

**Conceptualizing Giftedness among Students with Disabilities in Special Schools in  
Kazakhstan**

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in  
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Date: 18 November 2024

Dear: Svetlana Kobushko

This letter now confirms that your research project titled:

**Conceptualizing giftedness among students with disabilities in special schools in Kazakhstan**

has been approved by the Graduate School of Education Ethics Committee of Nazarbayev University.

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

Yours sincerely,

Oliver Mutanga (PhD)

**On behalf of:**

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## **Abstract**

### **Conceptualizing Giftedness among Students with Disabilities in Special Schools in Kazakhstan**

The present study explored how teachers in special schools conceptualize giftedness among students with disabilities and examined the state of gifted education for children with disabilities in Kazakhstan. Inclusive and gifted education are two major developmental vectors in Kazakhstani education, though the intersection of giftedness and special educational needs (SEN) is scarcely investigated. Notably, giftedness is not normally viewed as a type of SEN in Kazakhstan. This research aimed to build a conceptual model of gifted disability from the perspectives of teachers in special schools. Moreover, the study explored the challenges and measures related to developing giftedness among students with disabilities. The qualitative research methodology involved semi-structured interviews with teachers from special schools that serve children with intellectual disabilities, speech and hearing impairments, and visual impairments. The findings led to the development of a conceptual model of giftedness that defines and characterizes giftedness among students with disabilities from the perspective of teachers. The conceptual model is a combination of outdated narrow conceptions of giftedness and modern inclusive ones. The study revealed that gifted students with disability face barriers in their learning similar to those encountered by students with other SEN. A range of practices used and recommended to develop giftedness in these students was identified. These measures draw striking resemblance to those used to address other SEN. The central conclusion of the research is that teachers perceive giftedness as a type of special educational need affected by the environment of the child. The resulting conceptual model of giftedness as SEN entails several implications, the most important of which is the potential to shift the theoretical understanding of giftedness in Kazakhstan and internationally. Ultimately, the research suggests that the practices to

accommodate SEN can be used to accommodate gifted learners with disability, thus making gifted education and inclusive education mutually supportive.

*Keywords:* giftedness, disability, inclusive education

## Аңдатпа

Осы зерттеудің мақсаты – мамандандырылған мектептерде жұмыс істейтін мұғалімдердің көзқарасы бойынша мүмкіндігі шектеулі оқушылар арасындағы дарындылықты түсіну және Қазақстандағы мүмкіндігі шектеулі дарынды балаларға арналған білім беру жағдайын талдау болды. Инклюзивті білім беру мен дарынды балаларға арналған білім – Қазақстандағы білім беру жүйесінің екі маңызды даму бағыты болып табылады. Алайда, дарындылық пен ерекше білім беру қажеттіліктерінің (ЕБҚ) тоғысуы әлі де жеткіліксіз зерттелген. Қазақстанда дарындылық ЕБҚ түрі ретінде әдетте қарастырылмайтыны маңызды мәселе болып табылады. Осы зерттеудің мақсаты – мамандандырылған мектеп мұғалімдерінің көзқарасы тұрғысынан «мүмкіндігі шектеулі дарындылықтың» тұжырымдамалық моделін жасау болды. Сонымен қатар, зерттеу барысында мүмкіндігі шектеулі балалардың дарындылығын дамытуға байланысты кездесетін мәселелер мен қолданатын шаралар қарастырылды. Зерттеу мақсатына жету үшін сапалы зерттеу әдіснамасы таңдалып, дарындылық дамуында, сөйлеу және есту қабілетінде, сондай-ақ көру қабілетінде бұзылыстары бар балалармен жұмыс істейтін мамандандырылған мектеп мұғалімдерімен жартылай құрылымдалған сұхбаттар жүргізілді. Зерттеу нәтижесінде мұғалімдердің көзқарасы негізінде мүмкіндігі шектеулі оқушылардың дарындылығын анықтайтын және сипаттайтын тұжырымдамалық модель әзірленді. Бұл концептуалды модель дарындылықтың ескі тар анықтамаларын және заманауи инклюзивті ұғымдарды біріктіреді. Зерттеу мүмкіндігі шектеулі дарынды оқушылар басқа АБҚ бар оқушыларға тап болатын кедергілерге ұқсас оқыту қиындықтарына тап болатынын анықтады. Бұл оқушыларда дарындылықты дамыту үшін қолданылатын және ұсынылатын тәжірибелердің ауқымы анықталды. Бұл шаралар басқа ЕБҚ бар оқушыларды қолдау үшін қолданылатын әдістермен айтарлықтай ұқсас. Зерттеудің

негізгі қорытындысы – мұғалімдер дарындылықты баланың ортасына тәуелді ерекше білім беру қажеттілігі ретінде қабылдайды. Дарындылықтың ЕБҚ ретіндегі әзірленген тұжырымдамалық моделі дарындылықты теориялық тұрғыдан түсінуде, тек Қазақстанда ғана емес, халықаралық деңгейде де, өзгеріс жасау әлеуетіне ие. Ақырында, бұл зерттеу ЕБҚ бар оқушыларды қолдауға арналған тәжірибелерді мүмкіндігі шектеулі дарынды оқушыларға бейімдеуге болатынын көрсетеді. Осылайша, инклюзивті және дарынды білім беру өзара пайдалы бола алады.

*Кілт сөздері:* дарындылық, шеткеулі мүмкіндіктер, инклюзивті білім беру

## Аннотация

Целью данного исследования являлась концептуализация одарённости среди учащихся с ограниченными возможностями учителей специальных школ, а также анализ состояния образования для одарённых детей с ограниченными возможностями в Казахстане. Инклюзивное образование и образование для одарённых детей являются двумя важными направлениями развития казахстанской системы образования, однако пересечение одарённости и особых образовательных потребностей (ООП) исследованы недостаточно. Важно отметить, что в Казахстане одарённость обычно не рассматривается как разновидность ООП. Целью данного исследования стало построение концептуальной модели одарённости, совмещенной с ограниченными возможностями, с точки зрения учителей специальных школ. Кроме того, в исследовании рассматривались проблемы и практики, связанные с развитием одарённости среди детей в специальных школах. Для достижения цели исследования была выбрана качественная методология и проведены полуструктурированные интервью с учителями специальных школ, работающих с детьми с интеллектуальными нарушениями, нарушениями речи и слуха, а также нарушениями зрения. Результаты исследования позволили разработать концептуальную модель одарённости, которая определяет и описывает одарённость у учащихся с ограниченными возможностями с точки зрения учителей. Эта концептуальная модель представляет собой сочетание устаревших узких представлений об одарённости и современных инклюзивных подходов. Было выявлено, что одарённые ученики с ограниченными возможностями сталкиваются с барьерами в обучении, аналогичными тем, с которыми сталкиваются другие дети с ООП. Были выявлены различные используемые и рекомендуемые практики для развития одарённости у таких учеников. Эти меры параллельны тем, что применяются для поддержки учащихся с другими ООП. Ключевым выводом

исследования является то, что учителя рассматривают одарённость как особую образовательную потребность, на которую значительное влияние оказывает окружающая среда ребёнка. Разработанная концептуальная модель одарённости как ООП имеет потенциал для изменения теоретического понимания одарённости как в Казахстане, так и за его пределами.. В конечном счёте, исследование показывает, что практики, применяемые для поддержки учащихся с ООП, могут быть адаптированы для работы с одарёнными детьми с ограниченными возможностями, что делает инклюзивное и одарённое образование взаимополезными.

*Ключевые слова:* одарённость, ограниченные возможности, инклюзивное образование

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## **Chapter 1: Introduction**

### **Background Information and Context**

Gifted education (GE) has long been around and is an important part of many education systems worldwide (Pfeiffer, 2015). Despite having prominent importance, gifted students face various challenges. Giftedness was previously viewed narrowly, focusing on a student's psychometric capabilities, overlooking talents, creativity, etc. (Dai & Chen, 2013). To this day, a lot of gifted students are misidentified and do not receive proper support, raising concerns of equity in access to GE (Sternberg, 2024). Among the most disadvantaged gifted learners are twice-exceptional (2e) students, those who are gifted and have a disability (Lovett & Lewandowski, 2006), leading to double barriers in education faced by such students. As a response to this and other challenges in GE, more inclusive conceptualizations of giftedness appeared. One of such paradigms is the differentiation paradigm, which views giftedness as a special educational need (SEN) (Dai & Chen, 2013). Recognizing giftedness as a SEN on par with disability, will increase inclusiveness and serve the interests of both 2e and gifted learners (Lo et al., 2022).

In Kazakhstan, the education system has taken a path toward the values of humanization. In articles 27 and 30 of the Constitution of the Republic of Kazakhstan (1995), it is guaranteed that childhood is protected by the state and all citizens shall have free access to secondary education. The subsequent Law on Education from 2007 has enforced this intention by stating in Article 3 that education shall be accessible for “all levels for population in recognition of mentality, psychophysiological and individual peculiarities of each person” and the basic principle of education is “equality of rights of all to obtain the quality education” (Law on Education of the Republic of Kazakhstan, 2007, art.3).

At the same time, Kazakhstan places a great emphasis on gifted education. Article 3 of the Law on Education asserts that one of the basic principles of the state policy in the field of education shall be the stimulation of education of personality and development of giftedness (Law on Education of the Republic of Kazakhstan, 2007, art.3). The establishment of such institutions as the Kazakh-Turkish Lyceums, Nazarbayev Intellectual Schools, as well as the practical centre ‘Daryn’ was aligned with the state’s commitment to gifted education in the strategy for educational development (Yakavets, 2014a).

These two foci of Kazakhstani education have been a subject of rigorous research, and pursuing the goals of creating inclusive education and education for gifted children have become policymakers’ everyday agenda (MoESRK, 2019). While these pursuits share a common goal – to provide Kazakhstani children with quality education, the issues of gifted education for children with disabilities have not been addressed yet.

## **Research problem, purpose, and questions**

### ***Research problem***

The Law on Education (Law on Education of the Republic of Kazakhstan, 2007, art.8), highlights the importance of providing special provisions for people with special educational needs, including people with disabilities. The majority of children with disabilities study in special schools for children with disabilities (Passeka & Somerton, 2024). Despite the state’s commitment to develop inclusive education, so that children with disabilities could study among other students without special educational needs and/or disabilities (SEND), inclusion in schools is still largely underdeveloped (Makoelle et al., 2023). The status of 2e students is also not secured in Kazakhstan’s Law and educational program, while research shows that such students exist (Shaimakhanova, 2016, Yermakhanova, 2019).

In Kazakhstan, gifted education is exclusionary, when gifted children study in special schools with strict admission policies. The history of GE in Kazakhstan is rooted in the Soviet tradition of giftedness (Yakavets, 2014b). Moreover, as can be seen from the entrance tests to identify gifted students, the aforementioned schools hold a narrow view of giftedness, focused on their psychometric capabilities like mathematical and verbal aptitude (“Bilim-Innovation” IPF, 2022, “NIS” AEO, n.d.a). However, research shows that even in these special schools for gifted children, there are students with SEND (Yermakhanova, 2019). Another issue is that giftedness is not considered an SEND in Kazakhstan’s legislation (Law on Education of the Republic of Kazakhstan, 2007, art.3).

Developing individuals’ potential and ensuring equality in education are some of the primary goals of Kazakhstani education. However, the state’s vision does not coincide with the current state of affairs, as, in contrast to the pronounced values of inclusion, there are still special schools for children with SEND, and, contrary to the intention to develop giftedness, gifted education is exclusionary and inaccessible to Kazakhstani people’s differences. One of the reasons for these issues is conceptual rigidity of the views toward special, inclusive, and gifted education in Kazakhstan.

### ***Research purpose***

This research aims to conceptualize giftedness among students with disabilities, also known as 2e learners, from the perspectives of teachers in special schools for children with disabilities. Moreover, the purpose of the research is also to explore the state of gifted special education in one city in Kazakhstan, investigating how giftedness in special schools is identified and fostered, what are the challenges and the solutions to the challenges are in terms of educating gifted children with disability.

***Research questions***

1. How do teachers in special schools conceptualize giftedness?
2. How do special schools develop the gifts and talents of students with disabilities?
3. What challenges do special schools face in identifying and fostering giftedness in students with disabilities?
4. What are the recommended strategies to identify and foster giftedness in students with disabilities?
5. What are the implications of the findings for practice, policy and research to enhancing inclusive education in Kazakhstan?

**Significance, benefits, audience**

This research is important for theoretical and practical understanding of gifted, special, and inclusive education in Kazakhstan. It aimed at shifting the conceptual understanding of giftedness toward a more inclusive one, as well as defining giftedness as a special educational need. Moreover, this study provides important information on the status quo in educating twice-exceptional learners studying at special schools for children with disabilities.

The results of the study primarily address the research community in Kazakhstan, appealing to investigate GE from a critical perspective of special educational needs. Apart from that, the findings can inform policy-makers in building a model of inclusive education, inviting them to consider the issues of gifted students with disabilities. Finally, the research findings of the strategies to identify and foster giftedness among 2e learners can be used by teachers to navigate their practice under the conditions of the lack of educational resources on the matter.

**Outline of the chapters**

The following chapter presents the literature review on the topic, the methodology informing the present research, the findings and discussion chapters, as well as concluding chapter. The literature review sets the research context for this study by giving a background on the international and local research on gifted education, disability, and twice-exceptionality, as well as defining the conceptual framework. The methodology chapter describes in detail the methods that were adopted in this study – from the research design, data collection methods and the analysis methods. Apart from that, the methodology chapter discusses the ethical considerations in the present research. The findings and discussion chapters present the results of the grounded theory analysis of the interviews conducted with the stakeholders in special schools. Finally, the conclusion chapter presents the summary of the results of the study and sets the directions for further research.

## **Chapter 2: Literature Review**

In the following sections, the literature review is presented. First, the conception of giftedness is reviewed by looking at three examples of models of giftedness, a systematic paradigm overview, as well as the implications of the conception of giftedness and the conception of giftedness that Kazakhstan adheres to. Next, the conception of special educational needs is reviewed, with an emphasis on disability: first, the international and Kazakhstani definitions of SEN are overviewed; next, the conceptions of giftedness as SEN are discussed; the social model of disability is introduced and the implications of this part of the literature review are presented. The following part of the literature review discusses the phenomenon of twice-exceptionality and the challenges of twice-exceptional learners, with the implications of the review discussed. Finally, the conceptual framework is presented.

Since the phenomena of interest are not well-researched in Kazakhstan, the structure of the literature review includes the theoretical literature, followed by the international empirical findings and data from Kazakhstan. The literature review process involved searching the relevant studies in the Google Scholar and NU Library websites using the keywords like “giftedness conceptions”, “SEN”, “twice-exceptionality”, and their different combinations. Around 50 sources were reviewed and synthesized.

### **Gifted Education**

#### ***The Goal of Gifted Education***

To answer the research questions posed in this study, it is important to understand the ultimate goal of gifted education. According to Winner (2000), the first goal of GE is utilitarian in nature, as it views gifted children as human capital, whom we should “cultivate [...] so they can become our future leaders and innovators” (Winner, 2000,

p.166). Another goal of GE is that it serves the intrinsic need of the gifted individuals for self-actualization through achieving cognitive and emotional eminence (Winner, 2000). Thus, GE is supposed to bring benefits both to the state and the individuals. Winner (2000) also finds a gap in the goals of gifted education internationally, that is of moral value of service. According to her, the gifted have to return to society the benefits that were spared for them.

