficacy in meeting and addressing students' diverse needs. This may be accomplished through establishing internship programmes that are more structured and with clear expectations for future teachers, as well as by allocating specialised staff and resources to help pre-service teachers during their internships.

In addition, pre-service teachers' understanding of inclusive education is enhanced through further experience and training. Hence, the findings highlight the need to consider the

quality and duration of school placements to enhance the professional development of future teachers and prepare them to meet the needs of diverse learners. There is a need to offer pre-service teachers a greater opportunity to engage with children with SEN throughout their school internship because the study participants had limited access to inclusive classrooms or students with special needs. This may be done by increasing the number of school placements available in inclusive settings and ensuring pre-service teachers have the necessary preparation and support to deal with students with SEN. To provide teacher candidates with the ability to gain practical experience working with various student groups, ITE programmes may need to incorporate additional field experiences or clinical rotations in inclusive settings.

Partnership Between HEIs and Mainstream Schools. This study's results show that due to a lack of assistance and mentorship, pre-service teachers in Kazakhstan have substantial difficulties during their school internships. The value of internship experiences and advice from mentors or other faculty members in the study participants' professional growth was underlined. The interviews found that many future teachers were unhappy with the assistance and direction they received from their placement school mentors and requested additional help during their internships. This implies that current instructors may face obstacles in their profession, such as a lack of expertise or desire or a lack of time limitations, which may affect their capacity to help pre-service teachers successfully.

The study's implications for Kazakhstani ITE programmes strongly emphasise the necessity of providing pre-service teachers with extensive experience working with children with SEN and ensuring that mentors offer detailed instructions on relevant teaching techniques. The research also emphasised the need for HEIs and mainstream schools to foster a stronger mentorship culture where experienced in-service teachers may assist their future colleagues in a meaningful and beneficial manner. Bringing pre-service and in-service teachers closer together would make sharing information and experience between the two groups easier.

To guarantee that in-service teachers are prepared to assist pre-service teachers during their internships, in-service teachers training institutions in Kazakhstan, such as ORLEU (https://www.orleu-edu.kz), should prioritise developing mentoring abilities among in-service educators. This can entail giving in-service teachers a chance to participate in professional development activities where they can learn about efficient mentoring techniques. Also, in order to ease the integration of collaboration between pre-service and in-service teachers, ITE programmes ought to foster stronger cooperation between HEIs and mainstream schools. This can entail delivering combined training sessions or seminars for the two groups so they can benefit from one another's viewpoints and experiences. Kazakhstani universities could establish partnerships with mainstream schools and institutions with a proven track record of effectively mentoring pre-service teachers. This would guarantee that pre-service teachers receive the direction and assistance they require throughout their internships.

7.2.2 Implications for Inclusive Education in ITE Research

According to research, beliefs are formed due to social and cultural experiences, but they may be questioned and altered with adequate education and training (Duhan & Devarakonda, 2018; Ciampa & Gallagher, 2018; O'Neill, 2016; OECD, 2019b; Woodcock et al., 2012). To ascertain the success of inclusive education courses in forming pre-service teachers' attitudes and beliefs about inclusive education, it is crucial to examine their beliefs before and after the inclusive education curriculum. Also, essential insights into pre-service teachers' beliefs about inclusion can be retrieved by observing participants' behaviour and interactions in a real-world setting.

In addition, it is recommended that future research incorporate document analysis, including the examination of IE modules and curriculum for ITE programmes, in order to present a more comprehensive picture of the study. The quality and content of IE modules and curriculum in ITE programmes might be helpful insights from document analysis. This analysis can include an examination of the course objectives, learning outcomes, teaching and

learning strategies, assessment methods, and resources used in the modules and curriculum. Examining IE modules and ITE programmes' curricula may also identify gaps and areas of development in the teacher education curriculum. For instance, recommendations might be made to improve the IE modules and curriculum in these areas if the research reveals that they need to cover issues like diversity, cultural sensitivity, and special educational needs. A further benefit of the research is that it may point out areas where the IE modules and curriculum excel and can serve as examples for future ITE programmes.

The involvement of several stakeholders, including faculty members and university management, is necessary to implement inclusion in schools effectively (Armstrong & Cairnduff, 2012; Gunersel & Etienne, 2014; Márquez & Melero-Aguilar, 2022). Their perspectives on inclusion can greatly impact how future teachers think about and implement inclusive education. Therefore, it is crucial that future studies investigate the beliefs and perspectives of a wide variety of stakeholders on inclusion, especially those of university administration and faculty, in future research. The teaching methods and level of instruction that faculty members use can be impacted by their beliefs regarding inclusion and offer important insights into the opportunities and challenges of implementing inclusive education in schools.

Similarly, the university administration is crucial in shaping future teachers' perspectives on inclusion. They create and implement policies and initiatives that equip pre-service teachers to foster inclusion in the classrooms. Moreover, they ensure that students and teachers understand the value of inclusiveness and offer the assistance needed to implement it successfully. The policies and initiatives that university management develops and puts into place may be strongly impacted by their views on inclusion, which influences the quality of education future teachers to obtain. Examining their beliefs about inclusion might offer insights into the difficulties and chances of educating future educators to promote inclusion effectively.

Finally, further research must examine how pre-service teachers' self-efficacy beliefs and readiness to work in inclusive classrooms can be improved through appropriate teacher training programmes and support. Future studies should examine the efficacy of teacher preparation programmes and pinpoint the best methods for educating future educators to control disruptive and aggressive behaviour in inclusive environments. This can entail carrying out longitudinal studies to monitor the development of pre-service teachers over time and discover any variables that might impact their self-efficacy beliefs.

7.2.3 Implications for Inclusive Education Theory

The Social Cognitive Theory (SCT) was implemented in this study to examine pre-service teachers' beliefs regarding inclusion. The reciprocal interaction between pre-service teachers' behaviour, environment, and personal factors such as self-efficacy beliefs are stressed by this theory (Bandura, 2005). It is crucial to understand the theoretical underpinnings of pre-service teachers' beliefs regarding students with SEN, and their inclusion is crucial. SCT as a theoretical framework has assisted in explaining how pre-service teachers' beliefs about children with SEN and their inclusion are developed and how personal, behavioural, and environmental variables modify these beliefs. Furthermore, this study examined the analysis of pre-service teachers' beliefs about inclusive education from the standpoints of SCT, with a focus on the variables that influence those beliefs, how those beliefs affect pre-service teachers' teaching practises, and the environmental factors influencing pre-service teachers' beliefs and teaching practices.

The importance of self-efficacy beliefs has been highlighted in this study, where it has been found that pre-service teachers' beliefs and practices (behaviours) are influenced by their knowledge and conceptualisation and confidence about their abilities to educate children with SEN. Pre-service teachers' reflections on their preparedness to work in inclusive classrooms and suggestions for improving ITE programmes were presented in the environment dimension. Pre-service teachers shared their suggestions to improve ITE programmes that

indirectly may affect the 'environment' aspect in the future during their early career and in-service stages. According to SCT, pre-service teachers' beliefs about students with SEN and their inclusion are impacted by what they observe and experience throughout their own education, who they get to interact with as mentors and role models, and how confident they feel about their ability to educate children with SEN (Bandura, 1997). Also, according to SCT, environmental variables like support offered to pre-service teachers in their teacher education programmes have an impact on their belief about inclusion (Bandura, 2005). ITE programmes may create interventions that specifically target cognitive/personal, behavioural, and environmental aspects and by recognizing the importance of those variables, it is possible to promote positive beliefs about inclusion among pre-service teachers.

This study has contributed to the advancement of SCT in the field of inclusive education, ITE, and beliefs about students with SEN. In accordance with SCT, pre-service teachers' beliefs regarding learners with SEN and their inclusion in mainstream classrooms are intricate and multifaceted, influenced by aspects related to cognition/personal factors, behaviour, and the environment (Bandura, 2001). Therefore, it is essential for teacher education programmes to include SCT-related variables to encourage pre-service teachers' positive perceptions of students with SEN and their inclusion. Following are some suggestions for how further research can study pre-service teachers' beliefs about inclusion through the prism of SCT.

The present study has focused on the personal and environmental dimensions of Bandura's (1986) SCT as they relate to pre-service teachers' beliefs and self-efficacy and the environment in which they live and work. While these dimensions are important in understanding pre-service teachers' development and practice, the study has not covered the behavioural dimension of SCT. This is due to the fact that pre-service teachers need more experience in teaching in inclusive classrooms. According to Bandura's (1986) SCT, learning and development are influenced by the interaction of behaviour, cognitive, and environmental

variables. The behavioural component of SCT describes individuals' activities in reaction to their surroundings, including the methods they employ to accomplish their objectives. The particular instructional strategies pre-service teachers use to accommodate different learners may be considered behavioural elements in the context of inclusive education.

Future research might look at the interactions between the behavioural component of SCT and the personal and environmental elements of SCT, which were the focus of the current study. Researchers may, for instance, examine how pre-service teachers' beliefs and self-efficacy affect the precise teaching strategies they employ in inclusive classrooms during practicum/school placement and how those strategies, in turn, affect those pre-service teachers' self-efficacy over time. Researchers may also investigate how pre-service teachers' work conditions, both social and physical, affect their teaching strategies, interactions with their students, and learning outcomes. Researchers may establish a more thorough knowledge of the elements that influence pre-service teachers' growth and practice in inclusive education by examining the reciprocal relationships between the personal, behavioural, and environmental components of SCT. This knowledge can help to construct professional development opportunities and teacher education programmes that are more supportive of the needs of diverse learners.

In conclusion, although the current study concentrated on the personal and environmental dimensions of SCT concerning pre-service teachers' beliefs and self-efficacy in the context of inclusive education, future research could examine the reciprocal relationships between these dimensions and the behavioural dimension of SCT. Informed design of more efficient teacher education programmes and professional development opportunities would result from this, giving a more thorough knowledge of the aspects that influence teacher growth and practice.

7.3 Strengths and Limitations of the Study

This section presents several strengths and limitations of the study. It clarifies the details of the research design, methodology, and data interpretation by critically analysing the study's strong points and pointing out any weaknesses. This nuanced approach emphasises the value of a nuanced assessment of the strengths and limits of any academic endeavour and enables a complete grasp of the validity and dependability of the research findings.

7.3.1 Strengths

The strengths of this study are highlighted in this subsection, which also adds to the body of knowledge on pre-service teachers' beliefs about students with SEN and their inclusion in mainstream classrooms in Kazakhstan. Strengths highlighted include steps taken to improve the study's validity and reliability as well as the use of an explanatory sequential mixed methods research design that is based on the critical realism paradigm. The implications of the findings for further research, inclusive education policy and practice are also covered. The survey instruments employed in the study have also undergone extensive translation and validation, which further affirms their potential for application across a range of cultural and language contexts.

Firstly, this study has added essential insights regarding the beliefs held by pre-service teachers about students with SEN and their inclusion in mainstream schools in Kazakhstan. This fills a significant gap in the current literature on the Central Asian Kazakhstani context, which has not been thoroughly investigated. The implications of these findings are pertinent to future research, policy, and practice on inclusive education.

Secondly, the implementation of explanatory sequential mixed methods research design has helped to provide valuable and context-specific information about the fundamental conditions for pre-service teachers' beliefs about inclusive education. These insights are very relevant and transferrable since they have a broad range of applications not just in Kazakhstan but also in other inclusive education practice contexts outside of the region.

Thirdly, a research paradigm underpinning this study, critical realism, helped to offer an interactionist and multi-layered perspective on the pre-service teachers' beliefs about inclusive education and has allowed for flexibility and reflexivity in the process (Bhaskar, 1997). Additionally, the mixed methods approach used in this study produced both quantitative and qualitative data that complimented one another and provided light on many viewpoints on the topic under investigation (Cohen et al., 2018; Creswell & Creswell, 2018; Tashakkori et al., 2021).

Fourthly, through careful planning and design, measures like methodological triangulation using multiple methods and providing detailed descriptions of the data collection and analysis methods have been used to mitigate threats to the validity and trustworthiness of the study (Cohen et al., 2018; Greene, 2007; Lincoln & Guba, 1985). Additionally, the integration of findings from the two phases involved revisiting the raw data and ensuring that the discussion was data-driven.

Finally, the survey instruments of the My Thinking About Inclusion (MTAI) and the Teacher Efficacy for Inclusive Practice (TEIP) scales underwent a rigorous process of translation into the Russian and Kazakh languages, followed by confirmation of their validity. This meticulous translation process, coupled with the confirmation of their validity, lends further support to the robustness and reliability of these instruments, thereby bolstering their potential for universal use across diverse cultural and linguistic contexts.

7.3.2 Limitations

This subsection presents the limitations of the study. More specifically, the generalizability and external validity of study findings are significantly influenced by the sampling strategy used in the investigations. Also, it is crucial to recognise the contextual features of the study, such as the unique population and environment under consideration. In addition, given the possibility of sample bias, the sample's gender and other characteristics

should be noted since they may have an impact on how gender-related findings may be interpreted.

First, it is crucial to recognise that the non-probabilistic sampling method used in this study places limitations on the generalizability of the findings. As a result, the findings of this study might not be applicable to other situations outside of the study sample or to the larger population of pre-service teachers in Kazakhstan. Non-probabilistic sampling can also result in selection bias since some groups or viewpoints may be overrepresented or underrepresented in the sample, which could have an impact on the results and their generalizability to other populations (Cohen et al., 2018; Creswell & Creswell, 2018).

Secondly, the generalizability of the findings to other settings or populations may, also, be constrained due to the contextual aspect of the study (Cohen et al., 2018; Robinson, 2014; Tashakkori et al., 2021). It is crucial to highlight that no assumptions or attempts were made in this study to reflect the beliefs of all pre-service teachers about inclusion in Kazakhstan. To improve the external validity and generalizability of findings and hence raise the robustness and reliability of research findings, it is crucial that future research investigate using probabilistic sampling techniques.

Third, social desirability is an important factor to consider when analysing participants' answers. This has important implications for studies carried out in collectivistic countries like Kazakhstan (Nurumov et al., 2022). The propensity of people to reply in a way that they believe to be socially acceptable or desirable as opposed to giving honest or correct answers is known as social desirability (Tracey, 2016; Van de Mortel, 2008). Participants may be more likely to act in a way that is consistent with social expectations and norms in collectivistic societies where group harmony and conformity are highly prized (Nurumov et al., 2022). This tendency for socially acceptable behaviour might result in individuals hiding or altering their genuine ideas, beliefs, and attitudes, which can lead to biased or distorted findings (Nurumov et al., 2022). The social desirability bias may cause pre-service teachers to

express more favourable and inclusive beliefs than they do, which may distort the understanding of how they really feel about inclusive practices.

Finally, the sample for this study included pre-service teachers of both genders, from a variety of majors and university types, which reduced the possibility that the data-gathering process would be impacted by a certain major, university, or individual characteristics. However, the fact that 90% of the participants in this study were women is a limitation since it may have influenced the results in favour of one gender over another. Due to the possibility that the sample is not entirely representative of the larger population, any results or inferences regarding gender should be treated with care.

7.4 Conclusion

In conclusion, inclusive education has significant implications for ITE policy and practice. To address diversity and equity and to equip future teachers with the knowledge and skills they need to support the learning of all students, ITE programmes must be modernised to fit the priorities of contemporary education goals. The implementation and organisation of programmes for teacher preparation must support inclusive education. Pre-service teachers must obtain training in inclusive teaching methods and knowledge of the needs and rights of students with SEN. By addressing these issues, ITE programmes can better prepare future teachers to provide all students with welcoming and inclusive learning environments.

The study emphasises the necessity for extensive training and assistance for pre-service teachers to strengthen their self-efficacy beliefs in controlling classroom behaviour, putting various behaviour management strategies, and assisting children with SEN. According to the findings, Kazakhstani ITE programmes need to include a specialised classroom and behaviour management course to adequately train pre-service teachers to handle the various requirements of students with SEN. A more comprehensive approach to teacher preparation should be taken, focusing on each student's development and academic objectives. This will

encourage future teachers to adopt a more inclusive culture and help them meet the various demands of students with SEN. Mainstream schools should provide the support of instructors and teaching assistants to help handle the requirements of children with SEN. Pre-service teachers should be encouraged to take full responsibility for implementing inclusive education in their classrooms to help manage and meet the needs of children with SEN.

In addition, promoting inclusive practices requires teacher educators' and faculty members' assistance as they play a critical role in promoting inclusive practices in their classrooms and across the ITE programmes. To accomplish this goal, they should highlight the value of inclusion through inclusive pedagogies, real-world examples, and case studies. To meet the various requirements of future teachers, faculty members should also use multiple teaching techniques and tools. One important aspect of inclusive education for ITE is the need for prospective teachers to receive training in inclusive teaching methods. For students with various abilities, applying Universal Design for Learning (UDL) principles to provide accessible instructional materials and technology to assist student learning can successfully differentiate teaching (CAST, 2018). Also, faculty members can set a positive example for their pre-service teacher students by acting inclusively and encouraging interaction.

Moreover, school placements are essential for the professional growth of prospective teachers since they provide pre-service teachers with a chance to acquire real-world experience while completing their ITE programmes. The short duration, lack of exposure to inclusive educational environments and experiences, and insufficient assistance are just a few drawbacks connected with school placements that this study draws attention to. It is crucial to consider the calibre and length of school placements to improve future teachers' professional development and equip them to fulfil the requirements of various learners. It can significantly enhance pre-service teachers' comprehension by providing more structured internship programmes with clear expectations, specialised staff, and resources to assist them during

their internships and expanding the number of school placements available in inclusive settings. Also, adding more fieldwork or clinical rotations in inclusive environments might aid pre-service teachers in gaining hands-on experience working with various student groups. These issues may be addressed in ITE programmes to better prepare future teachers with the skills and knowledge necessary to develop inclusive learning environments that meet the requirements of all students.