Kazakhstani gifted education programs align with the international trend. The NIS vision statement echoes the utilitarian approach by emphasizing that the NIS graduates are expected to “contribute to the socio-economic development of Kazakhstan” (“NIS” AEO, 2018, p. 13). Moreover, the NIS project expects its graduates to “possess deep academic knowledge and universal skills, [and] speak several languages”, thus aligning with the second goal of gifted education delineated by Winner (2000) (“NIS” AEO, 2018, p. 13). Similarly, another major initiative in GE, the Bilim Innovation Lyceum Foundation, aims to “contribute to the development of the country’s human capital by creating conditions for the development of a competitive and harmoniously developed personality” (“Bilim-Innovation” IPF, n.d.). Both projects’ missions reflect Winner’s (2000) appeal to patriotism and the duty before motherland.

### ***Three Examples of the Conceptions of Giftedness***

There is a wide variety of definitions of giftedness, all of which depend on many factors affecting the choice of who the gifted individuals are, what characteristics they have, and how many of them there are in a population. These factors usually constitute the cultural context of the scholars of the definition of giftedness, in other words, this phenomenon is subject to cultural relativism (Freeman, 2005). In the following sections, three examples of different conceptions of giftedness are presented.

**The Mathematical and/or Verbal Talent:** One of the most popular models of giftedness is the MVT:D4 model, which stands for Mathematical and/or Verbal Talent: Discovery, Description, Development, and Dissemination (Brody & Stanley, 2005). This model aims at identifying children showing exceptional abilities in mathematical and verbal skills, and to help them develop their abilities. The scholars studying this model lean on its validity and reliability, guaranteed by the John Hopkins University researchers. For instance, Brody and Stanley (2005, p.21) write:

All of SMPY's [the predecessor of the MVT:D4 model] work was very much research-based, as the principal investigators sought validation of their hypotheses and evaluated the effectiveness of various intervention strategies. Consequently, there exists a large body of published empirical evidence in support of this approach to talent identification and development, something many theories lack.

Thus, the MVT:D4 is widely popular around the world.

**The Child-Responsive Model of Giftedness:** While the MVT:D4 model stands out from other definitions of giftedness with its long history of research-based practice, other models have an advantage of being more inclusive. For instance, the child-responsive model of giftedness recognizes two general areas of excellence where gifted students can reveal themselves – the academic activism and problem-solving innovations. According to this paradigm, some gifted students fall into the realm of being excellent students in school subjects, possess high intellectual ability, and demonstrate other advanced cognitive aptitudes, while others excel in being creative problem-solvers, not necessarily having good academic achievement, but bringing novelty into the subject they are learning. In contrast to the MVT:D4 model, the child-responsive model does not set

limits for the gifted students' in terms of the domains of giftedness, i.e. it recognizes gifts in different subjects and abilities (Callahan & Miller, 2005).

**The Three-Ring Conception of Giftedness:** A prominent researcher and theorist in the field of gifted education, Joseph Renzulli, supports the notion shared by the scholars of the child-responsive model of giftedness, but he refers to the academic activism type of giftedness as the “schoolhouse giftedness”, and the problem-solving innovation type of giftedness – as the “creative-productive giftedness”. However, he goes further to advance the creative-productive giftedness by proposing the three-ring conception of giftedness that takes into account the interaction of the three clusters of traits – above average ability, task commitment, and creativity (Renzulli, 2005). An important shift that this model makes in understanding giftedness is emphasizing the interaction of all these traits, rather than segregating the gifted individuals into two strict types.

Apart from these three examples, there are numerous other conceptions of giftedness, which highlights the fact that they have to be systematized. Dai & Chen (2013) epitomize the conceptions of giftedness into three major paradigms. According to them, there is a gifted child paradigm, that views giftedness as an inborn human quality, and it can be revealed using standardized metrics, like general intelligence tests, achievement tests, and rating scales. The basis of the talent development paradigm is broader in terms of focusing of the psychological and social factors affecting the general potential in a gifted person. It considers giftedness as an array of cognitive and non-cognitive capabilities and potentialities. Lastly, the differentiation paradigm is different from the other two in assuming that giftedness is a situational educational need that appears when the curriculum does not match the zone of proximal development of the individual. Thus, under this paradigm, giftedness is rather an emergent need, than a permanent quality (Dai & Chen, 2013).

### *The Conceptualization of Giftedness in Kazakhstan*

The development of education for gifted children in Kazakhstan is driven by a pursuit to raise human capital, which is “crucial for the development of a strong nation state and the establishment of Kazakh national identity” (Yakavets, 2014b, p.514). Under this developmental vector, several projects have been implemented in the independent Kazakhstan.

Among the pioneers in gifted education are the Kazakh-Turkish Lyceums (KTL), now known as the Bilim Innovation Lyceums (BIL). These schools cater for children gifted in math, science, and languages (English, Kazakh, Russian, and Turkish) (Yakavets, 2014b). The admission process involves the candidates taking a two-step selective exam in math and logic, and reading literacy (“Bilim-Innovation” IPF, 2022). In other words, it is evident that the conceptions of giftedness BIL follow is the aforementioned MVT:D<sup>4</sup> model, where only mathematical and verbal talents are considered. The BIL has consistently shown positive results, earning medals on the international Olympiads and graduating Kazakhstan’s political leadership (“Bilim-Innovation” IPF, n.d.).

A bigger effort to develop giftedness in Kazakhstan was made with the establishment of the Republican Research and Practical Center, also known as Daryn. This organization is aimed at “identifying, selecting, supporting, developing, and teaching talented children” (Yakavets, 2014b, p. 521). According to Yakavets (2014b), the conceptualization of giftedness that the institutions under this organization adopt is more inclusive of various domains, like sciences, humanities, sports, music, and art. Interestingly, a method of identifying gifted students used by Daryn relies on the children’s motivation and willingness to learn more. Daryn is an umbrella organization

uniting various schools for gifted children around Kazakhstan, the aforementioned BIL around them.

However, apart from the schools for the children gifted in maths, sciences, and languages, there are the schools that cater for musical talent, sport talent, artistic talent, and even those that provide enrichment curriculum for information technologies (“Daryn” RSPC, n.d.). Moreover, the Daryn center is also the organizer of nation-wide Olympiads that are accessible to all students, both from the schools for gifted students and mainstream schools. Olympiads remain a big part of education for gifted in Kazakhstan, yet this is a remnant of the Soviet educational tradition (Yakavets, 2014b).

The most widescale and innovative project in gifted education in Kazakhstan is the Autonomous Education Organization “Nazarbayev Intellectual Schools” (NIS), named after the first President of the Republic of Kazakhstan. The establishment of these 22 schools around the major cities of the country followed a critical, novel and one-of-a-kind approach that combines the best international practice. The NIS curriculum, similarly to Daryn and BIL schools, focuses primarily on sciences and languages (Yakavets, 2014b), and NIS conducts a competitive selection procedure to admit the students. This procedure includes the candidates taking a test that consists of tasks in several subjects: math, algebra, natural science, and three languages: Kazakh, Russian, and English (“NIS” AEO, n.d.a). It can be inferred that primarily, the conceptualization of giftedness that NIS adheres to is the MVT:D<sup>4</sup> model as well.

However, one of the aspects of novelty that differentiates NIS from other schools for gifted children in Kazakhstan is a large resource base that is directed to creating an environment fostering a balanced and versatile development of NIS students. This is manifested both in the curriculum: “In the new integrated curriculum, great emphasis is

placed on the development of creativity as well as critical thinking, problem-solving and inquiry skills” (Yakavets, 2014b, p. 525), and in the extracurricular field – NIS places a great importance on pastoral work, which targets the patriotic upbringing, moral upbringing, physical and psychological development, artistic-aesthetic development, leadership qualities, etc. (“NIS” AEO, n.d.b). In other words, it is evident that NIS’s approach also falls on the talent development paradigm that focuses on developing the students’ potentialities by providing them with a fostering environment (Dai & Chen, 2013).

To summarize, the three major projects in identifying and fostering gifted education in Kazakhstan all follow the gifted child paradigm by assuming that giftedness lies within an individual and what is needed is to find these gifted individuals among people and put them in separate schools with special provision. More specifically, within the gifted child paradigm, most schools for gifted children in Kazakhstan adhere to the MVT:D<sup>4</sup> model of giftedness, primarily focusing on the students’ high abilities in Math and languages. Apart from NIS’s attempt to develop other talents of gifted students like artistic and physical talents and Daryn’s tradition of Olympiads, where every child demonstrating high aptitude in a subject can participate with extracurricular support from the teachers, no other programs for gifted students exist in Kazakhstan, like enrichment programs, pull-out programs, etc. This emphasizes the narrow view of giftedness in Kazakhstan and the exclusiveness of gifted education.

### ***Implications***

Currently, gifted education in Kazakhstan is limited to the gifted child paradigm and exclusionary, segregating practices, where gifted children are identified and put into special schools. Only a narrow definition of giftedness is adhered to, being high aptitude in

certain subjects. Thus, the access to gifted education is severely limited for children that do not conform to the definition. This raises the issues of equity in gifted education, that research is starting to confirm empirically (Daulet, 2019).

## **Special Educational Needs**

### *The Definition of SEN*

While the definitions of SEN vary, the Salamanca Statement provides the one that is built on the consensus of the representatives of 92 countries reached on the 1994 World Conference on Special Needs Education in Spain: “the term ‘special educational needs’ refers to all those children and youth whose needs arise from disabilities or learning difficulties” (UNESCO, 1994, p. 6). Currently, the two main categories of SEN include students with disability and disadvantaged students (Norwich, 2014).

In Kazakhstan, the status of people with SEND is fixed in legislative documents. The Law on Education of the Republic of Kazakhstan defines individuals (children) with special educational needs and disabilities as the ones “who have permanent or temporary needs for special conditions to obtain an appropriate level of education and additional education” (Law on Education of the Republic of Kazakhstan, 2007, art.1, 19-2). It is apparent that this definition is less precise than the one followed by UNESCO.

Among other factors causing special education needs are being blind or partially sighted, being deaf or partially hearing, having emotional and behavioral difficulties, etc. (OECD, 2000). These are only a limited set of various conditions that students with SEND may have. Additionally, some categories are umbrella terms for various human conditions. For example, the “learning disabilities” category includes Attention-Deficit/Hyperactivity Disorder, dyslexia, dyscalculia, language-learning impairments, and other (Swanson et al., 2013).

In Kazakhstan, the factors that cause children special educational needs include physical, psychological, and behavioral impairments, as well as children, whose special educational needs are the result of social-psychological factors impeding their inclusion in the educational process, like children from dysfunctional families, migrants, refugees, and children with disabilities (MoESRK, 2022).

Despite the legislative security, people with SEND in Kazakhstan still face major barriers in getting access to quality education. Among them lack of qualified school personnel, low awareness of parents and educators, rigid curriculum, and social stigma (Makoelle et al., 2023; Allan & Omarova, 2022; Makoelle, 2020). Recently, due to the closure of schools during the COVID-19 pandemic, students with special educational needs were among the students whose education suffered severe drawbacks (“IAC” JSC, 2021).

### ***Disability as SEN***

It is notable that despite the variance in the definitions of SEN, impairment is a condition undoubtedly impeding education: “Children with disabilities are particularly at risk of exclusion from education” (UNESCO, 2020, p. 10). The severity of the problems impairment causes is conditioned by its abundance, as according to WHO (2021), approximately 15 percent of the world’s population is affected by a temporary or chronic disability. Not only that, but also disability is often the cause and the reason of poverty, perpetuating the cycle of injustice (WHO, 2011).

In many countries with a similar education system as Kazakhstan’s, children with disabilities were educated in special institutions, where they were segregated from their peers on the basis of their impairment. It is still the case in many countries throughout the world today, and this leads to further segregation of persons with disabilities (WHO, 2011,

p.205). Thus, people with disabilities are some of the most disadvantaged learners, who need a special effort from the educational community to provide them with social justice (UNESCO, 1994, p.6). Hence the focus of the proposed research – as disabled people experience the harshest challenges it is appropriate to prioritize their welfare among other groups.

According to the Social Code of the Republic of Kazakhstan (Parliament of the Republic of Kazakhstan, 2023), “a person with a disability is a person who has a health disorder with a persistent disorder of body functions caused by diseases, injuries (wounds, trauma, contusions), their consequences, disorders, which leads to a limitation of life activities and the need for his social protection” (art.1, 1-106). The type of disability and category is defined by the medical-social expertise. Persons with disabilities are entitled to social protection.

According to the Minister of Labor and Social Protection of the Population Svetlana Zhakupova, there are more than 725 thousand people with disabilities living in Kazakhstan, 15,1% of whom are children (Official information resource of the Prime Minister of the Republic of Kazakhstan, 2024). Persons with disabilities in Kazakhstan are entitled to the rights for habilitation, rehabilitation, and social integration.

At the same time, the state of people with disabilities in Kazakhstan is still hampered by the adherence to the medical model of disability that views disability as an intrinsic defect of an individual that needs correction and treatment (Rollan & Somerton, 2021). Scholars highlight the problematic nature of the Pedagogical Medical-Psychological Commission (PMPC) in defining whether a child with disabilities is educable. On the results of this commission, children can be placed in special schools, remedial classes within mainstream schools, or home-schooled (Allan & Omarova, 2022).

Moreover, the efforts to make education inclusive are not successful: conceptual rigidity, institutional barriers, lack of experience, absence of comprehensive policies, and financial constraints impede the implementation of inclusive education, despite the ambitious goal to achieve 100% of inclusive secondary schools by 2025 (Makoelle & Burmistrova, 2021; Official information resource of the Prime Minister of the Republic of Kazakhstan, 2020).

### *Giftedness as SEN*

A crucial question arises at this point of the literature review – where does giftedness lie in the conceptualization of SEN. Currently, giftedness is only considered an SEN by a few countries, like Turkey and Spain (OECD, 2000). However, the OECD reports that a shift toward a more inclusive definition of SEN is noticed across different countries. This approach includes not only students with disabilities, but also the ones with learning difficulties, disadvantaged background, and most importantly, giftedness. In light of this lack of consistency, OECD offers a more practical definition of SEND: “Students with disabilities, learning or behavior difficulties or disadvantages, represent a large and heterogeneous set of individuals who have in common the likelihood that they will be relatively unsuccessful in school unless additional effort is made to help them to access the curriculum and learn effectively” (OECD, 2000, p.101).

The wording used by OECD (2000) highlights the possibility for finding a common ground between disabled and gifted students – that they need additional effort to succeed at school. It is widely known that unaddressed learning needs of gifted students can lead them to academic failure, as they too have special needs in education (Barkova, 2019; Winsor & Mueller, 2024). Thus, a more inclusive way of looking at SEN allows the present study to make giftedness and disability meet within one conceptual framework.

This can also be additionally supported by the commitment the signatories of the Salamanca Statement have expressed:

The guiding principle that informs this Framework is that schools should accommodate all children regardless of their physical, intellectual, social, emotional, linguistic or other conditions. This should include disabled and gifted children, street and working children, children from remote or nomadic populations, children from linguistic, ethnic or cultural minorities and children from other disadvantaged or marginalized areas or group” (UNESCO, 1994, p.6).

Thus, in the present study, both giftedness and disability are considered special educational needs.

### ***Social Model of Disability***

As a priority in special needs education, disability as a concept needs to be reviewed as well. The United Nations Convention on the Rights of Persons with Disabilities provides an exhaustive definition, stating that people with disabilities are those who have “long-term physical, mental, intellectual or sensory impairments which in interaction with various barriers may hinder their full and effective participation in society on an equal basis with others” (UN, 2006, art.1). However, despite the fact that this definition raises an issue of unfair barriers people with disabilities have, disability is still perceived differently by different people.

Similarly with giftedness, there are many models of disability. Retief and Letšosa (2018) have overviewed the most common models of disability. Among them one of the most exclusive and discriminatory models is the moral and/or religious model of disability, which gathers the beliefs that disability is a punishment from God for the sins committed by people with disability (Retief & Letšosa, 2018). Another widely accepted model of

disability is the medical one, where disability is viewed as a defect within a person, an incurable disease (Retief & Letšosa, 2018, pp. 2-3). This model of disability contributed to a limited recognition of the rights of people with disabilities, perpetuating discrimination against them (Della Fina et al., 2017, pp. 4-6).

A positive change toward a more inclusive conceptualization of disability happened with the rise of the social model of disability. This model emphasizes that disability is a socially constructed phenomenon, and it is the society that disables people and not their impairment (Barnes, Mercer & Shakespeare, 2010, as cited in Retief & Letšosa, 2018, p.3). The late Mike Oliver, a prominent disability studies scholar and a disabled person, appeals to the society to critically think about how “the physical and social environment impose limitations upon certain categories of people” (Oliver, 1981, p.28, as cited in Retief & Letšosa, 2018, p.3). This shift in thinking about disability brought immense benefit to the disabled community, propelling the needed changes in paradigm (UNESCO, 2020, p.12). Hence the aforementioned definition of disability by the UNCRPD with an emphasis on the interaction of certain people with barriers that disable them (UN, 2006, art.1).

### ***The Problematic Nature of the SEN Concept***

Another essential comment needs to be made about the modern conceptualization of SEN, namely, the problematic nature of defining and categorizing SEN, addressed by Norwich (2014). She explains that the need for categorizing special educational needs comes from a utilitarian reasoning in order to allocate additional resources purposefully, thus leading to a dichotomization of learners into the ones worthy of these additional resources and the ones who are not. This problem echoes the one mentioned in the part of this chapter about gifted education and its contested origins. Both issues of conceptualizing

SEN and giftedness highlight the dilemma of difference. On the one hand, recognizing those who most need special resources allows to address their hardships, but on the other hand, this categorization and labelling draws a blurry line between the ones who fall into the category and those who don't, thus deciding their right for additional aid (Norwich, 2008, 2014; Borland, 2005).

## **Twice-Exceptionality**

### ***The Definition of Twice-Exceptionality***

The purpose of the proposed research is to investigate the intersection of the previously reviewed conceptions of giftedness and disability. The phenomenon that unites them is twice-exceptionality.

Twice-exceptional learners are the students who manifest disabilities and giftedness at the same time. They may demonstrate high potential in academic achievement or creativity, possess visual, spatial, or musical talent, all while suffering from impairments such as speech and language disorders, physical and learning disabilities, emotional/behavioral disabilities. As Reis et al. (2014) have put it, “their gifts may mask their disabilities and their disabilities may mask their gifts” (p.222). Examples of famous people who are twice-exceptional include Stephen Hawking, Hellen Keller, Nikola Tesla, Albert Einstein, and others (NEA, 2006).

The research in twice exceptionality is novel, though it was long before known that disability and giftedness can co-exist within one individual (Foley-Nicpon et al., 2013; Reis et al., 2014). In Kazakhstan, the status of twice-exceptional learners is not well known.

### *The Challenges of Twice-Exceptional Learners*

There are many challenges associated with identifying and catering for twice-exceptional students. Educators may not be aware of the phenomenon and how to address the needs of such students, though they are the main gatekeepers of quality education for these learners (Foley-Nicpon et al., 2013; Assouline & Whiteman, 2011). Not only that, but teachers play a major role in nominating students for gifted services, so any bias toward the students may result in them not receiving the education they can potentially get (Hernández-Torrano & Tursunbayeva, 2016). Misdiagnosing disability, too, can deprive gifted students from the education developing their giftedness (Shaimakhanova, 2014; Yermakhanova, 2019).

The tests to identify gifted students can easily miss the ones who have learning disabilities, like dyslexia (Foley-Nicpon, 2013). Some learning disabilities, vice versa, increase certain characteristics of gifted learners, like ADHD, which is correlated with higher creativity in gifted students (Fugate et al., 2013). Since twice-exceptional learners face double barriers in education, they are exposed to underachievement and difficulties in social and emotional integration (Reis et al., 2014; Manabayeva, 2020). This is complemented by research from Kazakhstan that revealed the challenges in being identified faced by a gifted student with ADHD (Shaimakhanova, 2014).

Like other learners having special educational needs, twice-exceptional learners require individualized programs and services that accommodate to the needs of both exceptionalities (NEA, 2006). The specialized educational programs should be strengths-focused and employ compensatory strategies (Reis et al., 2014). However, not always teachers have the proper knowledge and experience to provide individualized teaching for twice-exceptional students. Manabayeva (2020) has investigated the reasons for gifted

children's underachievement, one of which was revealed to be learning disabilities. According to the findings by Shaimakhanova (2014), despite being aware of the concept of twice-exceptionality, teachers demonstrated the absence of specialized teaching to the gifted child with ADHD. She highlights the importance of implementing inclusive education strategies to foster the twice-exceptional students' potential.

On a positive note, current research from Kazakhstan is not uniform and also indicates that some factors, like gender, socio-economic status, and ethnicity, do not affect the teachers' opinion of their gifted students (Hernández-Torrano & Tursunbayeva, 2016). This may be a positive example of teachers' fairness that can extrapolate not only to these factors, but disability as well.

### *Strategies to Accommodate the Needs of Twice-Exceptional Learners*

Internationally, the strategies to foster giftedness in twice-exceptional learners and deliver quality education for them are based on the notions of differentiated approach to instruction. For example, for gifted students who find it hard to verbally express their understanding of mathematics, alternative tasks should be assigned that allow the student to show their problem-solving skills (Van Boxtel, 2016). Another strategy is using the twice-exceptional learners' strengths to overcome their weaknesses, fulfilling their learning potential, using compensatory strategies, like computer technologies to assist them in learning (Willard-Holt et al., 2013). Winebrenner (2003) encourages teachers to teach the way the twice-exceptional students learn, i.e. adjusting to the personal learning styles of the students. In sum, all these strategies focus on the twice-exceptional students' individual needs and strengths and deliver quality education via differentiation.

While research on twice-exceptionality in Kazakhstan is scarce, there is a common theme transfusing the studies that echoes the international perspective – the need for

differentiated instruction as a strategy to accommodate to the needs of twice-exceptional students, gifted students, and students with disabilities. The researchers in these fields all refer to differentiation tools like prolonged time to complete an assignment (Yermakhanova, 2019), implementing alternative lightweight curriculum in the subjects that are difficult for the student (Manabayeva, 2020), and adaptive learning (Mukhamadiyeva & Hernández-Torrano, 2024).

### **The Conceptual Framework**

The difficulty in building the conceptual framework for the present study lies in the variability and contested nature of the definitions of giftedness, disability, and special educational needs. However, as the earlier sub-sections of this literature review have shown, an inclusive approach to defining the phenomena of interest resolves this challenge. By taking an inclusive perspective on defining giftedness, a much greater variability of the characteristics that can make a learner eligible for belonging to the group appears, allowing for non-conventionally gifted but equally exceptional individual to be considered gifted. An inclusive view on disability drives the rationale of this piece of research, as the social model of disability serves as an inspiration for the study. Similarly, an inclusive view on special educational needs allows giftedness to be referred to as a special need in education, and gifted learners worthy of additional resources, alongside disabled and twice-exceptional learners.

Therefore, the conceptual framework of this study can be visualized with the following scheme:



**Figure 1**

*The Conceptual Framework: the Overlap of the Concepts of Giftedness, Disability, and Special Educational Needs*

*Note.* 1 – the concept of special educational needs; 2 – special educational needs like low socio-economic status, being an orphan, etc.; 3 – the concept of disabilities; 4 – the narrow definition of giftedness; 5 – the inclusive definition of giftedness; 6 – twice-exceptionality

This figure represents the conceptual overlap which is the focus of the present study. The big pill shape [1] represents a cloud of special educational needs, uniting disabilities, giftedness, and other special educational needs [2] that are out of scope of this study. The white circle [3] represents disabilities, which are special educational needs. The two circles one inside each other [4] & [5] represent the conception of giftedness, which is included as a special educational need. The small circle represents the narrow view of giftedness [4] and the bigger circle represents the inclusive conception of giftedness [5]. The overlap between the conceptions of disability and inclusive conception of giftedness is the phenomenon of twice-exceptionality [6], which is the focus of the present paper. It is important to note that there is an intersection of inclusive, not narrow view of giftedness with disability, which underscores the rationale of the research.

### **Chapter 3: Methodology**

In this chapter, the research methodology is described and explained. The choice of the research design and research methods is justified in accordance with the research questions. The sampling strategy and the choice of the research site are explained. Next, the research data collection and analysis methods are described and justified. Finally, the ethics of the research is considered in the last part of this chapter.

#### **Philosophical Positioning**

The philosophical positioning this study pursues is a postmodernist research framework. It assumes that there is no single definition of truth, but rather that the combination of each individual's truths is the closest description of the reality (Merriam & Tisdell, 2015). Since the purpose of the present study was to understand the conceptions of giftedness and perceptions of the state of gifted education shared by the teachers at special schools, postmodernist philosophy is most helpful to divorce the study from the existing theories of giftedness, thus not imposing them on the subjects of the research.

Not only does the postmodernist philosophical stance reveal the multiplicity of truths, but also it aims at deconstructing the reality, reject dichotomies, and question the very existence of the phenomenon of interest (Leavy, 2014). Therefore, this research is not grounded in any particular theory, but rather investigates the phenomenon as perceived by people and then compared to existing theoretical frameworks.

In this way, a postmodernist approach in the present study allows to call into question the existing view on giftedness in Kazakhstan. From the literature review (see Chapter 2), it is evident that the schools for gifted students such as NIS, BIL, and Daryn, adhere to the narrow definition of giftedness, assuming that the gifted students are the ones possessing extraordinary abilities in mathematics and verbal skills. Moreover, as seen in Chapter 2, the school-based gifted programs do not take into account students' multiple

intelligences or creative talent, not to mention special educational needs and disabilities. Thus, this research shows what the understanding of giftedness in special schools is outside of any theoretical frameworks and compares it to the country-wide and international conceptualizations in the framework of post-modernist philosophy.

### **Research Design**

The present study adopted a qualitative research methodology to achieve its purpose and address the research questions. This methodology provides a means of understanding “how people interpret their experiences, how they construct their worlds, and what meaning they attribute to their experiences” (Merriam & Tisdell, 2015, p.6). Because the purpose of the present study was to understand how teachers perceive or interpret giftedness and what experiences they have in relation to it, qualitative methodology suited the research best.

More particularly, this study used phenomenological research as a method of inquiry. “Phenomenological study describes the common meaning for several individuals of their lived experiences of a concept or a phenomenon” (Creswell, 2013, p.156). This study’s conceptual framework consists of an intersection between disability and giftedness, the concept of interest is gifted disability, or rather, giftedness through the lens of disability. This was looked upon through the phenomenological research design, i.e., the different understandings of this phenomenon were gathered via the instruments discussed below. The phenomenological research method allowed this study to achieve the purpose of “[coming] to an intimate awareness and deep understanding of how humans experience something” (Saldana, 2011, p. 8). A sophisticated understanding of gifted disability was achieved by means of phenomenological study.

## **Research Site**

The site where the research was conducted are three special schools for children with disabilities in one city in Kazakhstan. These were a special school for children with intellectual disabilities, a special school for children with speech and hearing impairments, and a special school for students with visual impairments. Research was conducted in one more special school for children with visual impairments, however, the data gathered at this site had to be discarded for reliability concerns (See the section on ethical considerations for a more detailed explanation).

The choice of the research site was driven by the principles of utility and convenience. Since the sampling strategy (see the next section for more details) involves approaching teachers who work at special schools, it was reasonable to visit a school and ask the permission for conducting research from the principal. The principals at special schools also acted as recruitment gatekeepers (Robinson, 2014), as they had the access to the contact channels at the school. Hence, it was convenient to conduct research at schools as a site.

In order to increase the credibility of the study, triangulation technique was conducted. Three different schools for children with disabilities were visited, in order to compare the level of convergence of data collected (Leko et al., 2021). The results indicated that teachers from different schools were able to provide different characteristics of gifted students. For details, see the findings and discussion sections.

## **Sampling**

The target population for this study were the teachers who work at special schools for children with disabilities in one city in Kazakhstan. Experience working with 2e learners was not a criterion in the sampling procedure, since the primary aim of the research was to gather the teachers' understanding of giftedness, which they may have

without the actual experience of working with such students. The subsidiary aim was to describe the perceived state of development of gifted students with disabilities at special schools, which again did not require the participants' experience, but rather their thoughts and understandings of the phenomenon. Moreover, the teachers may have worked with twice-exceptional learners and not realize it, but reveal the information signaling that certain child they worked with may have been identified as gifted in the interview process. Thus, the only inclusion criterion in the research participation was the participants' willingness to devote their time and working as a teacher in a special school.

The participants were chosen by means of a combination of non-probability convenience sampling and simple random sampling. First, all participants were approached at special schools, as described in the research site section of this chapter. This made the process of recruiting the participants convenient, as this method is based on my a-priori assumption that teachers at special schools have conceptions of giftedness among students with disabilities (Robinson, 2014). Moreover, the special school leadership assisted me in approaching some teachers, hence this method is qualified as convenience sampling.

Next, among the teachers suggested by the school leadership, all teachers willing to participate were engaged in a one-to-one interview, hence the simple random sampling (Robinson, 2014). Since the research questions do not specify the teachers' characteristics, I did not focus on interviewing teachers of specific subjects, years of experience, or students' age category. In result, the sample turned out to be diverse, providing rich data. See Table 1 for participants' profiles.

There were 4 schools agreeing to participate in a study with a total number of ten participants. The initial plan was interviewing ten participants for 30 minutes each to reach data saturation, as the research is small scale. However, the data collected from two

participants from one school was discarded, this is explained in the ethical considerations section of this chapter. Due to time limitations, I could not collect more interviews. This limitation is also discussed in the conclusion chapter. Ultimately, the participant population consisted of eight participants from three schools. Below is the demographics of the participant population.

**Table 1**

*The Research Participants' Profiles*

Participant index	Place of work	Work specifics	Years of experience
P1	Special school for children with visual impairments	Russian language and literature teacher for middle- and high-schoolers	26
P2	Special school for children with hearing and speech impairments	Physics teacher for 7 <sup>th</sup> –10 <sup>th</sup> graders	4
P3	Special school for children with intellectual disabilities	Primary school teacher, a defectologist	16
P4	Special school for children with hearing and speech impairments	Biology and chemistry teacher for 7 <sup>th</sup> – 10 <sup>th</sup> graders	5
P5	Special school for children with hearing and speech impairments	Primary school teacher	41
P6	Special school for children with intellectual disabilities	Adaptational and social pedagogue, defectologist; Primary school teacher	11
P9	Special school for children with hearing and speech impairments	Russian language and literature primary school teacher; defectologist	40
P10	Special school for children with visual impairments	Middle and high school teacher; class teacher; Braille pedagogue	33

**Data Collection Procedure and Instruments**

The procedure of data collection began with approaching schools' principals and delivering the purpose of the study for their attention. It was decided to come to the schools in person, rather than address them via online communication services, as this

facilitated trust building between the researcher and the principal. This is an important skills of building rapport, as described by Creswell (2013), as the principals controlled my access to research participants.