Finally, the study draws attention to the challenges encountered by pre-service teachers in Kazakhstan during their school internships due to a lack of support and mentoring. The study emphasises the value of mentoring and internship opportunities for the professional development of prospective teachers. It recommends that improved mentorship practices are required in ITE programmes so that in-service teachers can effectively help pre-service teachers. The study also highlights the significance of considerable experience for pre-service teachers working with students with SEN and efficient mentoring strategies. In order to accomplish these goals, ITE programmes should prioritise enhancing in-service teachers' capacity for mentoring and promoting closer collaboration between HEIs and mainstream schools. By doing this, pre-service teachers can obtain the assistance they need to acquire the knowledge and skills required to become successful teachers during their internships.

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Appendices

Appendix A. Search Terms and Database Selection for Literature Review

Search Terms	Search Engine
"Behaviour management"	Applied Social Sciences Indexes and
"Beliefs about teaching and learning"	Abstracts
"Defectology"	Blackwell Reference Online
"Future teachers, prospective teachers, student	Cambridge Journals
teachers, beginning teachers"	Directory of Open Access Journals
"Inclusive education"	Dissertations and Theses A&I
"Initial teacher education"	Dissertations and Theses
"Integration and segregation"	Humanities Index
"Pre-service teacher preparation for inclusion"	International ERIC
"Pre-service teachers' beliefs"	Google Scholar
"School placement, practicum, internship"	Humanities e-Book
"Self-efficacy"	Inclusion specific research in EU,
"Special education"	OECD, UNESCO, UNICEF
"Students with special educational needs"	Open Online Library
"Teacher education"	Oxford Journals Online
"Teacher preparation"	Science Direct
	Scopus
	Taylor & Francis Online
	Web of Science

Appendix B. Research Questions and Their Procedures

RQ1. Teachers' beliefs about inclusive education; Perceived barriers to inclusive education

| My Thinking About Inclusion (MTAI) scale | Semi-structured interviews |

RQ2. Pre-service teachers' feelings of self-efficacy to teach in an inclusive environment

| Teacher Efficacy for Inclusive Practices (TEIP) scale | Semi-structured interviews |

RQ3. Factors influencing pre-service teachers' beliefs to work with students with SEN in a mainstream classroom.

| MTAI & TEIP scales | Semi-structured interviews |

RQ4. Readiness to work in an inclusive classroom, and how ITE programmes could better prepare future teachers to work in an inclusive environment

| Opend-ended questions | Semi-structured interviews |

Appendix C. List of HEIs Considered as Potential Study Sites

(Retrieved November 8, 2019, from http://edu.gov.kz/ru/deyatelnost/detail.php?ELEMENT_ID=554)

№	Ownership	The name of the HEI	Location	Webpage	E-mail
1.	National	L.N. Gumilyov Eurasian National University	Nur-Sultan	http://www.enu.kz/	enu@enu.kz
2.	National	Kazakh National Women's Teacher Training University	Almaty	http://kazmkpu.kz/	info@kazmkpu.kz
3.	National	Abai Kazakh National Pedagogical University	Almaty	http://www.kaznpu.kz/	rector@kaznpu.kz
4.	National	Al-Farabi Kazakh National University	Almaty	http://www.kaznu.kz/	info@kaznu.kz
5.	State	Y. Altynsarin Arkalyk State Pedagogical Institute	Arkalyk	https://www.api.kz/	arkgpi@mail.ru
6.	State	Zhetysu State University named after I. Zhansugurov	Taldykorgan	http://zhgu.edu.kz/	vuz@zhgu.edu.kz
7.	State	E. Buketov Karaganda State University	Karaganda	http://ksu.kz/	office@ksu.kz
8.	State	Sh. Ualikhanov Kokshetau State University	Kokshetau	http://www.kgu.kz/	mail@kgu.kz
9.	State	Kostanay State Pedagogical University	Kostanay	https://www.kspi.kz/	kgpi118@mail.ru
10.	State	Pavlodar State Pedagogical University	Pavlodar	http://pspu.kz/	pspu2017@gmail.com
11.	State	Taraz State Pedagogical University	Taraz	http://tarmpu.kz/	tarspu@mail.ru
12.	State	Korkyt Ata Kyzylorda State University	Kyzylorda	http://www.korkyt.kz/	korkyt_ksu@mail.ru
13.	State	Shakarim University	Semey	http://semgu.kz/	info@semgu.kz

14.	State	M. Auezov South-Kazakhstan State University	Shymkent	http://www.ukgu.kz/	koncel@ukgu.kz
15.	Joint stock	Kazakh Ablai Khan University of International Relations and Foreign Languages	Almaty	http://www.ablaikhan.kz/	kazumo@ablaikhan.kz
16.	Joint stock	KIMEP University	Almaty	https://www.kimep.kz/	uao@kimep.kz
17.	Joint stock	O.A. Baikonurov Zhezkazgan University	Zhezkazgan	http://www.zhezu.kz/	univer_zhez@mail.ru
18.	International	Khoja Akhmet Yassawi International Kazakh-Turkish University	Turkestan	http://ayu.edu.kz/	info@ayu.edu.kz
19.	Private	Turan-Astana University	Nur-Sultan	https://tau-edu.kz/	admissions@tau-edu.kz
20.	Private	Astana University	Nur-Sultan	http://astanauniver.kz/	astanauniver@mail.ru
21.	Private	The Eurasian Humanities Institute	Nur-Sultan	http://egi.kz/	eagi@list.ru
22.	Private	Kainar Academy	Almaty	http://www.kainar-edu.kz/	info@kainar-edu.kz
23.	Private	Turan University	Almaty	https://turan-edu.kz/	info@turan-edu.kz
24.	Private	Central-Asian University	Almaty	https://cau.kz/	infocau@mail.ru
25.	Private	University of Foreign Languages and Business Career	Almaty	https://ydu.kz/	ydu2006@mail.ru
26.	Private	The Almaty University	Almaty	http://www.almaty-university.kz/	info@almaty-university.kz
27.	Private	Suleyman Demirel University	Kaskelen	http://sdu.edu.kz/	info@sdu.edu.kz
28.	Private	Kazakh-Russian International University	Aktobe	http://krmu.kz/	mmu@akparat.kz
29.	Private	Baishev University	Aktobe	http://www.vuzbaishev.kz/	edu_ausb@mail.ru
30.	Private	Taraz Innovative Humanitarian University	Taraz	http://tigu.kz/	info@tigu.kz

31.	Private	Central-Kazakhstan Academy	Karaganda	http://www.c-k-a.kz/	cka_kz@mail.ru
32.	Private	Miras University	Shymkent	http://miras.edu.kz/	info@miras.edu.kz
33.	Private	Shymkent University	Shymkent	https://univershu.kz/	shu2050@mail.ru
34.	Private	Kazakhstan Engineering and Pedagogical University of Friendship of Peoples	Shymkent	https://kipudn.kz/	info@kipudn.kz
35.	Private	South Kazakhstan Humanitarian Institute named after M. Saparbaev	Shymkent	http://msi-edu.kz/	ukgi2002@mail.ru
36.	Private	SILKWAY International University	Shymkent	http://swiu.kz/	ukpu_kaz@mail.ru
37.	Private	Kazakh-American Free University	Oskemen	http://www.kafu.kz/	kafu_ukg@mail.ru
38.	Private	Syrdariya University	Zhetysay	http://sirdariya.kz/	sirdariya@mail.ru
39.	Private	Astana International University	Nur-Sultan	http://www.aiu.kz/	info@aiu.kz
40.	Non-commercial JS	South-Kazakhstan State Pedagogical University	Shymkent	http://okmpi.kz/	info@okmpu.kz

Appendix D. Questionnaire in English

<div align="center">

Demographic Data

</div>

Gender

- o   Male

- o   Female

Age

- o   18-20

- o   21-23

- o   24-26

- o   27+

Type of the University

- o   National University

- o   State University

- o   Joint-stock University

- o   Private University

Please, type your university here

Study year

Bachelor's Degree

- o   I year student

- o   II-year student

- o   III-year student

- o   IV-year student

Master's Degree

- o   I year student

- o   II-year student

Major

- o   Natural and Technical Sciences (Math, Physics, ICT, Chemistry, Biology, etc.)

      o   Humanities and Social Sciences (Kazakh language and Literature, Russian Language and Literature, Foreign languages, Pedagogy and Psychology, History, etc.)

      o   Special Education (Defectologist, Speech therapist, School psychologist, etc.)

My thinking about inclusion (MTAI) scale

Karen Callan Stoiber and Maribeth Gettinger

Please rate how much you accept or reject each of the sentences below using the following five-point scale: (1) = Strongly Accept, (2) = Accept, (3) = Neutral, (4) = Reject, and (5) = Strongly Reject

		SA	A	N	R	SR
1	Students with special needs have the right to be educated in the same classroom as typically developing students.	1	2	3	4	5
2	Inclusion is NOT a desirable practice for educating most typically developing students.	1	2	3	4	5
3	It is difficult to maintain order in a classroom that contains a mix of children with special education needs and children with average abilities.	1	2	3	4	5
4	Children with special education needs should be given every opportunity to function in an integrated/inclusive classroom.	1	2	3	4	5
5	Inclusion can be beneficial for parents of children with special education needs.	1	2	3	4	5
6	Parents of children with special needs prefer to have their child placed in an inclusive classroom setting.	1	2	3	4	5
7	Most special education teachers lack an appropriate knowledge base to educate typically developing students effectively.	1	2	3	4	5
8	The individual needs of children with disabilities CANNOT be addressed adequately by a regular education teacher.	1	2	3	4	5
9	We must learn more about the effects of inclusive classrooms before inclusive classrooms take place on a large-scale basis.	1	2	3	4	5
10	The best way to begin educating children in inclusive settings is just to do it.	1	2	3	4	5

11	Most children with special needs are well behaved in integrated/inclusive education classrooms.	1	2	3	4	5
12	It is feasible to teach children with average abilities and special needs in the same classroom.	1	2	3	4	5
13	Inclusion is socially advantageous for children with special needs.	1	2	3	4	5
14	Children with special needs will probably develop academic skills more rapidly in a special, separate classroom than in an integrated/inclusive classroom.	1	2	3	4	5
15	Children with special needs are likely to be isolated by typically developing students in inclusive classrooms.	1	2	3	4	5
16	The presence of children with special education needs promotes acceptance of individual differences on the part of typically developing students.	1	2	3	4	5
17	Inclusion promotes social independence among children with special needs.	1	2	3	4	5
18	Inclusion promotes self-esteem among children with special needs.	1	2	3	4	5
19	Children with special needs are likely to exhibit more challenging behaviors in an integrated/inclusive classroom setting.	1	2	3	4	5
20	Children with special needs in inclusive classrooms develop a better self-concept than in a self-contained classroom.	1	2	3	4	5
21	The challenge of a regular education classroom promotes academic growth among children with special education needs.	1	2	3	4	5
22	Isolation in a special class does NOT have a negative effect on the social and emotional development of students prior to middle school.	1	2	3	4	5
23	Typically developing students in inclusive classrooms are more likely to exhibit challenging behaviors learned from children with special needs.	1	2	3	4	5
24	Children with special needs monopolize teachers' time.	1	2	3	4	5
25	The behaviors of students with special needs require significantly more teacher-directed attention than those of typically developing children.	1	2	3	4	5

26	Parents of children with special education needs require *more* supportive services from teachers than parents of typically developing children.	1	2	3	4	5
27	Parents of children with special needs present no greater challenge for a classroom teacher than do parents of a regular education student.	1	2	3	4	5
28	A good approach to managing inclusive classrooms is to have a special education teacher be responsible for instructing the children with special needs.	1	2	3	4	5

Teacher efficacy for inclusive practice (TEIP) scale

Umesh Sharma, Tim Loreman and Chris Forlin

Please rate how much you accept or reject each of the sentences below using the following six-point scale: (1) =Strongly disagree, (2) = Disagree, (3) = Disagree somewhat, (4) = Agree somewhat, (5) = Agree, and (6) = Strongly agree

		SD	D	DS	AS	A	SA
1.	I can make expectations clear about student behavior	1	2	3	4	5	6
2.	I am able to calm a student who is disruptive or noisy	1	2	3	4	5	6
3.	I can make parents feel comfortable coming to school	1	2	3	4	5	6
4.	I can assist families in helping their children to do well in school	1	2	3	4	5	6
5.	I can accurately gauge student comprehension of what I have taught	1	2	3	4	5	6
6.	I can provide appropriate challenges for very capable students	1	2	3	4	5	6
7.	I am confident in my ability to prevent disruptive behavior in the classroom before it occurs	1	2	3	4	5	6
8.	I can control disruptive behavior in the classroom	1	2	3	4	5	6
9.	I am confident in my ability to get parent involved in school activities of their children with disabilities	1	2	3	4	5	6
10.	I am confident in designing learning tasks so that the individual needs of students with disabilities are accommodated	1	2	3	4	5	6
11.	I am able to get children to follow classroom rules	1	2	3	4	5	6
12.	I can collaborate with other professionals (e.ge. itinerant teachers or speech pathologists) in designing educational plans for students with disabilities	1	2	3	4	5	6
13.	I am able to work jointly with other professionals and staff (e.g., aides, other teachers) to teach students with disabilities in the classroom	1	2	3	4	5	6

14.	I am confident in my ability to get students to work together in pairs or in small groups	1	2	3	4	5	6
15.	I can use a variety of assessment strategies (for example, portfolio assessment, modified tests, performance-based assessment, etc.)	1	2	3	4	5	6
16.	I am confident in informing others who know little about laws and policies relating to the inclusion of students with disabilities	1	2	3	4	5	6
17.	I am confident when dealing with students who are physically aggressive	1	2	3	4	5	6
18.	I am able to provide an alternate explanation or example when students are confused	1	2	3	4	5	6

Open-ended survey

Three things I like best about the way how my university prepares me to work in an inclusive environment

1.
2.
3.

Three things I don't really like about the way how my university prepares me to work in an inclusive environment

1.
2.
3.

What three changes would you like to see at your university in order to adequately get prepared to work in an inclusive environment?

1.
2.
3.

Thank you for completing the questionnaire!

Would you like to take part in a follow-up interview on this topic?

In this interview, you will have an opportunity to elaborate on your ideas about the inclusion of SEN students into mainstream schools and your preparedness to work in an inclusive classroom.

The interview will not take more than 25 minutes of your time and will be conducted online at a time that it is convenient for you.

If you agree to participate in the interview, please click on the link below or [here]. You will be asked to provide an email and contact phone number so I can contact you in the near future to provide additional information and arrange the time of the interview.

Link to participate in a follow-up interview

https://nukz.qualtrics.com/jfe/form/SV_1XHBaib2mmovEW1

Appendix E. Questionnaire in Kazakh

Жынысы

- Ер
- Әйел

Жасыңыз қаншада?

- 18-20
- 21-23
- 24-26
- 27+

Жоғарғы оқу орныңыздың түрі

- Ұлттық университет
- Мемлекеттік университет
- Акционерлік Қоғам
- Жеке увиверситет

Сіздің жоғары оқу орныңыздың атын енгізіңіз

_____

Оқу жылы

Бакалавриат

- I курс студенті
- II курс студенті
- III курс студенті
- IV курс студенті

Магистратура
- I курс студенті
- II курс студенті

Басқа/өзгеше

Ғылыми бағыты

- Жаратылыстану ғылымдары (математика, физика, информатика, химия, биология, және т.б.)
- Гуманитарлық және әлеуметтік ғылымдары (қазақ тілі және әдебиет, орыс тілі және әдебиет, шет тілдері, педагогика және психология, тарих, және т.б.)
- Арнайы білім беру жүйесі (дефектолог, логопед, мектеп психологы және т.б.)

Менің инклюзия туралы ойым (МТАІ шкаласы)

Карен Каллан Стойбер және Мэрибет Геттингер

Төмендегі бес балдық шкаланы қолдана отырып, келесі сөйлемдердің әрқайсысымен қаншалықты келісіп немесе келіспегеніңізге баға беріңіз: (1) = Қатаң түрде Келісемін, (2) = Келісемін, (3) = Бейтарап, (4) = Келіспеймін, (5)) = Қатаң түрде Келіспеймін

		ҚТК	К	Б	КП	ҚТКП
1	Ерекше қажеттіліктері бар оқушылар қалыпты дамуы бар оқушылармен бірдей сыныпта білім алуға құқылы.	1	2	3	4	5
2	Инклюзия қалыпты дамуы бар оқушыларға білім беру үшін ҚАЖЕТ ЕМЕС тәжірибе болып табылады.	1	2	3	4	5
3	Ерекше білім беру қажеттіліктері бар балалар мен қалыпты дамуы бар балалар араласатын сыныпта тәртіпті сақтау қиын.	1	2	3	4	5
4	Ерекше білім беру қажеттіліктері бар балаларға интегривті/инклюзивті сыныпта оқуға барлық мүмкіндіктер берілуі керек.	1	2	3	4	5
5	Инклюзивті білім ерекше білім беру қажеттіліктері бар балалардың ата-аналары үшін пайдалы болуы мүмкін.	1	2	3	4	5
6	Ерекше қажеттіліктері бар балалардың ата-аналары баласын инклюзивті сыныпта оқытқанды жөн көреді.	1	2	3	4	5
7	Арнайы білім беретін мұғалімдердің көпшілігінде қалыпты дамуы бар оқушыларды тиімді оқыту үшін тиісті білім базасы жеткіліксіз.	1	2	3	4	5
8	Мүмкіндігі шектеулі балалардың жеке қажеттіліктерін жалпы білім беретін мұғалім тиісті деңгейде шеше алмайды.	1	2	3	4	5
9	Инклюзивті сыныптардың кең көлемде таралуынан бұрын біз инклюзивті сыныптардың әсері туралы көбірек білуіміз керек.	1	2	3	4	5

10	Балаларды инклюзивті ортада оқытуды бастаудың ең жақсы тәсілі – оны іс жүзінде қолдана бастау.	1	2	3	4	5
11	Ерекше қажеттіліктері бар балалардың көпшілігі интегривті/инклюзивті білім беру сыныптарында жақсы тәртіп көрсетеді.	1	2	3	4	5
12	Бір сыныпта қалыпты дамуы бар оқушылар мен ерекше қажеттіліктері бар оқушыларды оқытуға болады.	1	2	3	4	5
13	Инклюзия ерекше қажеттіліктері бар балалар үшін әлеуметтік жағынан тиімді.	1	2	3	4	5
14	Ерекше қажеттіліктері бар балалар академиялық дағдыларды интегривті/инклюзивті сыныпқа қарағанда арнайы, бөлек сыныпта тезірек дамытуы мүмкін.	1	2	3	4	5
15	Ерекше қажеттіліктері бар балалар инклюзивті сыныптарда қалыпты дамуы бар оқушылардан оқшалануы мүмкін.	1	2	3	4	5
16	Ерекше білім беру қажеттіліктері бар балалардың жалпы білім беретін сыныпта болуы қалыпты дамуы бар оқушылар тарапынан жеке айырмашылықтарды қабылдауға ықпал етеді.	1	2	3	4	5
17	Инклюзия ерекше қажеттіліктері бар балалардың әлеуметтік тәуелсіздігінің дамуына ықпал етеді.	1	2	3	4	5
18	Инклюзия ерекше қажеттіліктері бар балалардың өзін-өзі бағалауына ықпал етеді.	1	2	3	4	5
19	Ерекше қажеттіліктері бар балалар интегривті/инклюзивті сынып жағдайында қиын мінез-құлық танытуы мүмкін.	1	2	3	4	5
20	Инклюзивті сыныптардағы ерекше қажеттіліктері бар балалар өзіндік түсінігін жақсырақ дамытады оқшалуанып оқытатын сыныптарына қарағанда.	1	2	3	4	5
21	Күнделікті оқу сыныбындағы міндеттер ерекше білім беру қажеттілігі бар балалардың академиялық өсуіне ықпал етеді.	1	2	3	4	5
22	Арнайы сыныпта оқшаулап оқыту орта мектепке дейінгі оқушылардың әлеуметтік және эмоционалды дамуына теріс әсер етпейді.	1	2	3	4	5

23	Инклюзивті сыныптарда қалыпты дамуы бар оқушылар ерекше қажеттіліктері бар балалардан үйренген қиын мінез-құлықтарын көрсетуі мүмкін.	1	2	3	4	5
24	Ерекше қажеттіліктері бар балалар мұғалімдердің көп уақытын алады.	1	2	3	4	5
25	Ерекше қажеттіліктері бар оқушылардың мінез-құлқы мен тәртібі қалыпты дамуы бар балаларға қарағанда мұғалімдердің назарын айтарлықтай талап етеді.	1	2	3	4	5
26	Ерекше қажеттіліктері бар балалардың ата-аналары қалыпты дамуы бар балалардың ата-аналарына қарағанда мұғалімдерден *көбірек* қолдау қызметін қажет етеді	1	2	3	4	5
27	Ерекше білім беру қажеттіліктері бар балалардың ата-аналары сынып жетекшісі үшін қалыпты дамуы бар балалардың ата-анасына қарағанда үлкен қиындық туғызбайды.	1	2	3	4	5
28	Инклюзивті сыныптарын басқарудың жақсы тәсілі - ерекше қажеттіліктері бар балаларға көмек көрсетіп, нұсқаулық беретін арнайы білім беру мұғалімі болуы қажет.	1	2	3	4	5

Мұғалімнің инклюзивті практикасындағы тиімділігі (TEIP шкаласы)

Умеш Шарма, Тим Лорман және Крис Форлин

Төмендегі алты балдық шканалы қолдана отырып, келесі сөйлемдердің әрқайсысымен

қаншалықты келісіп немесе келіспегеніңізге баға беріңіз:

(1) = Мүлдем келіспеймін, (2) = Қарсы еместін, (3) = Біршама келіспеймін, (4) =

Біршама келісемін, (5)) = Келісемін, және (6) = Толықтай келісемін

		МК	ҚЕ	БК	БМ	К	ТК
1.	Мен оқушылардың мінез-құлқына қатысты нақты не күту екендігін біле аламын	1	2	3	4	5	6
2.	Мен шулы және тәртіпсіз оқушыны тыныштандырып, сынып ережелерін сақтата аламын	1	2	3	4	5	6
3.	Мен ата-аналардың мектепке келуіне жайлы жағдай жасай аламын	1	2	3	4	5	6
4.	Мен ата-аналарына балалардың мектепте жақсы оқуына көмектесе аламын	1	2	3	4	5	6
5.	Оқушылардың мен оқытып үйреткен нәрселерді түсінуін немесе түсінбеуін дәл анықтай аламын	1	2	3	4	5	6
6.	Мен өте қабілетті оқушыларға тиісті қиындықтары бар тапсырмаларды ұсына аламын	1	2	3	4	5	6
7.	Сыныптағы тәртіпсіздік пен жағымсыз мінез-құлықты алдын-ала болдырмау мүмкіндігіме сенімдімін	1	2	3	4	5	6
8.	Мен сыныптағы тәртіпсіздік іс-әрекеттерді басқара аламын	1	2	3	4	5	6
9.	Мүмкіндігі шектеулі балалардың ата-аналарын мектеп ішіндегі іс-шараларына тарту қабілетіме сенімдімін	1	2	3	4	5	6
10.	Мүмкіндігі шектеулі бар оқушылардың жеке қажеттіліктерін ескере отырып, оқу тапсырмаларын құрастыруға сенімдімін	1	2	3	4	5	6
11.	Мен балаларды сынып ережелерін ұстануға үйрете аламын	1	2	3	4	5	6

12.	Мүмкіндігі шектеулі бар оқушыларға арналған оқу жоспарларын құру барысында басқа мамандармен (мысалы, көмекші мұғалімдермен немесе логопед, дефектологтармен) бірлесе жұмыс жасай аламын	1	2	3	4	5	6
13.	Мүмкіндігі шектеулі бар оқушыларды сыныпта оқыту үшін басқа мамандармен және қызметкерлермен (мысалы, көмекші мұғалімдермен, басқа пән мұғалімдермен) бірлесіп жұмыс жасай аламын	1	2	3	4	5	6
14.	Оқушыларды жұпта немесе шағын топтарда бірлесіп жұмыс істете алу қабілетіме сенімдімін	1	2	3	4	5	6
15.	Мен бағалаудың әртүрлі стратегияларын қолдана аламын (мысалы, портфолио бағалау, бейімделген тесттер, нәтижеге негізделген бағалау тәсілдері және т.б.)	1	2	3	4	5	6
16.	Мүмкіндігі шектеулі оқушыларды қосуға қатысты заңдар мен саясат туралы аз білетін адамдарға ақпарат бере алатыныма сенімдімін	1	2	3	4	5	6
17.	Мен физикалық агрессивті оқушылармен қарым-қатынас жасай алатыныма сенімдімін	1	2	3	4	5	6
18.	Оқушылар шатасып немесе түсіне алмаған кезде мен қосымша түсініктеме беріп немесе мысал келтіре аламын	1	2	3	4	5	6

Ашық сұрақтары бар сауалнама

Университеттің мені инклюзивті ортада жұмыс істеуге қалай дайындағаны бойынша ұнайтын үш нәрсе:

1.	
2.	
3.	

Университеттің мені инклюзивті ортада жұмыс істеуге қалай дайындағаны бойынша ұнамайтын үш нәрсе:

1.

2.	
3.	

Инклюзивті ортада жұмыс істеуге дайын болу үшін сіздің университіңізде қандай үш өзгерісті көргіңіз келеді?

1.	
2.	
3.	

Сауалнаманы толтырғаныңызға рахмет!

Сұхбатқа қатысқыңыз келе ме?

Бұл сұхбатта сіз ЕБҚ оқушыларын негізгі мектепке қосу және инклюзивті сыныпта жұмыс істеуге дайын болу туралы өз ойларыңызбен бөлісуге мүмкіндік аласыз. Сұхбат сіздің уақытыңыздың 25 минутынан аспайды және сізге ыңғайлы уақытта онлайн режимінде өтеді.

Егер сіз сұхбаттасуға қатысуға келіссеңіз, төмендегі сілтемені басыңыз немесе [осында]. Жақын арада сізбен байланысып, қосымша ақпарат беру үшін, сондай-ақ сұхбаттасу уақытын белгілеуім үшін сізден электрондық пошта мекен-жайы мен байланыс телефоныңыздың нөмірін беруіңізді сұраймын.

[Сұхбатқа қатысу үшін сілтеме](https://nukz.qualtrics.com/jfe/form/SV_1XHBaib2mmovEW1)

https://nukz.qualtrics.com/jfe/form/SV_1XHBaib2mmovEW1

Appendix F. Questionnaire in Russian

Пол

- Мужской
- Женский

Укажите свой возраст

- 18-20
- 21-23
- 24-26
- 27+

Тип Высшего Учебного Заведения

- Национальный ВУЗ
- Государственный ВУЗ
- Акционерное Общество
- Частный ВУЗ

Пожалуйста, укажите название вашего ВУЗа

Год обучения

Бакалавриат

- студент I курса
- студент II курса
- студент III курса
- студент IV курса

Магистратура
- студент I курса
- студент II курса

Другое

Специальность

- Естественные науки (математика, физика, информатика, химия, биология, и т. д.)

- Гуманитарные и социальные науки (казахский язык и литература, русский язык и литература, иностранные языки, педагогика и психология, история, и т. д.)

- Специальное образование (дефектолог, логопед, школьный психолог и т. д.)

Мое мнение об инклюзии (MTAI шкала)

Карен Каллан Стойбер и Марибет Геттингер

Пожалуйста, оцените, насколько вы принимаете или отклоняете каждое из приведенных ниже предложений, используя следующую пятибалльную шкалу: (1) = Полностью согласен, (2) = Согласен, (3) = Нейтрально, (4) = Не согласен и (5) = Полностью не согласен

		ПС	С	Н	НС	ПНС
1	Ученики с особыми потребностями имеют право получить образование в том же классе, что и ученики с обычным развитием	1	2	3	4	5
2	Инклюзия НЕ желательна для обучения учащихся с обычным развитием	1	2	3	4	5
3	Трудно поддерживать порядок в классе, в котором обучаются дети с особыми образовательными потребностями и дети с обычным развитием.	1	2	3	4	5
4	Детям с особыми образовательными потребностями должна быть предоставлена каждая возможность обучаться в интегрированном/ инклюзивном классе.	1	2	3	4	5
5	Инклюзия может быть полезной для родителей детей с особыми образовательными потребностями.	1	2	3	4	5
6	Родители детей с особыми потребностями предпочитают, чтобы их ребенка обучали в инклюзивной среде.	1	2	3	4	5
7	Большинству учителей специального образования не хватает соответствующей базы знаний для эффективного обучения учеников с обычным развитием.	1	2	3	4	5
8	Индивидуальные потребности детей с ограниченными возможностями НЕ МОГУТ быть адекватно удовлетворены простым педагогом.	1	2	3	4	5

9	Мы должны узнать больше о влиянии инклюзивных классов, прежде чем инклюзивное образование начнется применяться в широком масштабе.	1	2	3	4	5
10	Лучший способ начать обучение детей в инклюзивных условиях - просто начать применять это в практике.	1	2	3	4	5
11	Большинство детей с особыми потребностями хорошо себя ведут в классах интегрированного/инклюзивного образования.	1	2	3	4	5
12	Вполне выполнимая задача обучать детей – как с особыми потребностями, так и без – в одном классе.	1	2	3	4	5
13	Инклюзия социально выгодна для детей с особыми потребностями.	1	2	3	4	5
14	Дети с особыми потребностями, вероятно, будут быстрее развивать академические навыки в специальном, отдельном классе, чем в интегрированном/инклюзивном классе.	1	2	3	4	5
15	Дети с особыми потребностями, вероятно, будут отделены учениками с обычным развитием в инклюзивных классах.	1	2	3	4	5
16	Присутствие детей с особыми образовательными потребностями способствует принятию индивидуальных различий учениками с обычным развитием.	1	2	3	4	5
17	Инклюзия способствует социальной независимости детей с особыми потребностями.	1	2	3	4	5
18	Инклюзия способствует чувству собственного достоинства среди детей с особыми потребностями.	1	2	3	4	5
19	Вероятнее всего, дети с особыми потребностями будут демонстрировать более сложное поведение в условиях интегрированного/инклюзивного обучения.	1	2	3	4	5
20	Дети с особыми потребностями в инклюзивных классах лучше развивают представление о самом себе, чем в специальном классе.	1	2	3	4	5
21	Трудности, возникающие при обучении в обычном классе, способствуют академическому росту детей с особыми образовательными потребностями.	1	2	3	4	5

22	Обучение в специальном классе НЕ оказывает негативного влияния на социальное и эмоциональное развитие учащихся до средней школы.	1	2	3	4	5
23	Ученики с обычным развитием в инклюзивных классах с большей вероятностью будут демонстрировать сложное поведение, перенятое у детей с особыми потребностями.	1	2	3	4	5
24	Дети с особыми потребностями занимают большую часть времени учителей.	1	2	3	4	5
25	Поведение учащихся с особыми потребностями требует значительно большего внимания со стороны учителя, чем поведение у детей с обычным развитием.	1	2	3	4	5
26	Родители детей с особыми образовательными потребностями нуждаются в *большем* количестве вспомогательных услуг со стороны учителей, чем родители детей с обычным развитием.	1	2	3	4	5
27	Родители детей с особыми образовательными потребностями не представляют большей проблемы для классного учителя, чем родители обычного ученика.	1	2	3	4	5
28	Хороший подход к управлению инклюзивными классами заключается в том, чтобы иметь учителя специального образования, который бы отвечал за обучение детей с особыми потребностями.	1	2	3	4	5

Эффективность учителя для инклюзивной практики (TEIP шкала)

Умеш Шарма, Тим Лорман и Крис Форлин

Пожалуйста, оцените, насколько вы принимаете или отклоняете каждое из приведенных ниже предложений, используя следующую шести балльную шкалу: (1) = Категорически не согласен, (2) = Не согласен, (3) = Несколько не согласен, (4) = Несколько согласен, (5) = Согласен и (6) = Полностью согласен

		КНС	НС	ННС	СН	С	ПС
1.	Я могу прояснить ожидания относительно поведения учащихся	1	2	3	4	5	6
2.	Я могу успокоить шумного и который прерывает занятие ученика	1	2	3	4	5	6
3.	Я могу сделать так, чтобы родители чувствовали себя комфортно, приходя в школу	1	2	3	4	5	6
4.	Я могу оказывать содействие семьям в помощи с их детьми, чтобы те хорошо учились в школе	1	2	3	4	5	6
5.	Я могу точно оценить, насколько ученик освоил то, чему я его обучил	1	2	3	4	5	6
6.	Я могу предоставить соответствующие задачи для очень способных учащихся	1	2	3	4	5	6
7.	Я уверен(а) в своей способности предотвратить плохое поведение в классе до того, как оно произойдет	1	2	3	4	5	6
8.	Я могу контролировать плохое поведение учащихся в классе	1	2	3	4	5	6
9.	Я уверен(а) в своей способности вовлечь родителей в школьную деятельность их детей с ограниченными возможностями	1	2	3	4	5	6
10.	Я уверен(а), что при разработке учебных задач, я могу учесть индивидуальные потребности учащихся с ограниченными возможностями	1	2	3	4	5	6

11.	Я могу сделать так, чтобы дети следовали правилам класса	1	2	3	4	5	6
12.	Я могу сотрудничать с другими специалистами (например, с учителями работающие с детьми с особыми потребностями/дефектологами или логопедами) в разработке учебных планов для учащихся с ограниченными возможностями	1	2	3	4	5	6
13.	Я могу работать совместно с другими специалистами и сотрудниками (например, помощниками, другими учителями), чтобы обучать учащихся с ограниченными возможностями в классе	1	2	3	4	5	6
14.	Я уверен(а) могу сделать так, чтобы ученики работали вместе в парах или в небольших группах	1	2	3	4	5	6
15.	Я могу использовать различные стратегии оценивания (например, оценка портфолио, модифицированные тесты, оценка на основе практических результатов и т. д.)	1	2	3	4	5	6
16.	Я уверен(а) в своей способности информировать тех, кто мало знает о законах и политике, касающихся инклюзии учеников с ограниченными возможностями	1	2	3	4	5	6
17.	Я уверен(а) в себе, когда имею дело с физически агрессивными учениками	1	2	3	4	5	6
18.	Я могу предоставить альтернативное объяснение или пример, когда учащиеся затрудняются понять что-то	1	2	3	4	5	6

Открытый опрос

Три вещи, которые мне больше всего нравятся в том, как мой университет готовит меня к работе в инклюзивной среде

1.	
2.	
3.	