Next, a principal either gave their permission to conduct the study at their school, or not. Among the schools that agreed to participate, the principals were asked for cooperation in approaching teachers. The principals asked a vice-principal or one teacher to assist me in approaching potential participants. I was given the names and offices of the teachers and approached them by myself. Another strategy used was snowballing sampling, when one participant referred me to another potential participant, and so on.

When I approached the potential participants, I first got acquainted with them and had a small talk in order to build rapport with the participants. I then gave them information leaflets that contained brief information about the research purpose, questions, methods, benefits, and potential risks of their participation. If a teacher agreed to take part in the interview, I gave them an informed consent form. A sample consent form can be found in Appendix B. Having signed it, we conducted an interview in the classroom during the teacher's break relying on pre-prepared interview protocol, which is presented in Appendix C. None of the participants agreed to participate in the interview outside of school in a designated time. Therefore, I only had an opportunity to gather data within the school walls.

To achieve the aims of a qualitative study, interviews were conducted. Interviews are a useful method to gather rich descriptive data on an individual's perspective, as they are used to extract the information inaccessible to the researcher by observations, like the person's feelings, interpretations, and past and future behaviors (Meriam & Tisdell, 2015). Not only does interview serve as a tool to obtain sophisticated information about a participant, but also it allows to see the difference between multiple participants'

perspectives. All these advantages were crucial for the current research, as the questions it posed are directly linked to people's attitudes, the information that cannot be obtained by any other method more fully than with an interview, where the participants can straightforwardly tell what they perceive as gifts and talents and whether there are gifted people in their school community.

A specific type of the interview that were employed to achieve the goals of postmodernist research, were semi-structured interviews. These interviews contained some prepared questions, and in the process of the interview, the researcher asked emerging questions to clarify information or make it more detailed. While the prepared questions allowed the participants reflect on their experiences easier, the emerging questions helped the researcher get deeper responses. This flexible structure allowed the participants to generate unique definitions of the phenomenon (Merriam & Tisdell, 2015, Leavy, 2014). By giving the participants freedom to conceptualize gifted disability, the researcher adhered to the post-modernist epistemological view described earlier.

To increase the validity of the data collection method, the interview questions were slightly amended after the first interview, as recommended by Creswell (2013). The questions asked in the interviews were open-ended, allowing to gather rich descriptive data. For example, to gather information to answer the first research question ("How do teachers in special schools conceptualize giftedness?"), the following questions were asked: "How do you understand "giftedness" in the context of your work?", "In your experience, what traits or behaviors do students with giftedness typically exhibit?", "Can you share an example of a student you believe fits your description of giftedness?", etc. Along with the structured questions, the researcher asked probing, or follow-up questions, to get more precise data, for example, "Do you think this is an individual case, or it can be generalized to the whole population of gifted students with disabilities?".

The duration of the interviews ranged from 13 to 39 minutes, with an average duration of 25 minutes. Unfortunately, the participants agreed to provide only limited time during their breaks, so the quality of the data has its limitations.

Most of the interviews were recorded using an audio recorder. Later, computer technology, namely, a transcribing website, TurboScribe, was used to automatically transcribe the interviews word-for-word. After that, I listened to the interviews once again to check the automatic transcription, and corrected the mistakes. The resulting text was saved as a Word document on my computer and used for subsequent stages. An example of a section of transcribed interviews is in Appendix D. The interviews that were recorded in a written form were typed in a Word document as well in a form of keywords and sometimes word-for-word sentences. To ensure that the participants feel comfortable and open, some interviews were recorded in a written form, rather than using an audio recorder, as per the participants' request.

### **Data Analysis**

The data gathered from the interviews was analyzed using grounded theory as a method of data analysis. Since my purpose was to build a new conception of giftedness unaffected by existing theories, I employed this method. The method is based on inductive reasoning, i.e., going from specific to general inferences, iterative and comparative approaches.

The interview data in the form of text was broken down into discrete parts – the lines of text that related to each of the research questions, or several of them simultaneously. They were color-coded in Microsoft Word. The example of the color-coded text is in Appendix 1.

Next, the lines were labeled with codes that represent their meanings, which is called an open coding (Flick, 2018). For example, from P1 words “In our school,

giftedness is manifested this way...they have wonderful voices, perfect pitch, perfect olfactory abilities, tactile sense are also developed, and a really good memory”, these characteristics of gifted children were highlighted with one color, as they refer to the conceptualization of giftedness and answer research question 1. An example of coding procedure can be found in Appendix D. Next, “wonderful voices” and “perfect pitch” were coded as “vocal abilities”, and “perfect pitch” while “olfactory abilities” and “tactile sense” were coded as “sensory abilities”.

Following that, a process of axial coding took place (Corbin & Strauss, 2008), when I grouped similar codes into categories and looked for the relationships between them. For example, the aforementioned codes like “vocal abilities” and “perfect pitch” were united under a “musical abilities” category, and “olfactory abilities” and “tactile sense” were grouped with other similar codes under the “sensory abilities” category. In its turn, the “musical abilities” was categorized under a core or central theme called “talents” under research question 1 as a part of the conception of giftedness. The axial coding was performed in Microsoft Excel using tables and colors. An example of axial coding can be found in Appendix E.

Finally, all resulting categories were consolidated into a conception of giftedness, challenges of gifted students with disabilities, and the measures to identify and foster them.

### **Ethical Considerations**

Finally, the ethical issues considered in this study primarily concerned the participants. The research falls into the category of “no more than minimal risks”, as the subjects of research were adult unmarginalized individuals. In this part of the methodology, possible risks for the participants are described and the strategies to mitigate them are explained. In general, the approach that this section follows is considering ethical

issues on all stages of the research, including recruitment of the participants, data collection, and data analysis (Creswell, 2013, p.123).

Overall, the ethical considerations described below are in accordance with the principles of ethics in research involving human subjects. I underwent the Collaborative Institutional Training Initiative (CITI) training, which contained a program on the ethical issues in social and behavioral science research. The certificate of completion verifies that I understand the risks both more and no more than minimal and the strategies to mitigate them. Additionally, the ethics of this study will be ensured by the Nazarbayev University Research Ethics Committee (NU IREC), providing institutional guidance and support in terms of ethics to the researcher.

The general risk that was applicable to all participants was the issue of anonymity and confidentiality. Since I conducted one-on-one personal interviews, it was impossible to guarantee the anonymity of my research. I knew the names and identities of the participants. Apart from that, as explained in the procedure section, sometimes the principal, vice principal, or another teacher knew the name of the possible participant, as they referred me to them.

Therefore, it was crucial to maximize the confidentiality of the participants' data. To do that, I am not mentioning the city where data collection took place. Hence, it could be any special school in Kazakhstan, and the participants cannot be identified. In addition to that, the data collected from the interviewees is stored on a separate memory device with a password, which is accessible only to the researcher and her supervisor. This guarantees the limitation in access to the raw data. Moreover, the participants are assigned random index number, and it is impossible to gather what particular information was given from a particular person.

To protect the privacy of the participants during the interviewing process, the interviews are conducted in the spaces that are safe for them. All participants rejected the suggestion to meet outside school, demonstrating that they were safe and comfortable in their classrooms, hence, the interviews were conducted there. It is important to mention that there was an occasional disturbance to the interview process with two participants, when children entered the room and quickly left it. Despite this fact, the interview transcription shows that the teachers were unbothered by it and their answers were coherent despite the disturbance. Having consulted with my supervisor, we decided to keep this data, but reflect this situation in this section. Moreover, each participant was asked whether they agree with what they said, or they would like to change their answer at the end of the interview, and all the participants wished to keep their answers unchanged. Most importantly, the site of data collection involved negotiation and consent of the participants.

Another risk that the research entails were the issues of voluntary participation in the research (Atkins & Wallace, 2012). To mitigate the risk of unwilling or imposed participation, the participant recruitment and data collection procedures followed certain rules. During the recruitment process, information sheets were distributed to the teachers with the permission of the principle prior to the interview. The leaflets contained brief information about the research and its purposes, as well as the contact information of the researcher. Thus, only the teachers who understood the purpose and were interested in giving an interview, were invited. Next, prior to the data collection procedure, I asked the participants to fill out the informed consent form, which contained brief information on the research, the risks they may have faced, and the measures taken to ensure the ethics of the research. To ensure inclusiveness, the consent form was presented in three languages – English, Kazakh, and Russian. By signing the informed consent form, the participants

indicated that their participation in the research was consensual. However, there appeared a complication during the data collection procedure in one case. The vice principal of a school invited two teachers to participate in an interview in their office, and insisted on overlooking the process. This broke several rules at once – first, the principle of confidentiality, which was not possible in the presence of a third party, especially a person in a more powerful position. Second, the principle of privacy, as there were three people in the room at once. The interview was still conducted, as it was important to keep the rapport with the participants and gatekeepers. However, the data was discarded and not used in any subsequent research stages, as it compromises the credibility and ethics of the present research.

Next, there might have been reputational risks associated with the information that the participants provided in their responses. Since the object of the study is the phenomenon of gifted disability, this topic entails multiple sensitivities, as people with disabilities suffer from social injustice, discrimination, and non-fulfilled human rights (Norwich, 2014). Therefore, expressing views on the issues of people with disabilities might have been a challenging task to the participants, as they might have involuntarily used derogatory language or attitudes towards people with disabilities. To ensure that the participants were confident in the information they provided, every participant was asked whether they agree with their response or wish to amend it. All participants kept their initial responses. Apart from that, the participants were ensured that if they wish to change their answers, I will follow their demand and discard their response until the work is published.

## Chapter 4: Findings

The data was analyzed using grounded theory, and the resulting themes are presented in this chapter. The chapter is structured around four core themes: conceptions of giftedness, school practices supporting gifted students with disabilities, challenges in identifying and fostering giftedness, and recommended measures to support these students. Each core theme includes codes organized into subsidiary themes.

To reiterate, this research aimed to conceptualize giftedness among students with disabilities as perceived by special school teachers and to examine the state of gifted education by exploring challenges and measures in identifying and fostering giftedness.

### **Core Theme 1: Conceptions of Giftedness**

The first core theme identified from the grounded theory analysis are the conceptions of giftedness among students with disabilities by teacher participants working at special schools. This core theme is organized into several subsidiary themes: the characteristics of gifted children (including the cognitive characteristics, talents, and socio-behavioral characteristics), framing giftedness, and identification methods. Below each subsidiary theme is described in detail with in-vivo quotes by the participants.

#### ***Cognitive Abilities***

Most participants identified cognitive abilities in 2e learners. One such ability is mathematical and/or arithmetic ability: “I have a student who graduated last year, I was her teacher from year 6 ... she is enlisted in the Guinness’ World Records book as one of the best in mental calculations” (P1). Other teachers also recognized gifted children by their advanced math skills: “I have a gifted student... His math is excellent” (P2).

Next, the participants differentiated analytical and logical skills of gifted students: P6 described them as “being able to analyze their work and correct others’ work”, and P10

noted they “provide well-thought answers, they are able to analyze their own and other students’ answers”.

Another defining cognitive trait is “deep” or sophisticated thinking: “Gifted children think deeper than their counterparts” (P10), “They have a different view of the world, more deep, more philosophical and personal” (P5).

Certain cognitive abilities were linked to specific disabilities. Teachers of visually impaired students highlighted their good memory: “In general, our children have good memory” (P1). This phenomenon, called by the participants as decompensation, was mentioned several times.

Interestingly, several participants emphasized the importance of “preserved intelligence” for identifying giftedness: “Gifted students are the ones whose intelligence is not damaged” (P5). Similarly, P1 noted, “as I understand giftedness, I think it is present among our students in case of preserved intelligence.”

Almost unanimously, participants recognized creative thinking as a key characteristic of giftedness: “You know, a gifted child is a creative child” (P5), “they have rich fantasy, creative thinking” (P9). Teachers linked creative thinking to moments when children “ask questions not from the book, but from somewhere else, that make you wonder how this is possible” (P2), or when they add something new beyond what was taught (P6). Participants also referred to it as unique vision, fantasy, and original thinking (P5, P1, P9).

Thus, the cognitive abilities defining giftedness, as perceived by teachers in special schools, include skills like analysis, memorization, logic, mathematical ability, creative thinking, and “preserved” intelligence.

## ***Talents***

Participants extensively described the skills and abilities of gifted children that are not primarily cognitive but involve what is generally termed “talent” in gifted theory (Davis & Siegle, 2014). This category includes musical, artistic, and bodily-kinesthetic abilities. Since these activities do involve cognition and intelligence, they will be referred to as talents in this thesis.

**Musical Talent:** Participants most often mentioned musical abilities as a defining characteristic of gifted children: “In general, our children have ... musical abilities” (P1), “I have a female student who isn’t interested in studies but is gifted in music and can sing well. She can also play different musical instruments, like violin, accordion, etc.” (P10).

One category of musical talent is vocal ability. Several participants noted children who can sing well and are considered gifted (P1, P3). An autistic child with a phenomenal voice was proudly mentioned: “She sings, her voice is indescribable. Our music teacher says people learn to sing like that for 10–15 years, but she is given this gift by God” (P3).

Similar with cognitive abilities, some talents prevail among students with certain disabilities, aligning with the decompensation phenomenon: “Among children with visual impairments, their other senses develop well, and there are many musicians among them” (P5). Teachers from a school for visually impaired children highlighted musical talents like perfect pitch and the ability to learn music by ear (P1). One participant described a blind student playing the dombyra: “He carefully listens to the sound and tries to make it clearer. For his age, he plays dombyra really well” (P1).

**Artistic Talent:** Four teachers mentioned giftedness expressed through artistic abilities: “How else can a person be gifted? Artistically, I think” (P2), “In our school, children are mostly artistically gifted” (P4).

Drawing and painting talents were cited across schools: “We have a lot of children who dance, draw...” (P2), “Giftedness is not only about math and physics but also the ability to draw well...” (P3). Teachers from schools for children with hearing impairments noted that students with cochlear implants draw very well (P4).

Dancing was another form of artistic talent: “Yes, we have a lot of students who dance, draw...” (P2). Similarly, students with hearing impairments were described as excellent dancers: “We even had a visit from students of a dancing school... They are hearing impaired, but they dance well” (P3).

An interesting manifestation of artistic talents was expressive reading. A teacher from a school for children with intellectual disabilities spoke of a student who couldn’t perform simple tasks but “read fluently... with expression, with humor, I think this is his gift” (P3). Another teacher recalled a visually impaired student who “has artistic talent. He can read and recite texts really well. He has a good memory” (P1).

**Bodily-Kinesthetic Talent:** Participants also defined children with bodily-kinesthetic abilities as gifted: “We have children who have abilities in sports” (P1), “We have good sportsmen” (P10).

Teachers from schools for children with visual impairments again mentioned decompensation, highlighting strong olfactory, tactile, handcrafting, and sports abilities (P1).