Три вещи, которые мне не очень нравятся в том, как мой университет готовит меня к работе в инклюзивной среде

1.	
2.	
3.	

Какие три изменения вы хотели бы видеть в своем университете, чтобы адекватно подготовиться к работе в инклюзивной среде?

1.	
2.	
3.	

Спасибо за заполнение анкеты!

Хотели бы вы принять участие в интервью?

В этом интервью у вас будет возможность подробно рассказать о своих идеях о включении студентов ООП в обычную школу и о вашей готовности работать в инклюзивном классе.

Собеседование займет не более 25 минут вашего времени и будет проводиться онлайн в удобное для вас время.

Если вы согласны принять участие в собеседовании, щелкните ссылку ниже или [здесь]. Вам будет предложено указать адрес электронной почты и контактный номер телефона, чтобы я могла связаться с вами в ближайшем будущем

и предоставить дополнительную информацию, также договориться о времени

проведения интервью.

Ссылка на участие в интервью

https://nukz.qualtrics.com/jfe/form/SV_1XHBaib2mmovEW1

Appendix G. Interviews Protocol

I.   Demographic Questions. Pre-service teachers' background

- How old are you?
- Where are you originally from?
- What cohort are you in? (Sciences, Humanities, or Special Education. Defectologist)
- What year are you in? (I-IV year of bachelor's degree)

II.   Pre-service teachers' perspectives on inclusive education

o   What do you think are the key features of an inclusive education? (What does an inclusive education mean to you?

o   Are there any barriers to that kind of inclusion?

o   Who do you think benefits from inclusive policy and why?

o   Who do you think suffers from inclusive policy and why?

o   Are there any barriers to your future work?

III.   Pre-service teachers' readiness for an inclusive environment

o   Can you tell me about your professional development opportunities to be an inclusive teacher?

o   What do you think about the allocation of responsibility of a teacher to teach the number of children with SEN in the classroom?

o   To what extent do you feel confident to teach/enrol SEN students?

o   Can you tell me the kind of teaching strategies that are available to support SEN students?

IV.   The relevance of the teacher education curriculum with the development of inclusive education in mainstream schools in Kazakhstan

o   During your pre-service teacher training, what have you learned about special and/or inclusive education?

o Have you learned anything about students with disabilities, learning disabilities and/or special educational needs during your pre-service teacher training? (Please give examples)

o Have you learned any methods for special and/or inclusive education during your pre-service teacher training? (Please give examples, how?)

o What are the aims and reasons for learning about special and/or inclusive education during your pre-service teacher training? (Or why do you think you get to learn about it?)

o Throughout your pre-service teacher training, did you think it provide you sufficient knowledge and skills enabling you to teach within an inclusive setting/classroom?

o How do you assess, identify and provide educational provisions to meet the needs of individual students in the classroom?

o How do you manage your inclusive classroom?

o Through pre-service teacher training, have you gained any new and/or deeper knowledge, skills, or pedagogy that can be useful and applicable for your class?

o What will be your view about pre-service teacher training in terms of further support and/or ongoing development for all teachers towards inclusive education?

o What will be your view about pre-service teacher training in terms of preparing and strengthening all teachers for teaching within an inclusive setting/classroom?

o What kind of experiences have you received through teacher training in relation to academic and/or pedagogical aspects?

o Apart from academic and/or pedagogical knowledge and skills, have there been any other valuable aspects you have learned or gained through teacher training that can benefit you when you are in the classroom?

o How do you support children with special needs in the classroom?

o How do you create/ generate an inclusive atmosphere in the classroom?

o What kind of additional support do you need in order to ensure good quality educational services that meet the needs of all students?

o What are the challenges you have to face when using/ applying what you have learned from teacher training in the classroom?

V. Final comments

Is there anything else you would like to discuss?

Probing question types

Tell me more about…?

Why did you say that…?

Can you explain…? Or can you clarify…?

What did you mean by that…?

What is an example of…?

Appendix H. Information Sheet, Letter to Gatekeepers, and Informed Consent Forms

Letter to Gatekeepers in English Language

Dear _____,

Your Higher Educational Institution (HEI) has been invited to participate in a research study related to my doctoral thesis in the Graduate School of Education, Nazarbayev University. I am Gulmira Tussupbekova, a PhD candidate at NUGSE. I am conducting a study on the topic: *Initial Teacher Preparation for Inclusive Education in Kazakhstan: Pre-Service Teachers' Beliefs About Students with Special Educational Needs and Their Inclusion in Mainstream Classrooms*. The main aim of this study is to examine pre-service teachers' beliefs about the inclusion of students with SEN into mainstream classrooms and to what extent they feel prepared to work in an inclusive classroom. Moreover, the study aims to uncover future teachers' perceptions about how their initial teacher education programs prepare them to teach in inclusive classrooms. This research is being conducted as part of the requirements of a PhD dissertation at Nazarbayev University.

Your university has been chosen based on the typical case sampling technique, which means your HEI includes the most typical cases of the population under the study. To be exact, mainly secondary school future subject teachers of Sciences, Humanities, and Special Education teachers (i.e., defectologists) who are older than 18 years of age will need to be selected for the study. This study will be driven by the following research questions: 1) What are the pre-service teachers' beliefs about the students with special educational needs and their inclusion in mainstream schools in Kazakhstan; 2) How prepared do pre-service teachers feel about working with SEN students in a mainstream classroom?; 3) How could the Initial Teacher Education programs better prepare pre-service teachers to teach in an inclusive classroom from their perspectives?

This research is comprised of two phases: quantitative and qualitative phases. Firstly, I will conduct surveys on the research questions to examine pre-service teachers' beliefs about SEN students and their inclusion in mainstream schools, their perspectives on their preparedness to teach and work with SEN students in a mainstream classroom, and to what extent they feel confident in their gained knowledge in HEIs in Kazakhstan. Next, this will be followed by face-to-face semi-structured interviews with student-teachers to follow up the emerging, relevant, and unexpected issues.

The data I collect throughout this study will be treated with great care and attention to confidentiality. Both, the survey and interview are designed to be anonymous and there is no

intent to identify any individual participant and HEI. Participation of students of your higher educational institution will be invaluable for the implementation of this research study.

For further information, please see the attached Informed Consent Forms and Information Sheet. If you agree to give permission for your students to participate in the study or have any questions concerning this research study, please contact me via email at Gulmira.tussupbekova@nu.edu.kz or by telephone at 87022924699.

Thank you for your co-operation.
Sincerely,
Gulmira Tussupbekova
PhD candidate
Graduate School of Education
Nazarbayev University

Site access consent:

I, _____ [name of the

Rector], Rector of_____

[name of the university], grant permission to the research team lead by PhD candidate

Gulmira Tussupbekova and her advisors Dr. Daniel Hernández-Torrano and Dr. Janet

Helmer to conduct the study on pre-service teachers' beliefs about SEN students and

their inclusion in Kazakhstan under the conditions indicated in this information sheet.

Signature: _____   Date: _____

Contact details of the responsible person for all communication about this research

project:

Name: _____

Position: _____

Phone number: _____

Email: _____

Letter to Gatekeepers in Kazakh Language

Құрметті _____,

Сіздің жоғары оқу орныңызды Назарбаев Университетінің Жоғары Білім Мектебіндегі менің докторлық диссертациялық жұмысыма қатысты зерттеу жұмысына қатысуға шақырамыз. Мен Гульмира Тусупбекова, Назарбаев Университетінің Жоғары Білім Мектебінде (НУЖБМ) PhD кандидатымын. Мен "Қазақстандағы Инклюзивті білім беруге мұғалімдерді алғашқы даярлау: болашақ мұғалімдердің ерекше білім беру қажеттіліктері бар оқушыларды оқыту және оларды жалпы білім беретін сыныптарға қосу туралы сенімдері" тақырыбы бойынша зерттеу жұмысын жүргізіп жатырмын. Бұл зерттеудің негізгі мақсаты - ерекше білім беру қажеттіліктері бар оқушыларды жалпы білім беретін сыныптарға қосу туралы және болашақ мұғалімдердің инклюзивті сыныпта жұмыс істеуге қаншалықты дайын екендіктерін зерттеу. Сонымен қатар, зерттеу жұмысы болашақ мұғалімдердің педагогикалық білім беру бағдарламалары оларды инклюзивті сыныптарда оқытуға қалай дайындайтыны туралы түсініктерін ашуға бағытталған. Бұл зерттеу жұмысы Назарбаев Университетінде докторлық диссертация жұмысын орындау аясында жүргізілуде.

Сіздің университетіңіз типтік істер сынамасын іріктеу әдісінің негізінде таңдалды, демек сіздің ЖОО-да зерттелетін халықтың көп кездесетін жағдайлары бар. Дәлірек айтсақ, оқу үшін негізінен орта мектептің болашақ пән мұғалімдері, гуманитарлық ғылымдар және арнайы білім беру мұғалімдері (яғни, дефектологтар) 18 жастан асқан болуы керек. Бұл зерттеу жұмысы келесі зерттеу сұрақтарына негізделеді: 1) Ерекше қажеттіліктері бар (ЕБҚ) оқушылар туралы және олардың Қазақстанның жалпы білім беретін мектептеріне қосылуына байланысты болашақ мұғалімдердің сенімдері қандай? 2) ЕБҚ оқушыларымен негізгі сыныпта жұмыс істеуге болашақ мұғалімдер қаншалықты дайын деп сезінеді? 3) Мұғалімдерді дайындайтын педагогикалық білім беру бағдарламалары өздерінің көзқарастары бойынша болашақ мұғалімдерді инклюзивті сыныпта оқытуға қаншалықты жақсы дайындай алар еді?

Бұл зерттеу жұмысы екі фазадан тұрады: сандық және сапалық фазалар. Біріншіден, мен мұғалімдердің ЕБҚ оқушылар туралы сенімдерін және олардың жалпы білім беретін мектептерге қосылуын, олардың негізгі сыныптағы ЕБҚ оқушыларымен қаншалықты деңгейде жұмыс істеуге дайындығы туралы ой-пікірлерін және сенімдерін зерттеу мақсатында зерттеу сұрақтары бойынша сауалнамалар жүргіземін. Әрі қарай,

пайда болған, өзекті және күтпеген мәселелерді қарастыру үшін болашақ мұғалімдермен бетпе-бет сұхбаттасу жүргізіледі.

Осы зерттеу барысында жиналған мәліметтердің өте мұқият және құпиялылықта сақталуына назар аударылады. Сауалнама мен сұхбат анонимді болады, сондықтан жеке қатысушы мен ЖОО атаулары анықталмайды. Осы зерттеу жұмысын жүзеге асыру үшін сіздің ЖОО студенттеріңіздің қатысуы құнды болып табылады.

Қосымша ақпарат алу үшін ақпараттық келісім формасы мен ақпараттық парағын қараңыз. Егер сіз студенттеріңіздің зерттеуге қатысуына рұқсат берсеңіз немесе осы зерттеуге қатысты сұрақтарыңыз болса, маған Gulmira.tussupbekova@nu.edu.kz электрондық поштасы арқылы немесе 87022924699 телефоны арқылы хабарласуыңызды сұраймын.

Құрметпен,
Гульмира Тусупбекова
PhD кандидаты
Жоғары Білім Мектебі
Назарбаев Университеті

Зерттеу жұмысын жүргізуге келісім:
Мен, _____
[ректордың аты], ректор _____
[университет атауы], PhD кандидаты Гульмира Тусупбекова мен оның ғылыми жетекшілері доктор Даниэль Эрнандес-Торрано және доктор Джанет Хельмер бастаған зерттеу тобына зерттеу жұмысын жүргізуге рұқсат беремін. ЕБҚ оқушылар туралы болашақ мұғалімдердің сенімдері және олардың Қазақстандағы жалпы білім беретін оқу орнындарына қосылуы туралы ой-пікірлері мен сенімдері бойынша және осы ақпарат парағында көрсетілген жағдайлармен тура келісетін зерттеу жұмысына рұқсат беремін.

Қолы: _____ Күні: _____

Осы зерттеу жобасы туралы барлық байланыс үшін жауапты тұлғаның байланыс деректері:

Аты: _____

Лауазымы: _____

Телефон нөмірі: _____

Электрондық поштасы: _____

Letter to Gatekeepers in Russian Language

Уважаемый _____,

Приглашаем Вас принять участие в исследовании, связанном с докторской диссертационной работой в Высшей Школе Образования, Назарбаев Университета (ВШОНУ). Я Гульмира Тусупбекова, PhD кандидат в ВШОНУ, провожу исследование на тему: «Первоначальная подготовка учителей к инклюзивному образованию в Казахстане: убеждения будущих учителей касательно учащихся с особыми образовательными потребностями и их включения в общеобразовательные классы». Основная цель этого исследования - изучить убеждения будущих учителей относительно вовлечения учащихся с ООП в обычные классы и понять, в какой степени преподаватели чувствуют себя готовыми работать в инклюзивной среде. Кроме того, целью исследования является раскрытие представлений будущих учителей о влиянии их педагогической образовательной программы к готовности преподаванию в инклюзивных классах. Это исследование проводится в рамках требований докторской диссертационной работы в Назарбаев Университете.

Ваш университет был выбран на основе выборки типичных случаев, это означает, что ваш ВУЗ включает в себя наиболее типичные случаи населения в рамках исследования. А точнее, для исследования необходимо будет выбрать будущих учителей-предметников, преподающих в средних школах, а также будущих учителей гуманитарных наук и специального образования (к примеру дефектологов) старше 18 лет. В основу данного исследования входит рассмотрение следующих вопросов: 1) Каковы убеждения будущих учителей относительно учащихся с особыми образовательными потребностями и их вовлечения в обычные школы в Казахстане? 2) Насколько подготовлены будущие учителя к работе с учащимися с особыми образовательными потребностями (ООП) в обычном классе? 3) Как программы педагогического образования могли бы лучше подготовить будущих учителей работать в инклюзивном классе с их точки зрения?

Это исследование состоит из двух этапов: количественного и качественного. Во-первых, я проведу опрос по вопросам исследования, чтобы изучить убеждения будущих учителей касательно учащихся с ООП и их вовлечения в обычные школы, их взгляды на свою готовность преподавать и работать со студентами с ООП в обычном классе и в какой степени они чувствуют уверенность в полученных знаниях в ВУЗах Казахстана. Затем последуют полуструктурированные интервью с будущими учителями касаемо возникших, актуальных и неожиданных вопросов.

Данные, которые я собираю в ходе этого исследования, будут обрабатываться с большой осторожностью и вниманием к конфиденциальности. Опрос и интервью будут проводиться в анонимной форме, мы не преследуем целей раскрытия персональных данных участников. Участие студентов вашего высшего учебного заведения будет иметь неоценимое значение для реализации данного исследования.

Для получения дополнительной информации см. Прилагаемые Формы информированного согласия и информационный лист. Если вы согласны дать разрешение вашим студентам на участие в исследовании или у вас есть какие-либо вопросы, касающиеся этого исследования, пожалуйста, свяжитесь со мной по электронной почте Gulmira.tussupbekova@nu.edu.kz или по телефону 87022924699.

Спасибо за ваше сотрудничество!

С уважением,

Гульмира Тусупбекова

PhD кандидат

Высшая Школа Образования

Назарбаев Университет

Согласие на доступ к месту проведения исследования:

Я, _____ [имя ректора], ректор _____ [название университета], даю разрешение исследовательской группе, возглавляемой кандидатом PhD Гульмирой Туссупбековой и ее научными руководителями доктором Даниэлем Эрнандес-Торрано и доктором Джанет Хелмер, на проведение исследования касательно убеждения будущих учителей в отношении учащихся с ООП и их вовлечение в общеобразовательные школы Казахстана в соответствии с условиями, указанными в данном информационном листе.

Подпись: _____ Дата _____

Контактные данные ответственного лица для всех сообщений об этом исследовательском проекте:

Название: _____

Позиция: _____

Номер телефона: _____

Электронное письмо: _____

Email to Pre-Service Teachers Inviting to Participate in the Online Survey in English Language

Dear Students,

  You are cordially invited to participate in a research related to my doctoral thesis at the Graduate School of Education, Nazarbayev University. I am Gulmira Tussupbekova, a PhD candidate at NUGSE. I am conducting a study on the following topic: *Initial Teacher Preparation for Inclusive Education in Kazakhstan: Pre-Service Teachers' Beliefs About Students with Special Educational Needs and Their Inclusion in Mainstream Classrooms*.

  The main aim of this study is to examine pre-service teachers' beliefs about the inclusion of students with special educational needs into mainstream classrooms and to what extent they feel prepared to work in an inclusive classroom. Moreover, the study aims to uncover future teachers' perceptions about how their initial teacher education programs prepare them to teach in inclusive classrooms. This research is being conducted as part of the requirements of a PhD dissertation at Nazarbayev University.

  The data I collect throughout this study will be treated with great care and attention to confidentiality. Both, the survey and interview are designed to be anonymous and there is no intent to identify any individual participant and HEI. Your participation will be invaluable for the implementation of this research study.

<div align="center">Please, follow the link in order to fulfil the survey:</div>

<div align="center">https://nukz.qualtrics.com/jfe/form/SV_eXOQecxqgh8zh9X</div>

Email to Pre-Service Teachers Inviting to Participate in the Online Survey in Kazakh Language

Құрметті студент,

        Сізді Назарбаев Университетінің Жоғары Білім Мектебінде менің докторлық диссертацияма қатысты зерттеу жұмысына қатысуға шақырамын. Мен Гульмира Тусупбекова, Назарбаев Университетінің Жоғары Білім Мектебінде (НУЖБМ) PhD кандидатымын. Мен *"Қазақстандағы инклюзивті білім беруге мұғалімдерді алғашқы даярлау: болашақ мұғалімдердің ерекше білім беру қажеттіліктері бар оқушыларды оқыту және оларды жалпы білім беретін сыныптарға қосу туралы сенімдерірі"* бойынша зерттеу жұмысын жүргізіп жатырмын.

        Бұл зерттеудің негізгі мақсаты - ерекше білім беру қажеттіліктері бар оқушыларды негізгі сыныптарға қосу туралы және болашақ мұғалімдердің инклюзивті сыныпта жұмыс істеуге қаншалықты дайын екендіктерін зерттеу. Сонымен қатар, зерттеу жұмысы болашақ мұғалімдердің педагогикалық білім беру бағдарламалары оларды инклюзивті сыныптарда оқытуға қалай дайындайтыны туралы түсініктерін ашуға бағытталған. Бұл зерттеу жұмысы Назарбаев Университетінде докторлық диссертация жұмысын орындау аясында жүргізілуде.

        Зерттеу жұмысы барысында жиналған мәліметтердің мұқият түрде және құпиялылықта сақталуына назар аударылады. Осы зерттеу жұмысын жүзеге асыру үшін Сіздің қатысуыңыз құнды болып табылады.

Сауалнаманы толтыру үшін сілтемені басыңыз:

https://nukz.qualtrics.com/jfe/form/SV_eXOQecxqgh8zh9X

Email to Pre-Service Teachers Inviting to Participate in the Online Survey in Russian Language

Уважаемый студент,

        Приглашаю Вас принять участие в исследовании связанном с моей докторской диссертацией в Высшей Школе Образования, Назарбаев Университета (ВШОНУ). Я Гульмира Тусупбекова, PhD кандидат в ВШОНУ. Я провожу исследование на тему: *«Первоначальная подготовка учителей к инклюзивному образованию в Казахстане: убеждения будущих учителей касательно учащихся с особыми образовательными потребностями и их включения в общеобразовательные классы».*

        Основная цель этого исследования - изучить убеждения будущих учителей относительно вовлечения учащихся с особыми образовательными потребностями в обычные классы и понять, в какой степени преподаватели чувствуют себя готовыми работать в инклюзивной среде. Кроме того, целью исследования является раскрытие представлений будущих учителей о влиянии их педагогической образовательной программы к готовности преподаванию в инклюзивных классах. Это исследование проводится в рамках требований докторской диссертационной работы в Назарбаев Университете.

        Данные, которые я собираю в ходе этого исследования, будут обрабатываться с большой осторожностью и вниманием к конфиденциальности. Ваше участие будет иметь неоценимое значение для реализации данного исследования.

        Пожалуйста, перейдите по ссылке, чтобы заполнить опрос:

https://nukz.qualtrics.com/jfe/form/SV_eXOQecxqgh8zh9X

Email to Pre-Service Teachers Inviting to Participate in Interview in English Language

Dear student,

My name is Gulmira Tusupbekova and I am a doctoral student at the Nazarbayev University Graduate School of Education. I am conducting research on: "Initial Teacher Preparation for Inclusive Education in Kazakhstan: Future Teachers' Beliefs about Students with Special Educational Needs and Their Inclusion in Mainstream Classrooms". I invite you to participate in an interview where you will have the opportunity to share your experience.

The main aim of this study is to explore the beliefs of future teachers regarding the inclusion of students with special educational needs in mainstream classrooms and to understand the extent to which future teachers feel prepared to work in an inclusive environment. In addition, the study aims to uncover pre-service teachers' perceptions of the impact of their teacher education programme on preparedness to teach in inclusive classrooms. This research is conducted as part of the requirements of a doctoral dissertation at Nazarbayev University.

The data collected during this research will be treated with great care and attention to confidentiality. Your participation will be invaluable for the implementation of this study. Your involvement in the research will be confidential, and you have the right to voluntarily decide whether to participate.

For any questions, please contact Gulmira Tussupbekova, a doctoral student at Nazarbayev University.

Email: gulmira.tussupbekova@nu.edu.kz

Phone: 8 702 292 46 99

Email to Pre-Service Teachers Inviting to Participate in Interview in Russian Language

Уважаемый студент,

Меня зовут Гульмира Тусупбекова, я докторант Высшей Школы Образования Назарбаев Университета. Я провожу исследование на тему: *«Первоначальная подготовка учителей к инклюзивному образованию в Казахстане: убеждения будущих учителей касательно учащихся с особыми образовательными потребностями и их включения в общеобразовательные классы».* Приглашаю вас принять участие в интервью, где у вас будет возможность поделиться опытом.

Основная цель этого исследования - изучить убеждения будущих учителей относительно вовлечения учащихся с особыми образовательными потребностями в обычные классы и понять, в какой степени преподаватели чувствуют себя готовыми работать в инклюзивной среде. Кроме того, целью исследования является раскрытие представлений будущих учителей о влиянии их педагогической образовательной программы к готовности преподаванию в инклюзивных классах. Это исследование проводится в рамках требований докторской диссертационной работы в Назарбаев Университете.

Данные, которые я собираю в ходе этого исследования, будут обрабатываться с большой осторожностью и вниманием к конфиденциальности. Ваше участие будет иметь неоценимое значение для реализации данного исследования.

Ваше участие в исследовании будет конфиденциальным, и Вы в праве добровольно принимать решение о Вашем участии.

По всем, вопросам обращаться к Гульмире Тусубпековой, докторант Назарбаев Университета.

Email: gulmira.tussupbekova@nu.edu.kz

Phone: 8 702 292 46 99

Email to Pre-Service Teachers Inviting to Participate in Interview in Kazakh Language

Құрметті студент,

Мен, Гульмира Тусупбекова, Назарбаев Университетінің Жоғары Білім беру Мектебінің PhD докторантымын. Мен келесі тақырып бойынша зерттеу жұмысын жүргізіп жатырмын: *"Қазақстандағы инклюзивті білім беруге мұғалімдерді алғашқы даярлау: болашақ мұғалімдердің ерекше білім беру қажеттіліктері бар оқушыларды оқыту және оларды жалпы білім беретін сыныптарға қосу туралы сенімдері"*. Сізді менің докторлық диссертация жұмысыма байланысты интервьюге қатысуға шақырамын.

Бұл зерттеудің негізгі мақсаты - ерекше білім беру қажеттіліктері бар оқушыларды негізгі сыныптарға қосу туралы және болашақ мұғалімдердің инклюзивті сыныпта жұмыс істеуге қаншалықты дайын екендіктерін зерттеу. Сонымен қатар, зерттеу жұмысы болашақ мұғалімдердің педагогикалық білім беру бағдарламалары оларды инклюзивті сыныптарда оқытуға қалай дайындайтыны туралы түсініктерін ашуға бағытталған. Бұл зерттеу жұмысы Назарбаев Университетінде докторлық диссертация жұмысын орындау аясында жүргізілуде.

Зерттеу жұмысы барысында жиналған мәліметтердің мұқият түрде және құпиялылықта сақталуына назар аударылады. Осы зерттеу жұмысын жүзеге асыру үшін Сіздің қатысуыңыз құнды болып табылады.

Зерттеуге қатысу арқылы сізден өз тәжірибеңізбен, ақыл-кеңестеріңізбен бөлісуді сұраймын. Зерттеуге қатысу туралы шешімді қабылдау өз еркіңізде және сіздің зерттеуге қатысуыңыз құпия сақталады. Рахмет!

Қосымша сұрақтар бойынша маған хабарласуыңызды сұраймын:

Гульмира Тусупбекова

PhD кандидат, Назарбаев Университет

Email: gulmira.tussupbekova@nu.edu.kz

Phone: 8 702 292 46 99

Initial Teacher Preparation for Inclusive Education in Kazakhstan: Pre-Service Teachers' Beliefs About Students with Special Educational Needs and Their Inclusion in Mainstream Classrooms

Information Sheet

Who is doing the research?

The research is being carried out by Gulmira Tussupbekova, PhD candidate of the Graduate School of Education, Nazarbayev University.

Why the research is being conducted?

The project is being conducted for a PhD degree of PhD in Education, Graduate School of Education, Nazarbayev University (NUGSE). The purpose of the research is to examine pre-service teachers' beliefs about the inclusion of students with SEN into mainstream classrooms and to what extent they feel prepared to work in an inclusive classroom. Moreover, the study aims to uncover future teachers' perceptions about how their initial teacher education programs prepare them to teach in inclusive classrooms.

Why have you/ your school been asked to participate?

Your university has been chosen based on the typical case sampling technique, which means your HEI includes the most typical cases of the population under the study. To be exact, mainly secondary school future subject teachers of Sciences, Humanities, and Special Education teachers (i.e., defectologists) who are older 18 years of age will need to be selected for the study. This study will be driven by the following research questions: 1) What are the pre-service teachers' beliefs about the students with special educational needs and their inclusion in mainstream schools in Kazakhstan; 2) How prepared do pre-service teachers feel about working with SEN students in a mainstream classroom?; 3) How could the Initial Teacher Education programs better prepare pre-service teachers to teach in an inclusive classroom from their perspectives? Participation in the study is completely voluntary. If you decide to take part in this study you have the right to withdraw from the project (up until the dissertation is finalized), for any reason.

What will happen if you take part? What will you be asked to do?

This research is comprised of two phases: quantitative and qualitative phases. Firstly, I will conduct surveys on the research questions to examine pre-service teachers' beliefs about SEN students and their inclusion in mainstream schools, their perspectives on their preparedness to teach and work with SEN students in a mainstream classroom, and to what extent they feel confident in their gained knowledge in HEIs in Kazakhstan. Next, this will be followed by face-to-face semi-structured interviews with student-teachers to follow up the emerging, relevant,

and unexpected issues. Both the survey and interview will be conducted either face to face or online and will take approximately 30 minutes of your time at each phase of the study.

How is confidentiality and anonymity guaranteed?
All data will be kept anonymous and confidential. In the surveys, you will not indicate your names or any identification information. In the interview transcripts all names (people, places) will be replaced with pseudonyms. All the data will be stored securely in on password protected drive for the purposes of my dissertation work and will be destroyed in the line with university guidelines (held for a minimum of 3 years).

What will happen to the information provided?
The information you provide will be used by me for the purposes of my PhD dissertation. I may also present this work for additional academic purposes, such as at conferences and in journal articles.
No individual or institution will be named in any future reporting of this information.

Details of the ethical approval process
The research has been approved by the NUGSE Ethics Committee. This study has been discussed with my dissertation advisors Dr. Daniel Hernández-Torrano at daniel.torrano@nu.edu.kz /+7 (7172) 70-93-59 and Dr. Janet Helmer at janet.helmer@nu.edu.kz / +7 7172 704970, Graduate School of Education, Nazarbayev University, 53 Kabanbay Batyr Ave, Nur-Sultan, Kazakhstan.

Please contact me if you have any questions in relation to this project:
Gulmira Tussupbekova, Tel: 87022924699 Email: gulmira.tussupbekova@nu.edu.kz

Инклюзивті білім беруге мұғалімдерді алғашқы даярлау: болашақ мұғалімдердің ерекше білім беру қажеттіліктері бар оқушыларды оқыту және оларды жалпы білім беретін сыныптарға қосу туралы сенімдері

Ақпарат парағы

Зерттеуді кім жүргізіп жатыр?

Зерттеуді Гульмира Тусупбекова, Назарбаев Университетінің Жоғары Білім Мектебінің PhD кандидаты жүргізеді.

Неліктен зерттеу жүргізілуде?

Жоба Назарбаев Университетінің Жоғары Білім Мектебіндегі (НУЖБМ) білім саласындағы докторлық диссертациялық ғылыми жұмыс аясында жүзеге асырылуда. Зерттеудің мақсаты – болашақ мұғалімдердің ерекше білім беру қажеттіліктері (ЕБҚ) бар оқушыларды жалпы білім беру сыныптарына қосу туралы сенімдерін және олардың инклюзивті сыныпта жұмыс істеуге қаншалықты дайын екендіктерін зерттеу. Сонымен қатар, зерттеудің мақсаты болашақ мұғалімдердің жоғарғы білім беру бағдарламалары оларды инклюзивті сыныптарда оқытуға қалай дайындайтыны туралы ой-пікірлерін анықтау.

Сіз / ЖОО-ңыз неге зерттеу жұмысына қатысуға шақырылды?

Сіздің университетіңіз типтік істер сынамасын іріктеу әдісінің негізінде таңдалды, демек сіздің ЖОО-да зерттелетін халықтың көп кездесетін жағдайлары бар. Дәлірек айтсақ, зерттеу жұмысы үшін негізінен орта мектептің болашақ пән мұғалімдері, гуманитарлық ғылымдар және арнайы білім беру мұғалімдері (яғни, дефектологтар) 18 жастан асқан болуы керек. Бұл зерттеу жұмысы келесі зерттеу сұрақтарына негізделеді: 1) Ерекше қажеттіліктері бар оқушылар туралы және олардың Қазақстанның жалпы білім беретін мектептеріне қосылуына байланысты болашақ мұғалімдердің сенімдері қандай? 2) ЕБҚ оқушыларымен негізгі сыныпта жұмыс істеуге болашақ мұғалімдер қаншалықты дайын деп сезінеді? 3) Мұғалімдерді дайындайтын педагогикалық білім беру бағдарламалары өздерінің көзқарастары бойынша болашақ мұғалімдерді инклюзивті сыныпта оқытуға қаншалықты жақсы дайындай алар еді?

Зерттеуге қатысу толығымен ерікті түрде жүзеге асырылады. Егер сіз осы зерттеуге қатысуға шешім қабылдасаңыз, кез-келген себеппен жобадан бас тартуға құқығыңыз бар (диссертация аяқталғанға дейін).

Қатыссаңыз не болады? Сізден не істеу сұралады?

Бұл зерттеу екі фазадан тұрады: сандық және сапалық фазалар. Біріншіден, мен болашақ мұғалімдердің ЕБҚ оқушылары туралы сенімдерін және олардың жалпы білім беретін мектептерге қосылуын, олардың негізгі сыныптағы ЕБҚ оқушыларымен жұмыс істеуге дайындығы туралы сенімдерін және олардың қаншалықты деңгейде екенін зерттеу мақсатында зерттеу сұрақтары бойынша сауалнамалар жүргіземін. Әрі қарай, пайда болған, өзекті және күтпеген мәселелерді қарастыру үшін болашақ мұғалімдерден сұхбат (интервью) алынады. Сауалнама да, сұхбат та бетпе-бет немесе онлайн режимінде өткізілуі мүмкін және зерттеудің әр кезеңінде шамамен 30 минут уақыт кетеді.

Құпиялылық пен анонимділікке қаншалықты кепілдік беріледі?

Барлық деректер жасырын және құпия болып қалады. Сауалнамаларда сіз өзіңіздің атыңызды немесе сәйкестендіру туралы мәліметтерді көрсетпейтін боласыз. Сұхбат транскриптерінде барлық есімдер (адамдар, мекен-жайлар, ЖОО атаулары) лақап аттармен ауыстырылады. Диссертациялық жұмысым үшін барлық деректер парольмен қорғалған дискіде қауіпсіз түрде сақталады және университеттің нұсқауларына сәйкес жойылады (кем дегенде 3 жыл арасында).

Берілген ақпаратпен не болады?

Сіз ұсынған ақпаратты мен докторлық диссертациялық ғылыми жұмыс мақсаттары үшін пайдаланамын. Мен бұл жұмысты қосымша академиялық мақсаттарда, мысалы конференциялар мен журнал мақалаларында ұсына аламын.
Бұл ақпараттың болашақтағы есебінде ешбір адамның немесе оқу орнының аты аталмайды.

Этикалық бекіту процесі туралы мәліметтер

Зерттеуді НУЖБМ этика комитеті мақұлдады. Бұл зерттеу менің диссертациялық ғылыми жетекшілерім доктор Даниэль Эрнандес-Торраномен daniel.torrano@nu.edu.kz / + 7 (7172) 70-93-59 және доктор Джанет Хельмермен janet.helmer@nu.edu kz / +7 7172 704970 талқыланды. Жоғары Білім Мектебі, Назарбаев Университеті, Қабанбай батыр даңғылы, 53, Нұр-Сұлтан, Қазақстан.

Осы жобаға қатысты сұрақтарыңыз болса менімен байланысыңыз:
Гульмира Тусупбекова, тел: 87022924699, электрондық пошта:
gulmira.tussupbekova@nu.edu.kz

Первоначальная подготовка учителей к инклюзивному образованию в Казахстане: убеждения будущих учителей касательно учащихся с особыми образовательными потребностями и их включения в общеобразовательные классы

Информационный лист

Кто проводит исследование?

Исследование проводит Тусупбекова Гульмира Ерсыновна, кандидат PhD Высшей Школы Образования Назарбаев Университета.

Почему проводится данное исследование?

Проект ведется в рамках докторской диссертационной работы в области образования, Высшая Школа Образования, Назарбаев Университет (ВШОНУ). Цель исследования - изучить убеждения будущих учителей относительно вовлечения учащихся с особыми образовательными потребностями в обычные классы и в какой степени они чувствуют себя готовыми работать в инклюзивной среде. Кроме того, целью исследования является раскрытие представлений будущих учителей о том, как программы педагогического образования готовят их к преподаванию в инклюзивных классах.