To summarize, the participants have defined musical abilities, such as perfect pitch, voice, and playing musical instruments; artistic abilities, such as drawing/painting, dancing, expressive reading; bodily-kinesthetic abilities, such as sports, developed senses, and hand-crafting abilities, as talents possessed by gifted children.

### ***Socio-Behavioral Characteristics***

Another category of gifted characteristics identified from the data analysis is socio-behavioral traits. The following paragraphs describe the social abilities of gifted children, as well as their behavior and character features.

#### **Social Abilities:**

Beyond cognitive giftedness and talents, participants recognized social abilities as defining giftedness. These include leadership: “Every class has a leader, yes. Very active children” (P2). A teacher from the school for children with intellectual disabilities recalled a student with mild retardation who “was a leader, he used to help the teacher, was the student representative” (P6).

Another demonstration of social ability is mentorship behavior: “In the 10th grade, there is a girl who acts like a teacher. And everybody listens to her” (P2), and “There is always a nanny in each class; they help children dress, line up, lead them, look after them, and make sure they have school supplies” (P3).

#### **Behavior Difference:**

A specific interview question explored whether giftedness influences behavior. Two teachers affirmed that gifted children behave differently due to their giftedness (P1, P5). For instance, P5 stated, “Gifted children are different in their behavior, maybe also different in their view of the world.”

In contrast, other participants stated that behavior is independent of giftedness and varies like in the general child population: “The gifted child, he is the same as us” (P2, P3), “Their behavior is usually normal, parallel to class” (P6). Some (P3, P10) emphasized the diversity of gifted children's behavior and character.

#### **Character Traits**

When asked about the behavioral features or character traits that gifted children exhibit, the participants have mainly defined persistence, introspection, and interest as defining giftedness.

Regarding persistence, teachers noted that gifted children work hard to achieve goals: “He has the desire to go until the end, he has perseverance, he is not impulsive” (P6), and “If they are diligent and work hard, these children will become renowned later” (P1). One case of determination was described: “He has goals for the future, and he is walking toward these aims, for me, he is gifted” (P2).

Introspection, another trait, is shown as being absorbed in one's own thoughts: “I have a student... she has her own world, the world that nobody should touch, when she is thinking about it. She has more imagination, she daydreams a lot, and everything is fairytale-like, cloudless, beautiful” (P10). Other participants referred to it as a unique vision: “Most importantly, they have unique vision” (P5), “They have a deeper vision of the world” (P9).

Lastly, a defining characteristic is a deep interest in subjects. Teachers considered children invested in a subject as gifted (P2). This interest could extend across several domains: “I have a gifted student with limited abilities, but he has profound interest in many things” (P9).

### ***Framing Giftedness***

The data analysis also revealed several additional aspects of participants' conceptualization of giftedness.

Most participants defined giftedness as abilities in a specific domain rather than general giftedness: “I think that a gifted person is a person who has special abilities,

opportunities in something, in a specific field” (P3). Others similarly defined a gifted person as gifted in a particular area.

In terms of the prevalence of giftedness, some participants mentioned omnipresent giftedness, claiming that every person is gifted in some way (P1, P3), but others believe that “An average person, he will not be gifted” (P5).

A pattern of responses emerged that can be united under a theme “the origin of giftedness”. According to several participants, giftedness is God-given: “Her voice is indescribable... This is given to her by God” (P3), “this talent is given by God” (P5). According to other, it is nature that gave the gift to a gifted child (P4): “if a child has an interest assigned by nature, it will manifest itself” (P9).

Another theme concerned whether giftedness can exist among children with disabilities. Apart from one teacher who believed no gifted children existed in her subject (P4), all other teachers confirmed that children with SEND can be gifted, providing multiple examples.

Again, though not specifically asked, many participants commented on the family circumstances of gifted children with disabilities. Some described negative environments, such as dysfunctional families (P1, P3), while others described supportive, fostering environments (P3, P10). It can be concluded that the circumstances surrounding giftedness are idiosyncratic and require further study.

### ***Giftedness Identification***

The data analysis identified a theme around the identification of giftedness, its methods, and principles. The only method mentioned by most teachers was teacher observation. Teachers identified gifted children through their interests (P1), lesson behavior (P1), communication (P1), mathematical abilities (P2), class performance (P2),

everyday situations (P3), and general observations (P9, P10). As P10 noted: “The teacher is one of the first people who sees their advantages and downsides, their abilities – immediately”.

The main principle underlying identification was comparison with peers (P3, P4, P10). However, when comparing with children without special educational needs, teachers noted that gifted children with SEND did not show the same level of superiority: “Can he [a gifted child] study in a mainstream school? – No, not to that extent. Relatively to his peers, yes, [he is gifted]” (P2). Giftedness also sometimes manifested when a child exceeded task expectations: “There are children with the abilities exceeding the objectives” (P9).

Participants also highlighted that identifying giftedness is complicated by its changing nature: “Right now, you can’t understand whether she is gifted or not. This will be clear later. When she is 10 years old, it is unclear yet” (P5), or “If we take one class with children with higher abilities, but this is only temporary...” (P4). Identifying giftedness is not always easy: “Sometimes you are talking to a person and you can’t see that he is gifted, but then during a conversation, you begin to admire him” (P3).

## **Core Theme 2: Practices to support gifted students**

The data revealed several categories of the practices employed at special schools to support gifted students with disabilities: academic support, non-academic support, and other themes such as financial provision and key stakeholders. The following paragraphs describe resulting themes.

### ***Academic support***

The most amply described theme of giftedness development is academic support, covering curriculum adaptations and ability grouping. It is important to note that many

measures mentioned apply to all students with SEND, with teachers often not distinguishing between groups.

### **Differentiation**

Participants described various differentiation strategies to support gifted students. These included personalization through individual tasks and individual education plans: for example, P1 assigns individual tasks during lessons, and P2 offers specific tasks to highlight abilities. As P10 explains: “If a teacher sees that a child is more gifted, he has an individual plan.”

Another differentiation technique was adjusting task difficulty. Teachers assigned more challenging tasks (P3, P5, P9) and increased curriculum load: “I necessarily give him extra tasks” (P2). Gifted students were also offered more creative tasks (P5, P9) to showcase their abilities.

Assessment methods were adjusted as well. P6 notes: “With those children who have difficulties in abstract thinking, we meet them halfway.” Similarly, students who struggle with oral responses were allowed to submit written work (P2).

### **Ability Grouping**

Teachers also supported giftedness through ability grouping, creating classes based on students' abilities: “The first group is for more able children, the second for weaker kids, and the third for really weak students” (P3). Some participants referred gifted students to mainstream schools (P4) or specialized colleges: “I had a student who made his own dombyra. I referred him to a college for children with the same abilities” (P6).

### **Schools' Target**

An interesting finding was that the main goal of special schools is often social adaptation (P1) and developing manual skills (P3) rather than academic achievement. P1

explains: “We are a ‘correctional’ school. Recently, we’re being told to focus on adapting the child to society, not education.”

Similarly, P3 notes that in schools for children with intellectual disabilities, practical skills like bead weaving, felt work, and woodworking are prioritized over academic skills: “Honestly speaking, the ability to read, write, count, it is not really valued. We teach them how to work.”

### ***Non-academic Support***

Special schools also provide non-academic support to develop the gifts and talents of children with disabilities, as described below.

#### **Competitive Events**

A significant form of non-academic support is participation in competitive events like Olympiads and contests. Participants reported referring gifted students to Olympiads: “My students participated in Math olympiads” (P5); “I have referred them [gifted students] to an Olympiad... Starting from this year, there are special Olympiads for children with SEN” (P9).

In addition to Olympiads, students were encouraged to enter talent contests. For example, P1 and P10 mentioned a gifted student who participated in contests, winning first place, and writing essays and research projects (P1).

#### **Extracurricular Activities**

Participants emphasized that talented students often develop their abilities outside curriculum, attending music and sports classes (P1, P10) and extracurricular clubs like handcrafts (P9, P10): “Within our school, there is a musical school, so it seems necessary that a child learns music here” (P1).

One notable case from a school for children with intellectual disabilities involved a gifted girl with exceptional voice. To nurture her talent, teachers tried to enroll her in external music programs (P3) and talent development initiatives (P3). In this unique case, the school provided extensive care as she came from a dysfunctional family: “We took her from home to wash her, feed her, brush her hair... We buy her costumes for performances, clothes, shoes, hygienic goods” (P3).

### ***Other Aspects of Gift Development***

#### **Sources of Financial Provision**

In discussing the development of gifts and talents among students with disabilities, participants identified patterns regarding financial provision. They noted that both extracurricular activities and education at special schools are primarily government-funded (P3, P10).

Additionally, external sponsorship occasionally supplements funding: “If we have a sponsor, the children go on field trips/contests” (P10). In exceptional cases, financial support also comes from donations by parents and teachers (P3).

#### **Main Stakeholders**

Participants identified several key stakeholders in the process of supporting gifted students with disabilities. Teachers were recognized as the primary agents: “This is solely a teacher’s initiative [to take measures to develop a gifted child]” (P1) (P1, P2, P6).

School leadership also plays a role in facilitating talent development, as highlighted by P6: “We have a very good principal.” Finally, parents' involvement was emphasized (P3, P9), with P3 noting: “The parents [of children with higher abilities], from early childhood, make their kids accustomed to life.”

### **Core theme 3: Challenges**

The grounded theory analysis of the collected data identified several themes in regards to the main challenges in identifying and fostering giftedness among students in special schools. Like the previous section, the following challenges apply both to gifted students with disabilities and their peers, hence it is difficult to differentiate the challenges specific to giftedness as SEN.

#### ***Challenges outside School***

The most prominent theme identified by participants concerns challenges outside school. These include, most importantly, the family environment of gifted students with SEND (P1, P4, P10). Challenges created by families range from lack of attention, overprotection, to lack of financial resources for development.

Another significant challenge is the children's psychological state, especially fear of failure and self-expression. P4 admits: "Many teachers, maybe before that, even kindergarten teachers, maybe parents scold them when they make mistakes [gifted children]. Maybe they have a psychological trauma from the childhood, that they can't express their opinion" (P4). External circumstances can also affect gifted children's manifestation of giftedness (P6).

Although referral to mainstream or inclusive schools is important for developing giftedness, as reported by the participants, problems at these schools hinder it. At least four teachers noted that the lack of proper SEN support and the unreadiness of inclusive schools prevent gifted students with disabilities from being referred: "I don't believe in inclusion. We have a father here, who attends classes with his son [as a tutor], this is how it has to be" (P9), "The inclusive schools are not ready. My fellow teacher told me that she is not ready" (P3).

### ***Impairment-created Challenges***

Challenges in developing gifted children with SEND caused by impairment are widely described. Impairment creates behavioral difficulties like aggression and low attention span (P4, P9). It is also difficult to assess these children, as formats may not fit their abilities: “If you ask the same topic on the following day, they have already forgotten. They have short memory” (P4), “if you give them an oral task, one student can take the whole lesson to be assessed” (P2). Students with speech impairments particularly struggle to express opinions: “We have very gifted students who stutter, so they cannot completely deliver their thoughts” (P2).

Impairment can also determine access to extracurricular activities. P1 describes selection in school clubs based on a child’s “diagnosis”, due to the difficulty of teaching certain skills: “Imagine teaching a blind girl how to knit. This is a very difficult process” (P1). Similarly, access to specialist schools is affected: “She [a musically gifted girl] would not be able to attend these classes [at musical school] due to her limited abilities” (P3).

Children’s impairments also affect the learning process. Cognitive conditions hinder giftedness development and slow down education: “The children hardly manage to understand the topic, we don’t even have time to start the laboratory work, we can’t even cover one topic” (P4). Subjects like physics, being more theoretical, are harder for students with speech impairments (P2), and the same applies to chemistry and humanities (P4). Thus, children’s conditions can impact education and become barriers to identifying and fostering giftedness.

### *Teachers' Limited Capabilities*

Another major challenge identified is the limitations in teachers' capabilities. These include difficulties providing equal attention to all students: "We don't have the opportunity to sit with him, because there are other students sitting and waiting, and I can work individually with the child for a short time only" (P4).

Participants (P1, P2, P10) also mentioned lack of time hindering extra support to gifted students. Creating individualized tasks is challenging under time constraints: "Of course, it takes time to create special flashcards" (P1).

Psychological overload is another challenge: "Work with the special children is a difficult psychological work. We work around 16 hours a week, but it is still very hard" (P6). Teachers' lack of experience or competence is noted too, especially among new teachers: "When I just came here, I had almost no experience" (P2). Even experienced teachers sometimes cannot identify giftedness: "I think that every child is gifted in his own way. But, you see, not everyone can notice it" (P1).

Thus, challenges in identifying and fostering giftedness among students with disabilities also arise from teachers' limitations.

### *Curriculum Adaptations*

Teacher participants identify many curriculum challenges. Sometimes, the curriculum doesn't suit students' needs and abilities. In special schools, it is simplified in some subjects: "We have simplified topics. For example, our students who are finishing year 10, but study according to the 9th grade program" (P2). This doesn't allow gifted students develop to their full capability.

Standardized curricula often don't suit children with special educational needs, making it harder for 2e students to understand. P4 mentions: "All the textbooks are written

in the scientific language, so it is hard to understand them.” Some subjects lack special curricula for both gifted and special needs students (P4, P10).

Curriculum challenges also include varying student comprehension levels (P1, P2), leading to lack of interest in more able students: “If we solve easy problems here in the lesson, it will be not interesting for him [the gifted child]” (P2). Even with individualized programs, implementing multiple curricula in one classroom is difficult. P4 notes that small classes with mixed-grade curricula exhaust teachers, while P6 doubts that it possible to design individualized programs for all: “I don’t think that it will be possible to design an IEP for everyone, children get distracted easily, they like to copy one another” (P6).

### ***Interpersonal Communication***

Four participants highlight communication issues between teachers, parents, and students. Misunderstanding often arises with parents resisting teachers' recommendations (P3, P9): “Parents can also be difficult. If something goes wrong, they run to complain” (P4).

Communication gaps exist between teachers and students and among students: “There is misunderstanding...of each other and maybe, between the teacher and the student” (P10). Age gaps between teachers and students can also hinder communication (P10).

### ***Lack of Resources***

Participants cite a lack of resources as a barrier to fostering giftedness in students with disabilities. Schools lack personnel trained in working with children with SEND and external programs: “We tried to admit her [the gifted child] here and there, but we couldn’t find a teacher, not one” (P3).

Physical resources are also insufficient. P3 mentions the lack of tools to nurture musical talent, while P4 admits that the school's chemistry class doesn't have a laboratory with the needed equipment and reagents.

Thus, the gifted children's development in special schools is inhibited by the lack of resources.

### ***Other Challenges***

Finally, the participants have identified several more barriers to identifying and fostering giftedness. Some participants have acknowledged that the widespread use of technology affects the students' attention span (P2). Another participant talked about the age specifics of children that can affect the identification of giftedness as young children with special educational needs are very hard to control: "I think in primary school, things are really bad" (P4).

P4 has mentioned the negative effect of the environment on the development of giftedness: "The class environment plays a role too. If, for example, in one class only two students study more or less well, there is no competition. Because there is no competition, they are relaxed" (P4). Apart from that, the general culture in our country, according to P4, presupposes uniformity and doesn't foster individualism.