Почему вас / ваш университет пригласили принять участие?

Ваш университет был выбран на основе выборки типичных случаев, это означает, что ваш ВУЗ включает в себя наиболее типичные случаи потенциальных участников в рамках исследования. А точнее, для исследования необходимо будет выбрать будущих учителей-предметников, преподающих в средних школах, а также будущих учителей гуманитарных наук и специального образования (к примеру дефектологов) старше 18 лет. В основу данного исследования входит рассмотрение следующих вопросов:

1) Каковы убеждения будущих учителей относительно учащихся с особыми образовательными потребностями и их вовлечения в общеобразовательные школы в Казахстане?
2) Насколько подготовлены будущие учителя к работе с учащимися с особыми образовательными потребностями (ООП) в общеобразовательном классе?

3) Как программы педагогического образования могли бы лучше подготовить будущих учителей работать в инклюзивном классе с их точки зрения?
Участие в исследовании полностью добровольное. Если вы решите принять участие в этом исследовании, у вас есть право отказаться от участия в проекте (до завершения диссертации) по любой причине.

Что будет, если вы примете участие? Что вас попросят сделать?

Это исследование состоит из двух этапов: количественного и качественного. Во-первых, я проведу опрос, чтобы изучить убеждения будущих учителей в отношении учащихся ООП и их вовлечения в обычные школы, их взгляды на готовность преподавать и работать с учащимися с ООП в обычном классе и в какой степени они чувствуют уверенность в полученных знаниях в ВУЗах Казахстана. Затем последует полуструктурированное интервью со студентами (будущими учителями). Как опрос, так и интервью могут проводиться и офлайн, и в онлайн режиме. На каждом этапе исследования участникам потребуется примерно 30 минут времени.

Как гарантируется конфиденциальность и анонимность?

Все данные будут храниться анонимно и конфиденциально. Участники опроса не будут указывать свои имена или идентификационную информацию. В транскрипциях интервью все имена (люди, места, наименование ВУЗа) будут заменены псевдонимами. Все данные будут надежно храниться на защищенном паролем диске в целях конфиденциальности моей диссертационной работы и будут уничтожены в соответствии с руководящими принципами университета (срок хранения не менее 3 лет).

Что будет с предоставленной информацией?

Предоставленная вами информация будет использована мной в целях докторской диссертационной работы. Я также могу представить эту работу в дополнительных академических целях, например, на конференциях и в журнальных статьях. Конфиденциальность и анонимность данных будет сохранена.

Детали процесса этического одобрения

Исследование было одобрено Комитетом по этике ВШОНУ. Это исследование проводится под пристальным вниманием моих научных руководителей профессором Даниэль Эрнандес-Торрано, электронная почта: daniel.torrano@nu.edu.kz / тел: + 7 (7172) 70-93-59 и профессором Джанет Хелмер, электронная почта: janet.helmer@nu.edu.kz / тел: +7 7172 704970, Высшая Школа Образования, Назарбаев Университет, пр. Кабанбай батыра, 53, Нур-Султан, Казахстан.

Пожалуйста, свяжитесь со мной, если у вас возникнут какие-либо вопросы относительно этого проекта:
Тусупбекова Гульмира Ерсыновна, тел: 87022924699, электронная почта: gulmira.tussupbekova@nu.edu.kz

NAZARBAYEV UNIVERSITY GRADUATE SCHOOL OF EDUCATION

INFORMED CONSENT FORM FOR INTERNET SURVEY

Initial Teacher Preparation for Inclusive Education in Kazakhstan: Pre-Service Teachers' Beliefs About Students with Special Educational Needs and Their Inclusion in Mainstream Classrooms

DESCRIPTION: You are invited to participate in a research study conducted by a PhD candidate of Nazarbayev University Graduate School of Education: Gulmira Tussupbekova. The purpose of this study is to examine pre-service teachers' beliefs about the inclusion of students with special educational needs (SEN) into mainstream classrooms and to what extent they feel prepared to work in an inclusive classroom. Moreover, the study aims to uncover future teachers' perceptions about how their initial teacher education programs prepare them to teach in inclusive classrooms.

TIME INVOLVEMENT: If you volunteer to participate in this study, you are kindly asked to fulfil the survey lasting for about 20 minutes on your beliefs about the inclusion of SEN students into mainstream school and feelings about your preparedness to work in an inclusive classroom. Any information that is obtained during this study will be kept confidential to the full extent possible. All efforts, within reason, will be made to keep your personal information in your research record confidential. The collected data will be stored securely on the password-protected hard drive and will be destroyed three years after the end of the study based in accordance with the university regulations.

RISKS AND BENEFITS: There are no known risks for you as your participation in the study, and it will not have any impact or negative implications for the relationships in your educational institution. However, you may feel uncomfortable or uncertain to highlight your learning experiences and the challenges you might have faced. To eliminate this stress, you will be reassured that your responses will not be judged or criticized, and your personal identity will not be disclosed in the data and presentation of the data. Your anonymity and confidentiality of the information received from you will be ensured by using pseudonyms for you and your cohort or/and HEI. Moreover, the soft data (survey) received from you will be

saved in a password-protected file on my personal computers and all hard copies of data will be kept in a locked cabinet accessible to me only. The main benefit for you will be the opportunity to share your beliefs, thoughts, and perspectives in regard to the suggestions for improving the pre-service teacher education practices. Your decision whether or not to participate in this study will not affect your education process and grades.

PARTICIPANT'S RIGHTS: If you have read this form and have decided to participate in this project, please understand your participation is voluntary, and you have the right to withdraw your consent or discontinue participation at any time without penalty or loss of benefits to which you are otherwise entitled. The alternative is not to participate. You have the right to refuse to answer particular questions. The results of this research study may be presented at scientific or professional meetings or published in scientific journals.

COMPENSATION: No tangible compensation will be given. A copy of the research results will be available at the conclusion of the study at Nazarbayev University Repository.

CONTACT INFORMATION: Questions: If you have any questions, concerns or complaints about this research, its procedures, risks and benefits, contact the PhD candidate Gulmira Tussupbekova at gulmira.tussupbekova@nu.edu.kz / +7 702 292 46 99, or the PhD Thesis main advisor for this student work Associate Professor Daniel Hernández-Torrano at daniel.torrano@nu.edu.kz /+7 (7172) 70-93-59 and/or co-advisor Associate Professor Janet Helmer at janet.helmer@nu.edu.kz / +7 7172 704970.

Independent Contact: If you are not satisfied with how this study is being conducted, or if you have any concerns, complaints, or general questions about the research or your rights as a participant, please contact the NUGSE Research Committee to speak to someone independent of the research team. You can also write an email to the NUGSE Research Committee at gse_researchcommittee@nu.edu.kz

STATEMENT OF CONSENT: By clicking "I agree" below you are indicating that you are at least 18 years old, have read and understood this consent form and agree to participate in this research study.

    I Agree

    I Disagree

ОНЛАЙН САУАЛНАМАНЫҢ АҚПАРАТТЫҚ КЕЛІСІМ ФОРМАСЫ

Қазақстандағы инклюзивті білім беруге мұғалімдерді алғашқы даярлау: болашақ мұғалімдердің ерекше білім беру қажеттіліктері бар оқушыларды оқыту және оларды жалпы білім беретін сыныптарға қосу туралы сенімдері

СИПАТТАМА: Сізді Назарбаев Университетінің Жоғары Білім Мектебінің PhD кандидаты Гульмира Тусупбекова өткізетін ғылыми зерттеу жұмысына қатысуға шақырамыз. Бұл зерттеудің мақсаты - болашақ мұғалімдердің ерекше білімге қажеттіліктері бар оқушыларды жалпы білім беру сыныптарына қосу туралы сенімдері мен олардың инклюзивті ортада жұмыс істеуге қаншалықты дайын екендіктерін зерттеу. Сонымен қатар, зерттеудің мақсаты болашақ мұғалімдердің жоғарғы білім беру бағдарламалары оларды инклюзивті сыныптарда оқытуға қалай дайындайтыны туралы ой-пікірлерін анықтау.

ӨТКІЗІЛЕТІН УАҚЫТЫ: Егер сіз осы зерттеуге қатысқыңыз келсе, сізден ерекше білім қажеттіліктері (ЕБҚ) бар оқушыларды негізгі мектепке қосу туралы сенімдеріңіз және инклюзивті сыныпта жұмыс істеуге дайындығыңыз туралы 20 минутқа созылатын сауалнаманы өтіуіңізді сұраймыз. Осы зерттеу барысында алынған кез-келген ақпарат құпия түрде сақталады. Сіздің жеке мәліметтеріңізді зерттеу жазбаларында құпиялылықты сақтау үшін барлық күш-жігер жұмсалады. Жиналған мәліметтер парольмен қорғалған қатты дискіде сенімді түрде сақталады және университет ережелеріне сәйкес оқу аяқталғаннан кейін үш жыл өткен соң жойылады.

ЗЕРТТЕУ ЖҰМЫСЫНА ҚАТЫСУДЫҢ ҚАУІПТЕРІ МЕН АРТЫҚШЫЛЫҚТАРЫ: Зерттеуге қатысу бойынша сіз үшін белгілі қауіптер жоқ және сіздің оқу орныңыздағы қатынастарға ешқандай теріс әсер тигізілмейді. Алайда, сіз өзіңіздің оқу тәжірибеңіз туралы және сіз кездестірген қиындықтар туралы айтуға ыңғайсыз немесе сенімсіз сезінуіңіз мүмкін. Бұл күйзелісті болдырмау үшін сіздің жауаптарыңыз бағаланбайтынына немесе сындалмайтындығына және сіздің жеке

басыңыз туралы мәліметтер ешқандай баяндама мен презентацияларда ашылмайтындығына кепілдік береміз. Сізден алынған ақпараттың құпиялылығы мен бей есімі сіздің тобыңыз бен университетіңізге лақап ат қолданылуымен қамтамасыз етіледі. Сонымен қатар, сізден алынған деректер (сауалнама жауаптары) құпиясөзбен қорғалған файлда менің жеке компьютерлерімде сақталатын болады, және мәліметтердің барлық қағаз көшірмелері тек маған қолжетімді жабық сөреде сақталады. Зерттеу жұмысына қатысуыңыздың келесідей артықшылықтары болуы мүмкін: болашақ мұғалімдердің біліктілігін арттыру жөніндегі ұсыныстар туралы өз ойларыңыз бен көзқарастарыңызбен бөлісу мүмкіндігі болады. Зерттеу жұмысына қатысуға келісім беруіңіз немесе бас тартуыңыз сіздің білім алу үдерісіңізге және бағаларыңызға еш әсерін тигізбейді.

ҚАТЫСУШЫ ҚҰҚЫҚТАРЫ: Егер сіз берілген формамен танысып, зерттеу жұмысына қатысуға шешім қабылдасаңыз, сіздің қатысуыңыз ерікті түрде екенін хабарлаймыз. Сонымен қатар, қалаған уақытта айыппұл төлемей және сіздің әлеуметтік жеңілдіктеріңізге еш кесірін тигізбей зерттеу жұмысына қатысу туралы келісіміңізді кері қайтаруға немесе тоқтатуға құқығыңыз бар. Зерттеу жұмысына мүлдем қатыспауыңызға да толық құқығыңыз бар. Сондай-ақ, қандай да бір сұрақтарға жауап бермеуіңізге де әбден болады. Бұл зерттеу жұмысының нәтижелері академиялық немесе кәсіби мақсаттарда баспаға ұсынылуы немесе шығарылуы мүмкін.

ӨТЕМ: Материалдық өтемақы берілмейді. Зерттеу нәтижелерінің көшірмелері зерттеу аяқталғаннан кейін Назарбаев Университетінің репозиторийінде қолжетімді болады.

БАЙЛАНЫС АҚПАРАТЫ:

Сұрақтарыңыз: Егер жүргізіліп отырған зерттеу жұмысының процесі, қаупі мен артықшылықтары туралы сұрағыңыз немесе шағымыңыз болса, келесі байланыс құралдары арқылы PhD кандидаты Туспубекова Гульмирамен келесі пошталық мекенжай арқылы gulmira.tussupbekova@nu.edu.kz / +7 702 292 46 99, немесе зерттеушінің бас ғылыми кеңесшісімен, доцент Даниэль Эрнандес-Торранамен daniel.torrano@nu.edu.kz / + 7 (7172) 70-93-59 және / немесе екінші ғылыми кеңесшісі, доцент Джанет Хельмер, janet.helmer@nu.edu.kz / +7 7172 704970 хабарласуыңызға болады.

ДЕРБЕС БАЙЛАНЫС АҚПАРАТТАРЫ: Егер берілген зерттеу жұмысының жүргізілуімен қанағаттанбасаңыз немесе сұрақтарыңыз бен шағымдарыңыз болса, Назарбаев Университеті Жоғары Білім беру мектебінің Зерттеу Комитетімен көрсетілген байланыс құралдары арқылы хабарласуыңызға болады: gse_researchcommittee@nu.edu.kz.

КЕЛІСІМ ТУРАЛЫ МӘЛІМДЕМЕ: Төмендегі «Мен келісемін» түймесін басу арқылы сіз 18 жасқа толған екеніңізді, келісу формасын оқып, түсінгеніңізді және осы зерттеу жұмысына қатысуға келісетіндігіңізді көрсетесіз.

   Мен келісемін

  Мен келіспеймін

ФОРМА ИНФОРМАЦИОННОГО СОГЛАСИЯ ДЛЯ ОНЛАЙН ОПРОСА

Первоначальная подготовка учителей к инклюзивному образованию в Казахстане: убеждения будущих учителей касательно обучения учащихся с особыми образовательными потребностями и их включения в общеобразовательные классы

ОПИСАНИЕ: Вы приглашены принять участие в исследовании, проводимом PhD кандидатом Высшей школы образования Назарбаев Университета - Гульмирой Тусупбековой. Основная цель этого исследования - изучить убеждения будущих учителей относительно вовлечения учащихся с особыми образовательными потребностями (ООП) в обычные классы и понять, в какой степени будущие учителя чуствуют себя готовыми работать в инклюзивной среде. Кроме того, целью исследования является раскрытие представлений будущих учителей о влиянии их педагогической образовательной программы к готовности преподаванию в инклюзивных классах.

ВРЕМЯ УЧАСТИЯ: Если вы желаете участвовать в этом исследовании, прошу вас пройти опрос продолжительностью около 20 минут, касаемо ваших убеждений о вовлечении учащихся с особыми образовательными потребностями в обычную школу и о вашей готовности работать в инклюзивном классе. Любая информация, полученная в ходе этого исследования, будет оставаться конфиденциальной в максимально возможной степени. Будут предприняты все разумные усилия для сохранения конфиденциальности вашей личной информации в вашей исследовательской записи. Собранные данные будут надежно храниться на жестком диске, защищенном паролем, и будут уничтожены через три года после окончания исследования в соответствии с правилами университета.

РИСКИ И ПРЕИМУЩЕСТВА: Нет выявленных рисков для вас при участии в исследовании, и это не окажет какого-либо влияния или негативного воздействия на

отношения в вашем образовательном учреждении. Однако вы можете чувствовать себя неловко или неуверенно, рассказывая о своем опыте обучения и проблемах, с которыми вы могли столкнуться. Заверяем вас, что ваши ответы не будут оценены или подвергнуты критике, и ваша личная информация не будет раскрыта в данных и в представлении данных. Ваша анонимность и конфиденциальность информации, полученные от вас, будет обеспечиваться использованием псевдонимов для вас, вашей группы и университета в целом. Кроме того, полученные от вас данные (опросник) будут сохранены в защищенном паролем файле на моих персональных компьютерах, а все бумажные копии данных будут храниться в закрытом шкафу, доступном только мне. В качестве ожидаемых преимуществ в результате исследования можно рассматривать возможность поделиться своими убеждениями, мыслями и взглядами касательно предложений по улучшению практики подготовки будущих учителей. Ваше решение о согласии либо отказе в участии никаким образом не повлияет на процесс обучения и оценки.

ПРАВА УЧАСТНИКОВ: Если Вы прочитали данную форму и решили принять участие в исследовании, Вы должны понимать, что Ваше участие является добровольным и что у Вас есть право отозвать свое согласие или прекратить участие в любое время без каких-либо последствий и потерь. В качестве альтернативы можно не участвовать в исследовании. Также Вы имеете право не отвечать на какие-либо вопросы. Результаты данного исследования могут быть представлены или опубликованы в научных или иных профессиональных целях.

КОМПЕНСАЦИЯ: Не будут представлены какие-либо материальные компенсации. Копия результатов исследования будет доступна по завершении исследования в репозитории Назарбаев Университета.

КОНТАКТНАЯ ИНФОРМАЦИЯ:

Вопросы: Если у Вас есть вопросы, замечания или жалобы по поводу данного исследования, процедуры его проведения, рисков и преимуществ, Вы можете связаться с PhD кандидатом Туспубековой Гульмирой по адресу gulmira.tussupbekova@nu.edu.kz / +7 702 292 46 99, или с главным научным руководителем PhD кандидата, ассоциированным профессором Даниэль Эрнандес-Торрано по адресу daniel.torrano@nu.edu.kz / + 7 (7172) 70-93-59 и / или со вторым научным

руководителем, ассоцированным профессором Джанет Хелмер по адресу
janet.helmer@nu.edu.kz / +7 7172 704970.