### **Core Theme 4: Recommended Measures**

The analysis of the collected data on the participants' recommendations on how to identify and foster giftedness produced several themes. These themes widely intercept the practices that the special schools employ to develop giftedness. The following paragraphs describe the analysis. Likewise, many of the identified themes relate both to the development of giftedness and the accommodation of other special educational needs.

## *Differentiation*

Differentiation emerged as the most prominent solution to the challenges identified. Participants highlighted various ways to differentiate the curriculum to meet the needs of gifted students with disabilities. Personalizing education helps address the challenges of identifying and fostering giftedness (P1, P4, P5, P6, P10). Personalization includes individualized lesson plans: “I have already understood that it is necessary to change the tasks to make them more personalized, I have already designed the tasks for them [gifted students]” (P4). Several participants stressed the importance of working individually with gifted students (P1, P6), and P1 found ready-made materials helpful for lesson personalization (P1).

Teachers also mentioned other methods of differentiation, like adjusting the difficulty of explanations: “Sometimes I explain the topic myself in brief form, so that it is easier to understand” (P4). Another approach is modifying content to make it more engaging: “Sometimes we have a boring topic, but I can teach another topic that is related to it, but more interesting” (P4).

Using technology is a powerful tool to support gifted students with disabilities (P4, P6). For instance, P4 uses YouTube videos to compensate for limited teaching materials and adds subtitles to help students with hearing impairments understand the material better (P4). P6 noted that interactive boards aid comprehension through visual reinforcement (P6).

Adjusting assessments is another effective adaptation. A teacher for students with speech and hearing impairments uses assisted assessment and alternative tasks to help them demonstrate their skills: “Exams are really difficult for them. It seems like they see the questions for the first time in their lives. But if I remind them or give them little hints,

they remember,” and “If I give them a test with multiple choice questions, it is easier for them. When they have options to choose from, they are calmer” (P4).

### ***Ability Grouping***

Ability grouping is widely recommended by participants to help gifted students with disabilities develop their potential. Referring students to special schools for the gifted is one option (P2, P3, P5). Grouping by ability in special classes within schools is another: “I think we need to put the gifted children in one class” (P10).

Some participants suggested referring gifted children to mainstream or inclusive schools (P2, P3, P9), though they emphasize that only partial inclusion will be beneficial: “Maybe, we could send her to the inclusive school for certain classes only” (P3), “Probably partial inclusion would help” (P9).

### ***Non-Academic Measures***

Participants proposed various non-academic activities to support gifted children with disabilities. Olympiads and contests were popular suggestions: “With the help of competitions, they [gifted children] will gain confidence” (P9).

Extracurricular activities were also recommended (P3, P9, P10): “It is necessary to take the children to the extracurricular activities, school clubs” (P9), and “She [a gifted child] needs extra classes with a speech therapist, she needs musical classes to learn the rhythm, she needs dances to learn how to move” (P3). Other suggestions included science projects (P2) and governmental talent programs (P3).

### ***Changing Teachers’ Actions***

Participants emphasized the need for changes in teachers’ behavior to better identify and foster giftedness. Recommendations included being patient (P1, P5),

passionate (P3), emotionally open (P4), and sharing personal experiences with students (P4).

Teachers also need support from stakeholders (P3, P6), including acknowledging teachers' rights: "We need more help, more support. Maybe we need more rights" (P3). Collaboration with parents is vital to emphasize the importance of fostering giftedness (P1, P3, P5).

Practical strategies included gaining experience (P2) and observing students for signs of giftedness (P5, P9): "It is necessary to notice and encourage the students' interests" (P9). Peer teaching was suggested to address the lack of experienced young teachers (P2).

### ***Changing Parents' and Students' Actions***

Parents, as key stakeholders, are advised to improve communication with schools (P1, P3, P4, P5). A three-way collaboration between the school, the student, and the parents is emphasized: "It is important [for a gifted child] to have people around, parents, teachers" (P5).

Parents are encouraged by the teacher participants to support and make effort to develop the giftedness of their children (P1, P3). P3 remembered a successful case when a parent engaged their child with SEN into the ABA-therapy (applied behavior analysis) (P3). Parents taking their children to extracurricular activities and excursions often have higher-ability children (P3, P10). P3 says: "Parents have to be very persistent".

Gifted children with disabilities, as stakeholders in their own development, are encouraged to stay persistent, engage in self-learning (P4), and work on motivation (P1). They should take part in curriculum planning: "Sometimes I present the topic, and they say, let's choose another topic, can you answer this question..." (P4).

Children are advised to work with psychologists (P1) and participate in competitions to build confidence: “With the help of contests, they will build their confidence” (P9).

### ***Provision of Resources***

Resource provision is identified as a key measure to address challenges in identifying and developing giftedness in students with special needs.

A tutor is essential for gifted children with disabilities, according to participants (P1, P3, P9). P9 shared an example of a father who tutored his child at school, assisting both the student and teacher.

Hiring more competent personnel is another recommendation (P3, P5). Teachers stress the need for specialists in both special and inclusive education: “I think there should be a specialist for these children [gifted], who would notice the manifestations of their giftedness, talents, uniqueness, and then not paying attention to their special needs, would foster their giftedness” (P5).

Participants also call for financial and technological resources to address issues in twice-exceptional education. P1 highlights how new technology offers more opportunities for gifted children with disabilities to access quality education. P3 emphasizes: “Financial expenditures should be high in a school, before admitting students [with SEN] there.”

## **Chapter 5: Discussion**

This research study's purpose was to explore how teachers in special schools conceptualize giftedness among students with disabilities and explore the state of gifted education for children with disabilities in special schools in Kazakhstan. The data allows to create a conceptual model of giftedness as perceived by the teachers from special schools, as well as understand what challenges special schools face in identifying and fostering gifted students with disabilities, and what measures are taken and recommended to support gifted special education.

To meet the research purpose, grounded theory analysis was conducted, and four main themes were identified: the conceptual model of giftedness, practices employed at special schools to identify and foster gifted students with disabilities, challenges in identifying and fostering such students, and recommended measures to support them. However, since the findings under theme two and theme four considerably overlap, they were united under one common theme – measures to identify and foster gifted students with disabilities.

This chapter is organized according to the three resulting themes, with each theme interpreted and discussed against the existing literature. There is a uniform paragraph structure throughout the chapter: first, the findings from the present research are summarized briefly, followed by their discussion. At the end of the chapter, the implications of the present findings for policy and practice in Kazakhstan are discussed.

### **The Conceptual Model of Giftedness**

Below, the conceptual model of giftedness resulting from the grounded theory analysis will be presented, and then interpreted and compared to the existing literature.

### ***The Resulting Model: Summary***

The resulting conceptual model of giftedness can be described in the following ways. A gifted child is defined as someone “who has special abilities in comparison to others in a specific domain”. The characteristics of a gifted child concern their cognitive abilities (e.g., strong memory, analytical and critical thinking, creativity), talents (e.g., musical, artistic, bodily-kinesthetic), and social behavior (e.g., leadership, persistence, deep subject interest). Giftedness is considered God- or nature-given by the research participants, can correlate with positive and negative family environment, and can definitely co-occur with disability. Gifted children are usually identified by their teachers’ observations.

### ***The Definition of Giftedness***

According to the generalized answer of the participants, a gifted child can be defined as “a child who has special abilities in comparison to others in a specific domain”. This definition goes in line with the one generally used in the field. According to the National Association for Gifted Children’s definition, “Students with gifts and talents perform - or have the capability to perform - at higher levels compared to others of the same age, experience, and environment in one or more domains” (NAGC, 2019).

According to the resulting conceptual model, for gifted children with disabilities, the comparison is made within their peer group, emphasizing that giftedness is a relative construct. This raises questions about the necessity of rigid definitions, aligning with

Borland's (2005) call for a paradigm shift to focus on education rather than labeling giftedness.

### *Cognitive Characteristics*

Gifted children, as perceived by teachers in special schools, exhibit distinct cognitive abilities, talents, and socio-behavioral traits. Among these, cognitive characteristics are highly prominent and form the foundation for identifying giftedness. This view that teachers in special schools share aligns with the gifted child paradigm proposed by Dai & Chen (2013) that often focuses on a child's in-born intellectual capabilities.

High mathematical or arithmetic abilities are frequently identified as key traits of giftedness by the participants of the present research. This aligns with the MVT:D4 model (Brody & Stanley, 2005), emphasizing mathematical and verbal talent. The findings also acknowledge that mathematical giftedness can co-occur with learning disabilities, resonating with existing research (Al-Hroub & Whitebread, 2019).

Sophisticated thinking, characterized by strong analytical and logical reasoning, is another gifted trait identified by participants. This echoes early conceptions of giftedness, such as Lewis Terman's IQ-based definition (Terman, 1925), and remains central to modern understandings of intellectual giftedness (Gallagher, 2000). Although intellectual precocity, i.e., exceeding age-expected cognitive abilities, is a well-documented element of giftedness (Lubinski & Benbow, 2021), it was not emphasized in this study's findings, calling for replicating research. Thus, the research study demonstrates that teachers in special schools hold some of the earliest conceptions of giftedness, along others described later in this chapter.

Creativity is widely recognized as a hallmark of giftedness by the participants. This aligns with the creative giftedness theory (Sternberg, 2003; Runco, 2005) and Renzulli's three-ring conception of giftedness, which highlights creativity alongside task commitment and above-average ability (Renzulli, 2005). Unlike rigid, outdated models like Terman's g-factor concept, the teachers in this study hold more inclusive, flexible views, emphasizing creativity as a key component of giftedness.

Gifted children with specific disability also develop decompensation strategies resulting in good memory among children with visual impairments, another cognitive ability defining giftedness as conceptualized by the research findings. An important note shall be made about the "preserved intelligence", a cognitive characteristic of a child defining their eligibility for the "gifted" notion. Unfortunately, no research was found that supports these pieces of findings. This calls for investigating this phenomenon empirically and theoretically.

### ***Talents***

The second category of characteristics attributed to gifted children in this study are talents, including musical, artistic, and bodily-kinesthetic abilities. These talents represent high proficiency in specific domains and are central to the resulting conceptual model of giftedness. In general, the findings aligns with the talents development paradigm that posits that a gifted child is not always the one with high general intelligence, but can also be described as gifted in "a range of authentic activities" (Dai & Chen, 2013, p.156).

The musical talent includes traits such as vocal aptitude, perfect pitch, increased listening abilities, and the ability to learn the notes by listening to a musical piece. These abilities align with theories that consider musical aptitude a distinct form of intelligence (Subotnik et al., 2011). Teachers noted that students with visual impairments often exhibit

enhanced musical skills due to decompensation. While the co-occurrence of musical talent and learning disabilities is recognized (Abramo, 2015), the decompensation phenomenon lacks substantial empirical investigation, inviting further research.

Artistic talent, as identified by participants, involves skills such as drawing, painting, dancing, and expressive reading. Artistic talent has long been considered a sign of giftedness, though different theories either equate it with giftedness, or differentiate between the two (Anghel, 2016). Participants did not distinguish artistic talent as separate from general giftedness, echoing perspectives like Subotnik et al.'s (2011) classification of creative performers (e.g., dancers, singers) and creative producers (e.g., visual artists).

Bodily-kinesthetic talent, another defining feature of giftedness as identified by this research participants, includes sports skills, crafting abilities, and developed tactile and olfactory senses, particularly among students with visual impairments. This talent reflects the influence of decompensation, where other senses compensate for a disability. Bodily-kinesthetic talent is acknowledged by the existing conceptions of giftedness too, for instance, Blumenfeld-Jones (2009) proposed an understanding of kinesthetic talent as the attention to one's own movement. Unfortunately, research in bodily-kinesthetic intelligence is scarce and is mostly based on Howard Gardner's theory of multiple intelligences (2011). Thus, the present study contributes to the body of research calls the need to investigate the phenomenon of bodily-kinesthetic talent in the future.

Similar to creativity as a cognitive characteristic of giftedness, as well as musical talent, acknowledging artistic and bodily-kinesthetic talent demonstrates the openness of teachers in special schools to different types of aptitude as observed in the gifted children with disabilities. This goes in line with the international perspective on giftedness.

### ***Socio-Behavioral Characteristics***

The third type of characteristics that gifted children demonstrate as reported by data in the present study, refers to specific social behavior. According to participants, these include advanced social abilities like leadership and mentorship, aligning with Sternberg's (2020) concept of transformational giftedness driven by helping others. This reflects teachers' modern views on giftedness despite limited training in gifted education.

Participants also noted traits such as persistence, introspection, and strong interest in specific domains, which are often correlated with giftedness in research literature (Davis & Siegle, 2014). Persistence mirrors task commitment in Renzulli's (2005) three-ring model, while introspection aligns with the sensitivity and emotional fragility noted in gifted populations (Subotnik et al., 2011). Motivation plays a key role, especially for creatively gifted children (Runco, 2005). These psychoemotional traits are crucial for identifying and fostering giftedness, as changes may signal underachievement (Barkova, 2019).

It is important to mention that the everyday social behavior of gifted children was reported to be both dependent and independent of their giftedness. This partially supports theories on the role of psychosocial variables in giftedness development (Subotnik et al., 2011). Davis and Siegle (2014) also found that personal adjustment skills differ by "level" of giftedness, with highly gifted students often struggling socially. These factors should be considered when designing strategies to nurture giftedness

### ***Framing Giftedness***

Teachers shared their understanding of giftedness in terms of focus, prevalence, nature, and environment, organized under the theme of "framing giftedness."

First, this study's participants consider giftedness as high abilities in a specific domain, in line with the existing research (Subotnik et al., 2011). Despite the literature suggesting that there may be universally gifted children (Davis & Siegle, 2014), the participants in the current study did not demonstrate the awareness of this phenomenon.

Giftedness is also seen by teachers in special schools as both omnipresent, occurring in everyone, and rare, present in only a small portion of society. This dual perspective aligns with Sternberg's (2023) inclusive conception of giftedness, suggesting anyone can be gifted under the right circumstances. Teachers' belief that giftedness exists in every individual supports the talent development paradigm (Dai & Chen, 2013), highlighting its potential for recognition, development, misidentification, or neglect.

Under the current conceptual model, giftedness is considered a gift from either the God or nature. The existing research complements this finding and aligns with the gifted child paradigm discussed by Dai & Chen (2013). However, in the modern world, the view that giftedness is a God-given gift is being critically re-assessed (Pihlström, 2023). Interestingly, while some teachers view giftedness as omnipresent and responsive to intervention, it is still considered as something in-born and given to a person. This shows the internal contradiction between the nature of giftedness and its manifestation in the participants' views.

Despite seeing it as inborn, teachers also perceive giftedness as malleable, occurring temporarily or at certain ages. This aligns with Subotnik et al.'s (2011) concept of developmental giftedness and Sternberg's (2023) theory of giftedness as a person-task-situation interaction. These perspectives reflect the differentiation paradigm (Dai & Chen, 2013) and position giftedness as a special educational need, seen as a potential to be fulfilled rather than a permanent trait.

### ***Identification Methods***

The findings of this research reveal that the sole method for identifying giftedness is teacher observation. Teachers assess giftedness based on a child's interests, behavior in and out of lessons, academic performance, and peer interactions. No standardized tools are employed. While observation allows teachers to notice gifted characteristics, research suggests that standardized scales can reliably identify giftedness in Kazakhstani schools (Mambetalina et al., 2024). This lack of standardized testing raises questions about the credibility of observations but also highlights the benefits of a flexible approach. The implication is the need for a systematic model of giftedness identification in Kazakhstan.

The identification process is based on relative comparison to peers and the task objective. This aligns with Renzulli's three-ring conception of giftedness, where above-average abilities are a key trait (Renzulli, 2005). However, models like the MVT:D4 expect exceptional rather than merely high abilities (Brody & Stanley, 2005). The observed abilities exceeding task objectives parallel Vygotsky's Zone of Proximal Development, used in differentiation-based giftedness identification (Dai, 2010). Similarly, Subotnik et al. (2011) distinguish between individuals with high abilities and those at the extreme end of the spectrum. This study's conceptual model, however, diverges from some existing theories.

### **Challenges in Identifying and Fostering Giftedness**

This section discusses the challenges in fostering and identifying gifted students, a main theme from the grounded theory analysis, compared with existing literature. These challenges fall into six categories: "challenges outside school," "impairment-created

challenges,” “teachers’ limited capabilities,” “curriculum adaptations,” “interpersonal communication,” and “lack of financial resources.” Each category is described separately.

The study confirms that teachers in special schools for children with disabilities face challenges similar to those encountered globally. Parents of gifted and twice-exceptional learners also share common experiences. Key challenges include environmental factors, stakeholder misunderstandings, impairment-related barriers, teacher unpreparedness, and limited financial resources. The findings align with international literature and corroborate local research.

### ***Challenges Outside School***

Gifted students with disabilities face barriers both in and outside school. This study identifies negative family circumstances as a key factor hindering progress. International research confirms that parents’ inability to provide resources affects both students and themselves (de Souza Fleith et al., 2024; Renati et al., 2017). Baimukanova (2020) reports that extended families can add stress by expressing negative attitudes toward gifted development. This emphasizes the need for policies addressing out-of-school factors in Kazakhstan.

Another challenge identified in this research is the vulnerable psychological state of gifted children. Fear of failure and self-expression issues complicate giftedness identification and development. Similarly, research highlights unique psychological struggles, such as perfectionism, fear of underachievement, and social anxiety (Moore, 2018; Renati et al., 2017; Rimm, 2007). Parents struggle to help children manage frustration in competitive environments (de Souza Fleith, 2024). Teachers’ recommendations for competitions and Olympiads, as seen later in this chapter, may

exacerbate stress, reflecting their lack of awareness of evidence-based practices for fostering giftedness.

A significant barrier is the lack of SEN preparedness in mainstream schools, which hinders referrals for gifted students. This aligns with literature on the underdeveloped state of inclusive education in Kazakhstan (Makoelle et al., 2023). Local research reveals insufficient resources in both inclusive and special schools for gifted students, including a lack of trained teachers and facilities (Daulet, 2019). These gaps create double barriers for twice-exceptional learners, as neither their disabilities nor giftedness are adequately supported.

### ***Impairment-Created Challenges***

Even in the context of special schools, children's impairment can pose a significant hindrance to the manifestation and development of their gifts.

It was revealed in the present study that impairments often result in behavioral issues like distraction, aligning with international research on twice-exceptional (2e) students, who face challenges in maintaining focus (Matthews & McKinney, 2025). A bored gifted child's lack of attention on the lesson may be misinterpreted as ADHD or ASD (Reis et al., 2014). Similar to the previous findings, this emphasizes the necessity of making additional provisions for twice-exceptional learners.

It is also difficult for teachers to assess students with impairments and hence, many giftedness manifestations remain unseen. Similar to this finding, other Kazakhstani research mentioned the difficulties of students with specific disability, for instance, speech impairment, to express their thoughts and demonstrate their high capabilities (Manabayeva, 2020). Gifted children may struggle academically because of the lack of

accommodation for their impairment. Academic struggles may arise from the lack of accommodations.

Impairments also limit access to extracurricular activities, as revealed in this study. Differentiated assessment tools are needed to help all students, especially 2e learners, fully demonstrate their abilities. However, as discussed later, differentiated instruction is a major challenge for special school teachers, who often lack inclusive teaching skills to support gifted students with disabilities.

### ***Teachers' Limited Capabilities***

Despite their extensive work supporting SEN students, teachers in special schools face challenges in identifying and fostering gifted children with disabilities.

A key issue identified is the lack of time to provide adequate attention to learners with SEND. Teachers must often deliver the same curriculum to students with varying needs while also supporting gifted students. Local research aligns with this, noting teachers struggle to adjust curricula and use differentiated approaches due to insufficient training and resources (Yermakhanova, 2019).

Teachers in special schools also face psychological stress from managing the complex task of working with children who have both disabilities and giftedness. Yermakhanova (2019) highlights teachers' fear of drawing unwanted attention to gifted students with disabilities, which can lead to peer pity. This aligns with findings that teachers often fail to meet these students' unique psychological needs.

Many teachers lack the competence to support twice-exceptional learners. Research shows inadequate training makes it harder to recognize and address twice-exceptionality (Reis et

al., 2014; Foley-Nicpon et al., 2013). This gap repeats several challenges discussed in this chapter, emphasizing the need for teacher training in SEN and gifted education.

### ***Curriculum Adaptation***

Adapting the curriculum is crucial for fostering giftedness and addressing special educational needs. The present findings revealed that gifted children with disabilities have the need for curriculum to be different and personalized for them in content, difficulty, pace and presentation. This mirrors what the differentiation paradigm entails: “When curricular content and process fall outside a student’s zone of proximal development (i.e., too easy or too hard), differentiation is called for” (Dai, 2010, as cited in Dai & Chen, 2013, p.157).

However, this study reveals that curriculum adjustment is a significant challenge for teachers. Overly simple curricula bore gifted children and may foster perfectionism and low motivation (Rimm, 2007), while overly difficult curricula can lead to underachievement, particularly for twice-exceptional learners (Baimukanova, 2020; Manabayeva, 2020). This dual challenge highlights the need for teacher training to address the unique needs of students with disabilities and giftedness. Even when adapted curricula are available, teachers find it challenging to implement multiple educational programs simultaneously.

### ***Interpersonal Communication***

This study highlights challenges in communication among key stakeholders in education—teachers, parents, and students.

The main difficulties appear between teachers and parents of 2e learners, when parents disagree with the measures recommended by teachers and expect more responsibilities than teachers are already carrying. This may be explained by unique

psychological needs that 2e learners have and parents' aspirations to meet them (Renati et al., 2017). Other research reveals that parents also criticize memorization-focused curricula that fail to address their gifted child's requirements (de Souza Fleith et al., 2024).

Misunderstandings in teacher-student and student-student interactions further hinder giftedness development, as this study found out. Negative teacher-student interactions can lead to underachievement (Manabayeva, 2020), while perfectionism often impedes gifted students' social adaptation and peer relationships (Rimm, 2007, Renati et al., 2017). Local research supports these findings (Baimukanova, 2020).

### ***Lack of Resources***

Teacher participants in this study highlighted limited financial resources as a significant challenge in gifted education, particularly the shortage of trained professionals. This issue is not unique to Kazakhstan, as the global lack of experts in twice-exceptional education persists, exacerbated by limited awareness of these learners and appropriate strategies to support them (Willard-Holt et al., 2013). Addressing this requires a systematic approach from policymakers and education stakeholders.

Results report that physical resources in special schools are also insufficient, restricting the realization of gifted students' potential. Similar findings by Moore (2018) indicate that gifted students are often underserved due to resource limitations. Interestingly, participants noted that resources are primarily allocated for broader special education needs, often neglecting gifted students. This underscores the flawed perception of giftedness, which is frequently not recognized as a special educational need.

### **Measures to Identify and Foster Giftedness among Students with Disabilities**

Findings of the present research reveal two core themes: practices employed and the recommended measures to identify and foster giftedness among students with

disabilities in special schools. The two themes widely intersect, with subsidiary themes and codes corroborating each other. Therefore, the two themes were united under the “measures to identify and foster giftedness” theme. In this part of the discussion, this united theme will be interpreted and compared against the existing literature. In general, the theme can be divided into several subsidiary themes: academic support, non-academic measures, and other measures. In the following paragraphs, the three categories are discussed.

### ***Academic Measures***

The teachers from special schools make academic provisions to foster giftedness among students with disabilities. Apart from that, they also shared recommendations in terms of academic provisions. These include differentiation, ability grouping, using technology, and rethinking the goal of education.

#### **Differentiation**

Differentiation is both a current practice and a proposed improvement strategy for teaching gifted students with disabilities, as noted by teacher participants. By implementing individual educational plans, personalizing instruction, adjusting curriculum difficulty and content, assigning creative tasks, and using alternative assessments, teachers aim to address issues such as unfit curricula, psychological challenges, and impairment-related barriers. This aligns with global trends in education, such as adaptive teaching supported by technology (Mukhamadiyeva, 2023).

Differentiated assessment is particularly effective for twice-exceptional learners, enabling them to showcase achievements in various domains. For example, it aids mathematical proficiency (Al-Hroub & Whitebread, 2019) and improves outcomes in language arts through integrated curricula (Callahan et al., 2015). These strategies are

essential for addressing under-identification among twice-exceptional students. Research by Steenbergen-Hu et al. (2020) also highlights that interventions for underachieving gifted students enhance psychosocial factors, although their academic achievement remains unaffected.

Despite its advantages, differentiation is not widely practiced in Kazakhstani schools. For instance, schools for gifted students often overlook differentiation strategies despite acknowledging diverse student needs (Nurmanova, 2018). In general, the findings indicate that teachers in special schools, while lacking specific training for gifted education, recognize the value of differentiation and apply their expertise from special needs education. These findings stress the need to treat giftedness as a special educational need, guaranteeing targeted interventions and support.

### **Ability Grouping**

The study highlights ability grouping as a popular practice among teachers and a recommended strategy for supporting gifted students. In special schools, students are grouped in classes based on performance. Other types of ability grouping suggested by participants include referring students to mainstream and inclusive schools or special schools for gifted children.

While referring gifted children with disabilities to inclusive schools may offer a balanced solution, referring them to non-inclusive mainstream schools could be harmful. Similarly, referring them to special schools for gifted children has both benefits and drawbacks. On the positive side, grouping gifted students in such schools can enhance their performance. A meta-analysis by Steenbergen-Hu et al. (2016) demonstrated that ability grouping effectively challenges students, especially the gifted ones, and improves academic achievement. Furthermore, Preckel et al. (2019) found no adverse effects on students' self-perception from ability grouping, with notable gains in achievement.

However, this practice can also lead to further segregation, where gifted children with disabilities transition from one isolated environment to another. This may harm their well-being, as gifted schools may lack resources to address special educational needs. This finding emphasizes that teachers in special schools support measures that have ambiguous consequences, despite their general inclusive views of giftedness.

### **Utilizing Technology**

Technology is a valuable resource for fostering giftedness and accommodating special needs, as noted by teachers in special schools. Despite resource limitations, teachers recognize its potential. Technology can address both giftedness-related needs and provide accommodations for disabilities. Adaptive teaching, which uses algorithms and AI to customize learning experiences, is highly effective in both gifted and general education (Mukhamadiyeva, 2023).

Local research aligns with these findings, indicating that teachers support leveraging technology for twice-exceptional learners (Yermakhanova, 2019). A review by Periathiruvadi and Rinn (2012) further emphasizes technology's benefits for gifted learners in areas such as learning, assessment, curriculum planning, and creating supportive environments. However, the lack of technological resources in special schools remains a significant challenge. Addressing this gap presents an opportunity for policymakers to improve educational provision in Kazakhstan.

### **Rethinking the Goal of Education**

Teacher participants in present study emphasized a novel approach to the purpose of education, focusing on helping students achieve social inclusion. Their efforts prioritize developing daily skills over academic excellence. While this perspective is valuable, it contrasts with views from teachers in schools for gifted students. Hernández-Torrano et al.

(2020) found that these educators view the goal of gifted education as fostering giftedness for societal benefit. International research, however, suggests flexibility in defining the purpose of gifted education (Winner, 2000).

An implication of this finding is a mismatch between the goals of gifted and special education, thus making twice-exceptional learners left marginalized as they cannot pursue two goals simultaneously. This highlights the urgent need to rethink educational policy in Kazakhstan, making gifted education more inclusive and addressing the unique needs of twice-exceptional learners.

### ***Non-Academic Measures***

The second category of measures that teachers think should be utilized to help gifted students with disabilities thrive are non-academic measures, including taking part in competitive events and extracurricular activities.

#### **Competitive Events**

Olympiads and talent contests have long been integral to Kazakhstani education. Teacher participants view these events as effective tools for fostering giftedness, aligning with findings by Hernández-Torrano et al. (2020), where educators in special schools for gifted students also value Olympiads for their developmental benefits.

However, competitiveness as an educational approach entails ethical concerns, contrasting with more communal educational philosophies (Thorkildsen, 1994). The challenges discussed earlier in this chapter indicate that gifted children often face psychological difficulties in high-pressure environments. For twice-exceptional learners, these issues are even more challenging, suggesting that while Olympiads are a deeply rooted tradition, their role in education should be critically reviewed to avoid putting extra stress on gifted students.

### **Extracurricular Activities**

As the resulting conception of giftedness showed that the teachers in special schools hold views aligning with the talent development paradigm, they strongly support encouraging students attend extracurricular activities to hone their talents and interests. Yermakhanova (2019) found that teachers from schools for gifted students similarly support their engagement with extracurricular activities, as it helps develop non-academic skills and address impairment-related barriers. Enrichment practices also enhance cognitive development, as highlighted by Sastre-Riba (2013). These findings align with international enrichment practices, supporting the inclusion of extracurricular activities as a critical measure for fostering giftedness.

### ***Other Measures***

In this category, teachers emphasized the role of stakeholders' involvement and sufficient resource provision to improve the ways in which gifted students develop their capabilities.

### **Stakeholder Involvement**

The results suggest that the development of giftedness involves three key stakeholders: parents, teachers (and school administration), and students. The findings suggest enhancing collaboration among these groups through initiatives such as peer mentoring, stakeholder support networks, and motivational interviewing, which have been shown to improve students' attitudes toward school (Steenbergen-Hu, 2020). Addressing miscommunication among stakeholders, as reported in the challenges section, requires fostering a culture of acceptance and adopting a team-based approach, as recommended by Speirs Neumeister (2024). These strategies should be incorporated into schools' visions and adopted by the stakeholders in a collaborative manner.

## **Resource Provision**

Adequate resources are foundational for the development of talents in gifted students with disabilities. The findings in the present study indicate that schools primarily rely on limited governmental resources, supplemented by external sponsorships and community charity. This corroborates other research that suggests both exogenous (social, material, cultural) and endogenous (physiological, psychological, personal learning) resources are critical for balanced development (Chandler & Ziegler, 2017). However, the inadequate allocation of resources remains an urgent issue in Kazakhstani education (“IAC” JSC, 2021), highlighting the need for greater investment to support gifted and 2e learners effectively.

## **Implications for Theory, Policy, and Practice**

The results of the present chapter entail several implications for international and Kazakhstani theory, policy, and practice for gifted, special, and inclusive education.

### ***Theoretical Implications***

First, the results demonstrate that teachers in special schools hold a multivariuous conception of giftedness, as they admit that giftedness can be manifested in different domains, there is a multitude of external and internal factors affecting the manifestation of giftedness, including disability, and they acknowledge the malleability of giftedness. This view mostly aligns with the talent development paradigm and to a lesser extent, to the gifted child paradigm (Dai & Chen, 2013).