Независимые контакты: Если Вы не удовлетворены проведением данного
исследования, или у Вас возникли какие-либо проблемы, жалобы и вопросы, Вы
можете связаться с Комитетом Исследований Высшей Школы Образования Назарбаев
Университета по электронному адресу gse_researchcommittee@nu.edu.kz

ЗАЯВЛЕНИЕ О СОГЛАСИИ: нажав «Я согласен» ниже, вы указываете, что вам
исполнилось 18 лет, вы прочитали и поняли эту форму согласия и согласны
участвовать в этом исследовании.

Я согласен

Я не согласен

INFORMED CONSENT FORM FOR INTERVIEW

Initial Teacher Preparation for Inclusive Education in Kazakhstan: Pre-Service Teachers' Beliefs About Students with Special Educational Needs and Their Inclusion in Mainstream Classrooms

DESCRIPTION: You are invited to participate in a research study conducted by a PhD candidate of Nazarbayev University Graduate School of Education: Gulmira Tussupbekova. The purpose of this study is to examine pre-service teachers' beliefs about the inclusion of students with special educational needs (SEN) into mainstream classrooms and to what extent they feel prepared to work in an inclusive classroom. Moreover, the study aims to uncover future teachers' perceptions about how their initial teacher education programs prepare them to teach in inclusive classrooms.

TIME INVOLVEMENT: If you volunteer to participate in this study, you will be asked to participate in an audio-recorded interview. The interview will be conducted either face-to-face or online at a time that is convenient for you and it will last approximately 30 minutes. The focus of these interviews will be on your beliefs about the inclusion of SEN students into mainstream schools and your feelings about your preparedness to work in an inclusive classroom. The interview will be audio taped and the recording will be transcribed into a written text. The collected data will be stored securely on the password-protected hard drive and will be destroyed three years after the end of the study based in accordance with the university regulations.

RISKS AND BENEFITS: There are no known risks for you as your participation in the study, and it will not have any impact or negative implications for the relationships in your educational institution. However, you may feel uncomfortable or uncertain to talk about your learning experiences and the challenges you might have faced. To eliminate this stress, you will be reassured that your responses will not be judged or criticized, and your personal identity will not be disclosed in the data and presentation of the data. Your anonymity and

confidentiality of the information received from you will be ensured by using pseudonyms for you and your cohort or/and HEI. Moreover, the soft data (interview transcript) received from you will be saved in a password-protected file on my personal computers and all hard copies of data will be kept in a locked cabinet accessible to me only. The main benefit for you will be the opportunity to share your beliefs, thoughts, and perspectives in regard to the suggestions for improving the pre-service teacher education practices. Your decision whether or not to participate in this study will not affect your education process and grades.

PARTICIPANT'S RIGHTS: If you have read this form and have decided to participate in this project, please understand your participation is voluntary and you have the right to withdraw your consent or discontinue participation at any time without penalty or loss of benefits to which you are otherwise entitled. The alternative is not to participate. You have the right to refuse to answer particular questions. The results of this research study may be presented at scientific or professional meetings or published in scientific journals.

COMPENSATION: No tangible compensation will be given. A copy of the research results will be available at the conclusion of the study at Nazarbayev University Repository.

CONTACT INFORMATION:

Questions: If you have any questions, concerns or complaints about this research, its procedures, risks and benefits, contact the PhD candidate Gulmira Tussupbekova at gulmira.tussupbekova@nu.edu.kz / +7 702 292 46 99, or the PhD Thesis main advisor for this student work Associate Professor Daniel Hernández-Torrano at daniel.torrano@nu.edu.kz /+7 (7172) 70-93-59 and/or co-advisor Associate Professor Janet Helmer at janet.helmer@nu.edu.kz / +7 7172 704970.

Independent Contact: If you are not satisfied with how this study is being conducted, or if you have any concerns, complaints, or general questions about the research or your rights as a participant, please contact the NUGSE Research Committee to speak to someone independent of the research team. You can also write an email to the NUGSE Research Committee at gse_researchcommittee@nu.edu.kz

Please sign this consent form if you agree to participate in this study.

Statement of consent

The researchers clearly explained to me the background information and objectives of the study and what my participation in this study involves. I understand that my participation in this study is voluntary. I can at any time and without giving any reason withdraw my consent, and this will not have any negative consequences for myself. I understand that the information collected during this study will be treated confidentially.

□ I am willing to participate in this research   □ I do not wish to participate in this research

□ I am willing to be audio recorded   □ I do not wish to be audio recorded

Name:

_____

Signature: _____ Date: _____

Thank you for consideration of this study. Please keep a copy of this form for your record

According to the law of the Republic of Kazakhstan an individual under the age of 18 is considered a child. Any participant falling into that category should be given the Parental Consent Form and have it signed by at least one of his/her parent(s) or guardian(s).

СҰХБАТТАСУҒА АРНАЛҒАН АҚПАРАТТЫҚ КЕЛІСІМ ФОРМАСЫ

Қазақстандағы инклюзивті білім беруге мұғалімдерді алғашқы даярлау: болашақ мұғалімдердің ерекше білім беру қажеттіліктері бар оқушыларды оқыту және оларды жалпы білім беретін сыныптарға қосу туралы сенімдері

СИПАТТАМА: Сізді Назарбаев Университетінің Жоғары Білім Мектебінің PhD кандидаты Гульмира Тусупбекова өткізетін ғылыми зерттеу жұмысына қатысуға шақырамыз. Бұл зерттеудің мақсаты - болашақ мұғалімдердің ерекше білімге қажеттіліктері бар оқушыларды жалпы білім беру сыныптарына қосу туралы сенімдері мен олардың инклюзивті ортада жұмыс істеуге қаншалықты дайын екендіктерін зерттеу. Сонымен қатар, зерттеудің мақсаты болашақ мұғалімдердің жоғарғы білім беру бағдарламалары оларды инклюзивті сыныптарда оқытуға қалай дайындайтыны туралы ой-пікірлерін анықтау.

ӨТКІЗІЛЕТІН УАҚЫТЫ: Егер сіз осы зерттеуге қатысқыңыз келсе, сізден аудио таспаға жазылатын интервьюге қатысуыңызды сұраймыз. Сұхбат бетпе-бет немесе онлайн режимінде өзіңізге ыңғайлы және шамамен 30 минутқа созылатын уақытта өткізіледі. Бұл сұхбаттың негізгі бағыты ЕБҚ оқушыларын негізгі мектепке қосу туралы сенімдеріңізге және инклюзивті сыныпта жұмыс істеуге қаншалықты дайын екендігіңізге байланысты болады. Сұхбат аудио таспаға жазылып, жазба мәтінге көшіріледі. Жиналған мәліметтер парольмен қорғалған қатты дискіде сенімді түрде сақталады және университет ережелеріне сәйкес зерттеу жұмысы аяқталғаннан кейін үш жыл өткен соң жойылады.

ЗЕРТТЕУ ЖҰМЫСЫНА ҚАТЫСУДЫҢ ҚАУІПТЕРІ МЕН АРТЫҚШЫЛЫҚТАРЫ: Зерттеуге қатысу бойынша сіз үшін белгілі қауіптер жоқ және сіздің оқу орныңыздағы қатынастарға ешқандай теріс әсер тигізілмейді. Алайда, сіз өзіңіздің оқу тәжірибеңіз туралы және сіз кездестірген қиындықтар туралы айтуға ыңғайсыз немесе сенімсіз сезінуіңіз мүмкін. Бұл күйзелісті болдырмау үшін сіздің жауаптарыңыз бағаланбайтынына немесе сындалмайтындығына және сіздің жеке

басыңыз туралы мәліметтер ешқандай баяндама мен презентацияларда ашылмайтындығына кепілдік береміз. Сізден алынған ақпараттың құпиялылығы мен бей есімі сіздің тобыңыз бен университетіңізге лақап ат қолданылуымен қамтамасыз етіледі. Сонымен қатар, сізден алынған деректер (сұхбаттасулардың транскрипциясы) құпиясөзбен қорғалған файлда менің жеке компьютерлерімде сақталатын болады, және мәліметтердің барлық қағаз көшірмелері тек маған қолжетімді жабық сөреде сақталады. Зерттеу жұмысына қатысуыңыздың келесідей артықшылықтары болуы мүмкін: болашақ мұғалімдердің біліктілігін арттыру жөніндегі ұсыныстар туралы өз ойларыңыз бен көзқарастарыңызбен бөлісу мүмкіндігі болады. Зерттеу жұмысына қатысуға келісім беруіңіз немесе бас тартуыңыз сіздің білім алу үдерісіңізге және бағаларыңызға еш әсерін тигізбейді.

ҚАТЫСУШЫ ҚҰҚЫҚТАРЫ: Егер сіз берілген формамен танысып, зерттеу жұмысына қатысуға шешім қабылдасаңыз, сіздің қатысуыңыз ерікті түрде екенін хабарлаймыз. Сонымен қатар, қалаған уақытта айыппұл төлемей және сіздің әлеуметтік жеңілдіктеріңізге еш кесірін тигізбей зерттеу жұмысына қатысу туралы келісіміңізді кері қайтаруға немесе тоқтатуға құқығыңыз бар. Зерттеу жұмысына мүлдем қатыспауыңызға да толық құқығыңыз бар. Сондай-ақ, қандай да бір сұрақтарға жауап бермеуіңізге де әбден болады. Бұл зерттеу жұмысының нәтижелері академиялық немесе кәсіби мақсаттарда баспаға ұсынылуы немесе шығарылуы мүмкін.

ӨТЕМ: Материалдық өтемақы берілмейді. Зерттеу нәтижелерінің көшірмелері зерттеу аяқталғаннан кейін Назарбаев Университетінің репозиторийінде қолжетімді болады.

БАЙЛАНЫС АҚПАРАТЫ:

Сұрақтарыңыз: Егер жүргізіліп отырған зерттеу жұмысының процесі, қаупі мен артықшылықтары туралы сұрағыңыз немесе шағымыңыз болса, келесі байланыс құралдары арқылы PhD кандидаты Туспубекова Гульмирамен келесі пошталық мекенжай арқылы gulmira.tussupbekova@nu.edu.kz / +7 702 292 46 99, немесе зерттеушінің бас ғылыми кеңесшісімен, доцент Даниэль Эрнандес-Торранамен daniel.torrano@nu.edu.kz / + 7 (7172) 70-93-59 және / немесе екінші ғылыми кеңесшісі, доцент Джанет Хельмер, janet.helmer@nu.edu.kz / +7 7172 704970 хабарласуыңызға болады.

Дербес Байланыс Ақпараттары: Егер берілген зерттеу жұмысының жүргізілуімен қанағаттанбасаңыз немесе сұрақтарыңыз бен шағымдарыңыз болса, Назарбаев Университеті Жоғары Білім беру мектебінің Зерттеу Комитетімен көрсетілген байланыс құралдары арқылы хабарласуыңызға болады: gse_researchcommittee@nu.edu.kz.

Зерттеу жұмысына қатысуға келісіміңізді берсеңіз, берілген формаға қол қоюыңызды сұраймыз.

Келісім туралы өтініш

Зерттеушілер маған зерттеу туралы негізгі мағлұматтар мен мақсаттарды және менің осы зерттеуге қатысуымның мәнін нақты түсіндірді. Менің бұл зерттеуге қатысуым ерікті екенін түсінемін. Мен кез-келген уақытта және ешқандай себепсіз келісімімді қайтарып ала аламын, және бұл өзім үшін теріс нәтиже болмайды. Осы зерттеу барысында жиналған ақпараттың құпия түрде сақталатынын түсінемін.

□ Мен осы зерттеуге қатысуға дайынмын □ Мен осы зерттеуге қатысқым келмейді
□ Мен аудио жазылымға келісім беремін □ Мен аудио жазылымға келісім бермеймін

Аты-жөні: _____

Қолы: _____ Күні: _____

Осы зерттеуді қарастырғаныңыз үшін рахмет. Сіздің жазбаңыз үшін осы форманың көшірмесін сақтаңыз

Қазақстан Республикасының заңы бойынша 18 жасқа толмаған адам бала болып саналады. Осы санатқа кіретін кез-келген қатысушыға ата-анасының келісім нысаны және оған кемінде бір ата-анасы немесе қамқоршысы қол қоюы керек.

ФОРМА ИНФОРМАЦИОННОГО СОГЛАСИЯ ДЛЯ ИНТЕРВЬЮ

Первоначальная подготовка учителей к инклюзивному образованию в Казахстане: убеждения будущих учителей касательно обучения учащихся с особыми образовательными потребностями и их включения в общеобразовательные классы

ОПИСАНИЕ: Вы приглашены принять участие в исследовании, проводимом PhD кандидатом Высшей школы образования Назарбаев Университета - Гульмирой Тусупбековой. Основная цель этого исследования - изучить убеждения будущих учителей относительно вовлечения учащихся с особыми образовательными потребностями (ООП) в обычные классы и понять, в какой степени будущие учителя чувствуют себя готовыми работать в инклюзивной среде. Кроме того, целью исследования является раскрытие представлений будущих учителей о влиянии их педагогической образовательной программы к готовности преподаванию в инклюзивных классах.

ВРЕМЯ УЧАСТИЯ: Если вы желаете участвовать в этом исследовании, прошу вас принять участие в интервью, которое будет аудиозаписано. Интервью можно провести как при личной встрече, так и в режиме реального времени (онлайн), в удобное для вас время. Интервью займет около 30 минут. Основное внимание данного интервью будет уделено вашим убеждениям относительно вовлечения учащихся с особыми образовательными потребностями в общеобразовательную школу и вашей готовности работать в инклюзивной среде. Интервью будет аудиозаписано, с последующим транскрибированием. Собранные данные будут надежно храниться на жестком диске, защищенном паролем, и будут уничтожены через три года после окончания исследования в соответствии с правилами университета.

РИСКИ И ПРЕИМУЩЕСТВА: Нет выявленных рисков для вас при участии в исследовании, и это не окажет какого-либо влияния или негативного воздействия на отношения в вашем образовательном учреждении. Однако вы можете чувствовать себя неловко или неуверенно, рассказывая о своем опыте обучения и проблемах, с которыми

вы могли столкнуться. Заверяем вас, что ваши ответы не будут оценены или подвергнуты критике, и ваша личная информация не будет раскрыта в данных и в представлении данных. Ваша анонимность и конфиденциальность информации, полученные от вас, будет обеспечиваться использованием псевдонимов для вас, вашей группы и университета в целом. Кроме того, полученные от вас данные (транскрипция интервью) будут сохранены в защищенном паролем файле на моих персональных компьютерах, а все бумажные копии данных будут храниться в закрытом шкафу, доступном только мне. В качестве ожидаемых преимуществ в результате исследования можно рассматривать возможность поделиться своими убеждениями, мыслями и взглядами касательно предложений по улучшению практики подготовки будущих учителей. Ваше решение о согласии либо отказе в участии никаким образом не повлияет на процесс обучения и оценки.

ПРАВА УЧАСТНИКОВ: Если Вы прочитали данную форму и решили принять участие в исследовании, Вы должны понимать, что Ваше участие является добровольным и что у Вас есть право отозвать свое согласие или прекратить участие в любое время без каких-либо последствий и потерь. В качестве альтернативы можно не участвовать в исследовании. Также Вы имеете право не отвечать на какие-либо вопросы. Результаты данного исследования могут быть представлены или опубликованы в научных или иных профессиональных целях.

КОМПЕНСАЦИЯ: Не будут представлены какие-либо материальные компенсации. Копия результатов исследования будет доступна по завершении исследования в репозитории Назарбаев Университета.

КОНТАКТНАЯ ИНФОРМАЦИЯ:

Вопросы: Если у Вас есть вопросы, замечания или жалобы по поводу данного исследования, процедуры его проведения, рисков и преимуществ, Вы можете связаться с PhD кандидатом Туспубековой Гульмирой по адресу gulmira.tussupbekova@nu.edu.kz / +7 702 292 46 99, или с главным научным руководителем PhD кандидата, ассоциированным профессором Даниэль Эрнандес-Торрано по адресу daniel.torrano@nu.edu.kz / + 7 (7172) 70-93-59 и / или со вторым научным руководителем, ассоциированным профессором Джанет Хелмер по адресу janet.helmer@nu.edu.kz / +7 7172 704970.

Независимые контакты: Если Вы не удовлетворены проведением данного исследования, или у Вас возникли какие-либо проблемы, жалобы и вопросы, Вы можете связаться с Комитетом Исследований Высшей Школы Образования Назарбаев Университета по электронному адресу gse_researchcommittee@nu.edu.kz

Пожалуйста, подпишите эту форму согласия, если вы согласны участвовать в данном исследовании.

Заявление о согласии

Исследователи четко объяснили мне основную информацию и цели исследования и что включает в себя мое участие в этом исследовании. Я понимаю, что мое участие в этом исследовании является добровольным. Я могу в любое время и без объяснения причин отозвать свое согласие, и это не будет иметь никаких негативных последствий для меня. Я понимаю, что информация, собранная в ходе этого исследования, будет рассматриваться конфиденциально.

□ Я хочу участвовать в этом исследовании   □ Я не хочу участвовать в этом исследовании

□ Я даю согласие на аудиозапись   □ Я не даю согласие на аудиозапись

ФИО: _____

Подпись_____ Дата: _____

Спасибо за рассмотрение данного исследования. Пожалуйста, сохраните копию этой формы для вашей записи

Согласно законодательству Республики Казахстан, физическое лицо в возрасте до 18 лет считается ребенком. Любому участнику, попадающему в эту категорию, должна быть предоставлена форма согласия родителей и подписана по крайней мере одним из его / ее родителей или опекунов.