However, the “Challenges” and “Measures” themes demonstrate that giftedness is perceived as a special educational need – the challenges that gifted students face are very similar to other, more traditional special educational needs conceptions, and the measures to foster giftedness strikingly resemble the measures to address general SEND. Hence, it

can be concluded that the conceptualization of giftedness in Kazakhstan has a potential to develop into the differentiation paradigm (Dai & Chen, 2013).

### ***Implications for Policy***

The status of a gifted child with disabilities, i.e., a twice-exceptional child, is not secured in Kazakhstani Law on Education and the program for educational development. The findings of the present paper suggest that these learners should be defined and supported on all levels of policy making and implementation.

Moreover, giftedness is not considered a special educational need in Kazakhstani educational policy, hence gifted students are underserved and under-identified. It is essential to secure the status of a gifted child as the one with special educational needs, and design a support system accordingly.

Another implication is the reported need for a systematic and inclusive policy to identify and foster gifted children, among them twice-exceptional learners.

### ***Implications for Practice***

Despite the participants in the present study utilizing a wide variety of strategies to foster giftedness, they lack systematicity and training. It is recommended to design practical guidelines for teachers to 1) learn how to identify gifted children using inclusive tools; 2) learn how to develop their gifts; 3) learn how to solve the challenges encountered by gifted and twice-exceptional students. The wide range of measures recommended by the findings can be spread around the teaching community to help them address the needs of gifted students.

## **Chapter 6: Conclusion**

In this chapter, the main findings obtained from the grounded theory analysis of the data derived from semi-structured qualitative interviews, will be presented. The results are presented in accordance to the themes emerged from grounded theory analysis, i.e., the conceptual model of giftedness, the challenges and measures to identify and foster giftedness among students with disabilities in Kazakhstan. Moreover, this chapter discusses the strengths and limitations of the present research. The chapter then focuses on the implications and recommendations for further research in relation to the importance and benefits for inclusive, gifted, and special education in Kazakhstan.

### **The Conceptual Model of Giftedness**

The primary aim of this study was to gather the conceptualization of giftedness through the lens of special education. In the result, I was able to describe a conceptual model of giftedness as perceived by teachers from special schools for children with disabilities. The resulting model appeared to consist of various conceptions of giftedness, showcasing an interesting amalgamation of narrow and broad, exclusive and inclusive conceptions of giftedness of teachers from special schools. The teachers demonstrated that they hold inclusive understanding of the types of giftedness, ranging from the traditional giftedness manifested in high intellectual capabilities, to talents like musical, artistic, and bodily-kinesthetic ones. The conceptual model acknowledged specific socio-behavioral and psycho-emotional characteristics of gifted children with disabilities. Most importantly, the resulting conceptual model admits the malleability and situation-dependence of giftedness, emphasizing the potential to develop the conception under the differentiation paradigm (Dai & Chen, 2013). The results also showed some conflicting findings, demonstrating that teachers' conceptions of giftedness is multi-faceted and not systematic, reiterating Borland's (2005) idea to critically re-examine the phenomenon of giftedness.

### **The Challenges in Identifying and Fostering Gifted Children with Disabilities**

The research revealed that the development of twice-exceptional learners in special schools is challenged by academic and non-academic factors. Gifted children with disabilities experience negative influence of their environment, like their family situation and psychological well-being. Apart from that, their impairment due to lack of adequate accommodation, hinders the manifestation and development of their potentialities. Impairment-created challenges include both behavioral and physical barriers in education. The teachers in special schools admitted their lack of preparedness to meet the advanced learning needs of their children, especially in terms of curriculum differentiation. From the teachers' perspective, gifted children with disabilities also experience the consequences of misunderstandings between parents, teachers, and students, as well as the lack of resources to help them develop their potentialities. These challenges are familiar to every child with a special educational need, emphasizing that giftedness should be viewed as one (Lo et al., 2022).

### **The Measures to Identify and Foster Giftedness**

The results of the study revealed a wide range of measures that are already used and are recommended to use by teacher participants to help develop giftedness among students with disabilities. These include differentiation to meet the special learning needs of twice-exceptional students. Ability grouping is also a measure supported by the teacher participants, despite it being an exclusive practice. Technology is pronounced as an important aspect of talent development. The teacher participants also refer their gifted children with disabilities to Olympiad participation, however, that entails certain negative consequences for the well-being a child. A multi-faceted enrichment is another measure identified by this research study. Finally, it was revealed that stakeholder engagement and resource provision are highlighted as important measures in the identification and fostering

giftedness among students with disabilities in Kazakhstan. Similar to challenges, the strategies to accommodate for giftedness widely intersect special needs accommodations, implying that gifted and special education can be mutually beneficial.

### **Strengths and Limitations**

The present research followed a postmodernist philosophy and grounded theory as a method of data analysis. This allowed to create a conceptual model of giftedness as perceived by teachers from special schools for children with disabilities, outside existing theoretical framework. This resulted in a unique conception of giftedness that partly supports and contradicts the theory of gifted education, as well as contributes to it.

However, the study also entails certain limitations. First, the process of data collection did not involve quality probing of some questions due to limited time the participants were ready to devote to the interviews. This resulted in gaps in clarity of the findings. Moreover, the initial plan to conduct ten interviews for richer data was changed due to the need to discard some data for research credibility.

### **Implications for Further Research**

The implications of the results of the present study call the need to investigate the phenomenon of twice-exceptionality in Kazakhstan in a bigger scale and a variety of methodological approaches. This research also appeals to investigate giftedness from a critical perspective, looking at it as a special educational need. Moreover, research has to be conducted from the perspective of inclusive education, as this is the primary commitment of the educational system in Kazakhstan. Strategies to identify and support twice-exceptional learners need to be investigated in greater detail. The present research also revealed unique phenomena, such as decompensation and “preserved intelligence”,

which were not found in international literature. Thus, these phenomena need to be studied as well.

### **Personal Reflection**

Thesis work became an unforgettable journey for me and my community. This work is the most difficult and rewarding endeavor in my life. I have put a lot of my time and effort into this project, and throughout the process, I have gathered an enormous amount of knowledge and skills in research. My skills of reading and synthesizing literature improved immensely, and the experience of conducting a real field data collection taught me many lessons, both research- and life-wise. This journey is a testament to the principle of not giving up. Most importantly, I realized there is always room for improvement, and hard work will lead to good results.

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## Appendix A: AI Declaration Form



Thesis Title:

### Declaration of the Use of Generative AI

I hereby declare that I have read and understood NUGSE's policy concerning appropriate use of AI and composed this work independently (please check one):

- with the use of artificial intelligence tools, or  
 without the use of artificial intelligence tools.

*(If you have used AI tools as defined in the GSE policy document, please complete the rest of this form.)*

During the preparation of this thesis/examination, I used \_\_ChatGPT\_\_ to \_\_reduce the word count in my findings and discussion chapters by prompting it to make my writing more efficient, since my word count exceeded 25,000 words\_<sup>1</sup>.

I also declare that I

- am aware of the capabilities and limitations of AI tool(s),  
 have verified that the content generated by AI systems and adopted by me is factually correct,  
 am aware that as the author of this thesis I bear full responsibility for the statements and assertions made in it,  
 have submitted complete and accurate information about my use of AI tools in this work, and  
 acknowledge that there may be disciplinary consequences if I have not followed NUGSE's guidelines regarding appropriate AI use.

Name: Svetlana Kobushko

Signature:

Date: April 28<sup>th</sup>, 2025

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<sup>1</sup> Examples: brainstorm ideas / find or select sources on a topic / paraphrase / structure and organize the written text / edit the text for clarity and grammar / ask for tips to improve coherence / cite and reference sources

## Appendix B: Informed Consent Form

### INFORMED CONSENT FORM

#### Conceptualizing giftedness among students with disabilities in special schools in Kazakhstan.

**DESCRIPTION:**

Dear Sir or Madam,

My name is Svetlana Kobushko, I am a student at the Master of Science in Educational Leadership: Inclusive Education program at Nazarbayev University. As a part of my degree requirements, I am conducting a research study aimed at conceptualizing giftedness among students with disabilities in special schools in Kazakhstan. You are kindly invited to participate in this research study.

You will be asked to answer a number of questions on how you understand giftedness, what traits are associated with giftedness from your professional experience, your opinion on the gifted education in Kazakhstan and equity in access to it, and other questions related to the phenomenon of giftedness among students with disabilities. Your personal information will not be collected for this interview, and any information that can identify you will be thoroughly protected. The data obtained from your participation will be analyzed and compared with the information provided by other participants. Your contribution is very valuable for shaping the conceptualization map of giftedness among students with disabilities in Kazakhstan, and your participation will contribute to the development of gifted, special, and inclusive education in our country.

**TIME INVOLVEMENT:** The interview will take approximately one hour.

**RISKS AND BENEFITS:** The risks associated with this study are present, but they can be mitigated as follows. The first risk is the issue of voluntary participation. If you feel that you are being imposed to participate in the interview, please withdraw at any time before or during the interview. If you have already given an interview, but wish to withdraw your answers, you have the right to do that.

Another risk is reputational. If you feel like the words and phraseology you have used in the interview are controversial or you disagree with them, please, amend your answer after you are provided with the transcribed version of the interview. You are also entitled to the right

to withdraw or amend your answer after you receive a copy of the findings chapter, where the interpretations of your answers are described.

This study may indirectly benefit the state of gifted, special, and inclusive education in Kazakhstan. The findings of this study can contribute to the understanding of giftedness in people with disabilities and inform strategical changes to make gifted education more inclusive and accessible to people with disabilities.

**PARTICIPANT’S RIGHTS:** Your participation is completely voluntary. You have the right to withdraw from the interview or some questions at any time. Your decision to participate in the interview will not affect your professional standing. You are entitled to confidentiality, and your name, workplace, or other identification information will not appear in any publicly available documents. The fact of your participation is confidential.

**CONTACT INFORMATION:**

*Questions:* If you have any questions, concerns or complaints about this research, its procedures, risks and benefits, contact the Master’s Thesis Supervisor for this student work, Oliver Mutanga, at [oliver.mutanga@nu.edu.kz](mailto:oliver.mutanga@nu.edu.kz) or call +7 (7172)69-4742, or the researcher, Svetlana Kobushko, at [svetlana.kobushko@nu.edu.kz](mailto:svetlana.kobushko@nu.edu.kz) or call +7-708-620-42-88 .

*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 Nazarbayev University Graduate School of Education Institutional Research Ethics Committee at [gseresearchcommittee@nu.edu.kz](mailto:gseresearchcommittee@nu.edu.kz).

Please sign this consent form if you agree to participate in this study.

- I have carefully read the information provided;
- I have been given full information regarding the purpose and procedures of the study;
- I understand how the data collected will be used, and that no identifying information will be collected;
- I understand that I am free to withdraw my participation from the study at any time without giving a reason;
- With full knowledge of all foregoing, I agree, of my own free will, to participate in this study.

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

## **Appendix C: Interview Protocol**

### **Interview Protocol**

**Date:**

**Participant index:**

**The interview scenario:**

- 1) Greetings
- 2) Introduction of the researcher and the participant
- 3) Introduction of the background of the research
- 4) Informing the participant about the duration, format, and their rights
- 5) Signing the informed consent form
- 6) Asking if the participant is ready to start
- 7) Asking for the permission and informing the participant about beginning the recording
- 8) Conducting the interview
- 9) Informing the participant about stopping the recording
- 10) Saying thank you and goodbye to the participant

**Questions for the interview:**

1. Can you describe your role and responsibilities at this school, particularly in relation to working with diverse learners?
2. How long have you been working here?
3. How do you define or conceptualize "giftedness" in the context of your teaching?
4. In your experience, what traits or behaviors do students with giftedness typically exhibit?
5. Can you share an example of a student you believe fits your description of giftedness? What characteristics made you identify them as gifted?
6. Have you encountered other definitions or views on giftedness? How do these compare with your own understanding?

7. In your view, can students with disabilities also be considered gifted? If so, in what areas or ways do their gifts manifest?
8. How does your school identify and support students who are gifted? What specific strategies or programs are in place?
9. In your experience, what strategies or approaches can be used to nurture the gifts and talents of students with disabilities?
10. What challenges do special schools face in identifying and fostering giftedness in students, particularly those with disabilities?
11. In your opinion, what steps or changes can help overcome the challenges you've mentioned?
12. How can gifted education change the learning experience of students with disabilities? Can you provide examples of how gifted education has impacted students with disabilities in your school?
13. Do you believe that the current educational programs in Kazakhstan adequately support gifted students, including those with disabilities? If changes are needed, what would you recommend?
14. How does your school differentiate between students who are gifted and those who are high-achieving?
15. What role do you think teachers' perceptions play in identifying students with giftedness, particularly those with disabilities?
16. What professional development or training do teachers receive in supporting gifted students, including those with disabilities?
17. In what ways do you believe the school environment or curriculum could be adjusted to better accommodate and nurture gifted students with disabilities?

## Appendix D: Open Coding Procedure

(0:26 - 1:04)

How do you understand giftedness in general?

So, I understand giftedness as... I think that among our students, who have preserved intelligence, there are gifted children. Since I work at a school for children with visual impairments, in general, our children have good memory and musical abilities.

In our school, giftedness is manifested this way...they have wonderful voices, perfect pitch, perfect olfactory abilities, tactile sense are also developed, and a really good memory.

- SK **Svetlana Kobushko**  
 Decompensation: good memory of visually impaired children
- SK **Svetlana Kobushko**  
 Decompensation: Visually impaired children have high musical abilities
- SK **Svetlana Kobushko**  
 Vocal abilities
- SK **Svetlana Kobushko**  
 Perfect pitch
- SK **Svetlana Kobushko**  
 olfactory abilities
- SK **Svetlana Kobushko**  
 tactile sense
- SK **Svetlana Kobushko**  
 good memory

### Appendix E: Axial Coding Procedure

Central theme	Category	Code	Citation	Int.index
	Creative giftedness	Creative thinking	У меня был ребенок, который брал вот такой стаканчик и магнитики. Он здесь, знаете, какие узоры выкладывал? М. был. Но это, конечно, у него дар был творческий.	P3 N6
			Развитая фантазия, мышление	P9 N9
	Musical talent	Musical abilities	mostly our children, they have a good memory and musical abilities	P1N4
			Visual impairment yes, there are a lot of talented children among these children, because other analyzers are developing, and there are a lot of musicians among them	P5 N9
			Then our vocals are developing very well.	P1N4
			beautiful voices	P1N4
			perfect pitch	P1N4
			They don't see notes, they adapt differently, by ear	P1N4
			Here is a boy in my class in the sixth grade, D. Here he is, when he plays, he listens attentively to this sound. And he tries to make this sound clearer. And he plays the dombra very well for his age.	P1N4
			...or can sing well	P3 N6
			She sings, she has a voice, it's something else. Our music teacher says that people learn this for 10-15 years, but God gave it to her, nature gave it to her.	P3 N6
			Let's say I have a girl who is not interested in studying at all. In general, she is not interested in anything. But musically, she is gifted and sings. She also plays instruments, that is, she plays the violin, the button accordion, and the accordion...	P10 N4
			Сейчас известный депутат К. тоже учился в нашей школе. У него были вообще артистичные способности. Он очень	