Oral Consent Script

Introduction:

Hello. I'm *Gulmira Tussupbekova.* I am conducting interviews about Initial Teacher Preparation for Inclusive Education in Kazakhstan: Pre-Service Teachers' Beliefs About Students with Special Educational Needs and Their Inclusion in Mainstream Classrooms. I'm conducting this as part of research for PhD studies at Nazarbayev University's Graduate School of Education.

Study procedures:

I'm inviting you to participate in an interview that will take about 30 minutes. The survey will ask you questions about your beliefs about the inclusion of SEN students into mainstream schools and feelings about your preparedness to work in an inclusive classroom, such as *What do you think are the key features of an inclusive education? What does an inclusive education mean to you? To what extent do you feel confident to teach/enrol SEN students?*

Risks:

You do not need to answer questions that you do not want to answer or that make you feel uncomfortable. However, you may feel uncomfortable or uncertain to talk about your learning experiences and the challenges you might have faced. To eliminate this stress, you will be reassured that your responses will not be judged or criticized, and your personal identity will not be disclosed in the data and presentation of the data. Your anonymity and confidentiality of the information received from you will be ensured by using pseudonyms for you and your cohort or/and HEI. Moreover, the soft data (survey and interview transcript) received from you will be saved in a password-protected file on my personal computers and all hard copies of data will be kept in a locked cabinet accessible to me only. And you can withdraw (stop taking part) at any time.

Benefits:

The main benefit for you will be the opportunity to share your beliefs, thoughts, and perspectives in regard to the suggestions for improving the pre-service teacher education practices. Participation in the study will provide input into the process of a critical examination that will be necessary for policymakers to take immediate action through educational reforms and changes to current teaching practices regarding the initial teacher education for inclusion.

Voluntary Participation:

- Your participation in this study is voluntary.

- You can decide to stop at any time, even part-way through the questionnaire for whatever reason.

- If you decide to stop participating, there will be no consequences to you.

- If you decide to stop, we will ask you how you would like us to handle the data collected up to that point.

- This could include returning it to you, destroying it or using the data collected up to that point.

- If you do not want to answer some of the questions you do not have to, but you can still be in the study.

- If you have any questions about this study or would like more information you can call or email *Gulmira Tussupbekova* at gulmira.tussupbekova@nu.edu.kz / 87022924699

This study has been reviewed and cleared by the Nazarbayev University Institutional Research Ethics Committee. If you have concerns or questions about your rights as a participant or about the way the study is conducted, you may contact:

Nazarbayev University Institutional Research Ethics Committee
E-mail: resethics@nu.edu.kz

Consent questions:

- Do you have any questions or would like any additional details?

- Do you agree to participate in this study knowing that you can withdraw at any point with no consequences to you?

[If yes, begin the interview.]

[If no, thank the participant for his/her time.]

Сценарий устного согласия

Вступление:

Добрый день. Я Гульмира Тусупбекова и я провожу исследование для моей докторской диссертационной работы в Высшей Школе Образования Назарбаев Университета. Я провожу интервью о начальной подготовке учителей к инклюзивному образованию в Казахстане: убеждения будущих учителей относительно учащихся с особыми образовательными потребностями и их вовлечение в обычные классы.

Процедура исследования:

Я приглашаю вас принять участие в интервью, которое займет около 30 минут. В ходе собеседования будут заданы вопросы о ваших убеждениях относительно вовлечения учащихся ООП в обычную школу и о том, как вы готовы работать в инклюзивном классе, например: «Как вы думаете, что является ключевыми характеристиками инклюзивного образования? Что для вас значит инклюзивное образование? Насколько вы чувствуете себя уверенно, чтобы преподавать учащимся с ООП?»

Риски:

Вам не нужно отвечать на вопросы, на которые вы не хотите отвечать или которые вызывают у вас дискомфорт. Однако вы можете чувствовать себя неловко или неуверенно, рассказывая о своем опыте обучения и проблемах, с которыми вы могли столкнуться. Заверяем вас, что ваши ответы не будут оценены или подвергнуты какой-либо критике, и ваша личная информация не будет раскрыта в данных и в представлении данных. Ваша анонимность и конфиденциальность информации, полученной от вас, будет обеспечиваться использованием псевдонимов для вас и вашей группы или / и ВУЗа. Кроме того, полученные от вас данные (транскрипция интервью) будут сохранены в защищенном паролем файле на моих персональных компьютерах, а все бумажные копии данных будут храниться в закрытом шкафу, доступном только мне. Вы можете отозвать свое участие (прекратить участие) в любое время.

Выгоды:

Основным преимуществом для вас будет возможность поделиться своими убеждениями, мыслями и взглядами в отношении предложений по улучшению практики подготовки будущих учителей. Участие в исследовании обеспечит вклад в процесс критического исследования для принятия незамедлительных мер в рамках

образовательных реформ в отношении начального педагогического образования для инклюзии.

Добровольное участие:

- Ваше участие в этом исследовании является добровольным.
- Вы можете решить прекратить участие в любое время по какой-либо причине.
- Если вы решите прекратить участие, для вас не будет никаких последствий.
- Если вы решите прекратить участие, мы уточним у вас, как бы вы хотели, чтобы мы обрабатывали данные, собранные до этого момента.
- Это может включать возврат, уничтожение или использование данных, собранных до этого момента.
- Если вы не хотите отвечать на некоторые вопросы, можете не отвечать, но вы все равно можете продолжить участвовать в исследовании.
- Если у вас есть какие-либо вопросы об этом исследовании или вы хотели бы получить дополнительную информацию, вы можете позвонить или написать Гульмире Тусупбековой по электронной почте gulmira.tussupbekova@nu.edu.kz или позвонить по тел.: 87022924699

Это исследование было рассмотрено и одобрено Комитетом по этике институциональных исследований Назарбаев Университета. Если у вас есть проблемы или вопросы относительно ваших прав как участника или о том, как проводится исследование, вы можете связаться с:

Комитетом по этике институциональных исследований Назарбаев Университета
Электронная почта: resethics@nu.edu.kz

Вопросы согласия:

• У вас есть какие-либо вопросы или хотели бы вы получить дополнительную информацию?
• Согласны ли вы участвовать в этом исследовании, зная, что вы можете отказаться от участия в любой момент без каких-либо последствий для вас?
[Если да, начните интервью.]
[Если нет, поблагодарите участника за его / ее время.]

<center>**Ауызша келісім сценарийі**</center>

Кіріспе:

Сәлеметсіз бе. Мен Гульмира Тусупбекова. Мен мұғалімдердің Қазақстандағы инклюзивті білім беруге алғашқы дайындығы: болашақ мұғалімдердің ерекше білім беру қажеттіліктері (ЕБҚ) бар оқушылар туралы және олардың негізгі сыныптарға қосылуы туралы пікір-сенімдері бойынша сұхбат жүргізудемін. Мен бұл жұмысты Назарбаев Университетінің Жоғары білім мектебінде PhD докторантурасына арналған зерттеулердің бір бөлігі ретінде жүргізіп жатырмын.

Зерттеу жұмысының үдерісі:

Мен сізді шамамен 30 минутқа созылатын сұхбатқа қатысуға шақырамын. Сауалнамада сізге ЕБҚ оқушыларын негізгі мектепке қосу туралы сенімдеріңіз және инклюзивті сыныпта жұмыс істеуге қаншалықты дайын екендігіңіз туралы сұрақтар қойылады. Мысалы: инклюзивті білімнің негізгі белгілері қандай? Инклюзивті білім сіз үшін нені білдіреді? ЕБҚ оқушыларын оқытуға қаншалықты сенімдісіз?

Қауіптер:

Сіз жауап бергіңіз келмейтін немесе өзіңізді ыңғайсыз сезінетін сұрақтарға жауап беруіңіздің қажеті жоқ. Алайда, сіз өзіңіздің оқу тәжірибеңіз туралы және сіз кездестірген қиындықтар туралы айтуға ыңғайсыз немесе сенімсіз сезінуіңіз мүмкін. Бұл күйзелісті болдырмау үшін сіздің жауаптарыңыз бағаланбайтынына немесе сынға алынбайтындығына және сіздің жеке басыңыз туралы мәліметтер мен презентацияларда ашылмайтындығына сенімді боласыз. Сізден алынған ақпараттың құпиялылығы мен бей есімі сіздің тобыңыз бен университетіңізге лақап ат қолданылуымен қамтамасыз етіледі. Сонымен қатар, сізден алынған мәліметтер (сұхбаттасулардың транскрипттері) менің жеке компьютерлерімде парольмен қорғалған файлда сақталады және деректердің барлық көшірмелері тек маған қолжетімді жерде жабық сөреде сақталады. Сіз кез-келген уақытта қатысуыңызды тоқтата аласыз.

Артықшылықтары:

Сіз үшін басты пайда болашақ мұғалімдердің біліктілігін арттыру жөніндегі ұсыныстар туралы өз ойларыңыз бен көзқарастарыңызбен бөлісу мүмкіндігі болады. Зерттеуге қатысу саясаткерлерге білім беру реформалары мен болашақ мұғалімдердің білім беру

жүйесіне қатысты қазіргі оқыту практикасына өзгерістер енгізу арқылы шұғыл шара қабылдау үшін қажет болатын сыни зерттеу процесіне қатысуға мүмкіндік береді.

Ерікті қатысу:

Сіздің бұл зерттеуге қатысуыңыз ерікті болып табылады.

Сіз кез-келген уақытта, кез-келген себеппен, қатысуыңызды тоқтата аласыз.

Егер қатысуыңызды тоқтатқыңыз келсе, сізге ешқандай салдары болмайды.

Егер сіз тоқтатуды шешсеңіз, біз сізден осы уақытқа дейін жиналған деректерді қалай өңдеу жөнін сұраймыз.

Бұған осы деректерді сізге қайтару, жою немесе осы уақытқа дейін жиналған деректерді пайдалану іс-әрекеттері кіреді.

Егер сіз кейбір сұрақтарға жауап бергіңіз келмесе, жауап бермеуіңіз болады; бірақ сіз әлі де зерттеуге қатысуыңызды жалғастыра аласыз.

Осы зерттеу жұмысы туралы сұрақтарыңыз болса немесе қосымша ақпарат алғыңыз келсе, Гульмира Тусупбековаға келесі электронды пошта арқылы gulmira.tussupbekova@nu.edu.kz, немесе тел.: 87022924699 бойынша хабарласыңыз.

Бұл зерттеу жұмысы Назарбаев Университетінің Институционалды Зерттеу Этикасы Комитетімен қарастырылып, нақтыланды. Қатысушы ретіндегі сіздің құқықтарыңызға немесе зерттеу жүргізу туралы сұрақтарыңыз болса, сіз келесі мекен-жайға хабарласа аласыз:

Назарбаев Университетінің Институционалды Зерттеу Этикасы Жөніндегі Комитет Электрондық поштасы: resethics@nu.edu.kz

Келісім сұрақтары:

• Сізде сұрақтар бар ма, немесе қосымша мәліметтер алғыңыз келе ме?

• Сіз кез-келген уақытта сіз үшін ешқандай салдары болмай-ақ қатысуыңызды кері қатара алатыныңызды біле отырып, осы зерттеуге қатысуға келісесіз бе?

[Егер келіссе, сұхбатты бастаңыз.]

[Келіспесе, қатысқаны үшін және уақыты үшін алғыс айтыңыз.]

Appendix I. Background of The Expert Committee Members

Expert committee members	Language of the translated research instruments	Degrees they hold	Work experience
Expert 1	Russian	MSc Educational Leadership in Inclusive Education, Kazakhstan	This expert has nine years of experience in the field of education. The expert has been working as a General English and IELTS teacher, a Learning Support teacher, as well as Special needs and support worker.
Expert 2	Russian	MSc Educational Leadership in Secondary Education, Kazakhstan	This expert worked as a teacher of English language from 2012 until 2015, and as a teacher of Global Perspectives between 2015 and 2019 at CIS accredited school. The expert has conducted their own quantitative research on self-directed learning skills and recruited more than 800 participants for the survey. Also, this expert has worked as a teacher assistant in various international schools, including in Kuala Lumpur, Malaysia; Dundee, Scotland; Bali, Indonesia; Santa Barbara, California.
Expert 3	Kazakh	MSc in Comparative Education, UK	This expert has eight years of experience in the field of education. The expert has been working as a General English and IELTS teacher in CIS-accredited schools.
Expert 4	Kazakh	PhD in Mathematics, Kazakhstan	This expert has over 23 years of work experience in the field of education. The expert worked in the field of secondary education between 1993 and 2002. Between 2003 and 2004, the expert worked in the field of vocational education and training. Since 2019 this expert has been working in one of the Kazakhstani Higher Educational Institutions as a lecturer of the Department of "Mathematics, physics, and Informatics".

Appendix J. Feedback Provided by Each Member of The Expert Committee on The Research Instruments

Feedback for the translation of the Questionnaire into Russian language	Expert 1	Expert 2
	● In the scale of assessment, it is preferably to write from the first person: "I accept, I reject" in Russian. Also, it is possible to translate these statements as "I agree and disagree". ● Instead of strongly disagree it is better to say, "I absolutely disagree". ● It is better to say, "students with typical development" instead of "typically developing students". Person + description rather than using adjective for the description. e.g.: *student with autism* rather than *an autist.* "Student with normal development" instead of "normally developing student". ● In the item 28 of the MTAI scale it is advisable to add the word "именно" in order to emphasize the role of the special education teacher. ● In the title of the next scale, it is advised to add: "Second scale" ● In the second question of the TEIP scale, "noisy and student who disrupts lesson; шумного и который прерывает занятие" should be added. ● In several questions, instead of translating directly "make somebody do something" it is better to rewrite sentences from the third person and add "thanks to me – благодаря мне". ● Also, some difficult words were suggested to be replaced by simpler ones: instead of "monopolize" preferably to say, "take most of the time".	● In the background section it is advised to add "Type of the HEI" In order to avoid tautology, it is better to rephrase the instruction for the MTAI scale «приведенных ниже предложений», чтобы не повторяться «предложенных-предложений» ● To rephrase the degrees of agreement in first person ● It is better to state "pupils/учащиеся" instead of "students" in Russian. ● Another suggestion was to restate the phrase "typically developing students" to for example «все остальные учащиеся» or to adapt to KZ context ● In MTAI questionnaire the Item 3, the phrase "children with average abilities" does it also refer to "typically developing students". Otherwise, it sounds like "children with average abilities" also lag behind from the program. ● In item 4, the verb function should be restated in Russian version. ● In item 5, the "inclusion" could be restated as "inclusive education" as some may not understand it. ● In item 8, "regular education teacher" could be replaced as "простым педагогом". ● In item 9, "before inclusive classrooms take place on a large-scale basis" could be restated as «прежде чем инклюзивное образование начнется применяться в широком масштабе» i.e., "inclusive education" rather than "inclusive classroom" ● In item 10, "just to do it" can be restated as "просто начать применять" i.e., "just to start applying it" ● In item 11, question from the expert on whether the potential study participants have ever experienced teaching in inclusive classroom in

		order to be able to answer that question.
		● Item 12 can be totally restated as "Вполне выполнимая задача обучать всех детей - как с ограниченными возможностями так и без - в одном классе"
		● In item 14, the word should be restated as "classroom/ класс"
		● Item 15, "will be isolated by whom?" maybe by "Обычно развивающимися детьми"
		● Item 16, "are likely to" should be added as "вероятнее всего"
		● Item 20 "self-concept" could be added as "лучше развивают представление о самом себе"
		● Item 21 would sound better as "Трудности возникающие при обучении в обычном классе способствуют академическому росту детей с особыми образовательными потребностями"
		● Some changes were added into the sentence grammatical structure in Item 23
		● In item 25 in comparison clarification should be added "чем поведение"
		● TEIP scale, the sentence structure should slightly change in Items 3, 4, 5, 9, and 10. Mostly the statements "make somebody do something" are translated as "я могу сделать так, что…"
		● In Items 11 and 14 the Russian version of "making somebody do something" should be replaced with a softer version.
		● Some minor word changes in Items 16 and 18.

Feedback for the translation of the Questionnaire into Kazakh language	**Expert 3**	**Expert 4**
	● Several amendments were made in the Background section: proper suffixes were added to some words, and the Hard Sciences was changed to "жаратылыстану ғылымдары"	● It was suggested to be consistent with the terminology. In particular, it is better to use "children with special needs" rather "children with disability" throughout the questionnaire.
	● The sentence structure was changed in the MTAI scale instruction.	● Also, clarification of the SEN could be added into the glossary.
	● Degrees of agreement were also altered.	● Hard Sciences should be changed to "жаратылыстану ғылымдары"
	● Item 20 was rephrased (MTAI scale) *"Инклюзивті сыныптардағы ерекше қажеттіліктері бар балалар*	● TEIP scale, Item 2: instead of "Мен шулы немесе тәртіпсіз оқушыны тыныштандыра аламын" it is suggested to phrase as "Мен

өзіндік түсінігін жақсырақ дамытады оқшалуанып оқытатын сыныптарына қарағанда".

- Item 28, a word "нұсқаулық" was replaced by the word "бағыт" (MTAI scale).
- Title of the TEIP scale was slightly amended.
- Statements of degrees of agreement were amended.
- A word "шулы" in Item 2 (TEIP scale) can be omitted.
- Item 4, several clarifying words were added in the translated version (TEIP scale).

оқушыларға сынып ережелерін сақтата аламын"