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TWICE-EXCEPTIONALS: LET'S REALIZE GIFTED AND TALENTED STUDENTS WITH LEARNING DISABILITIES!

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A stylized human figure logo consisting of a blue circle for the head, a yellow circle for the torso, and a blue and yellow shape for the arms and legs, all contained within a white outline of a person with arms raised.

Twice
Exceptional

TWICE EXCEPTIONAL AWARENESS TRAINING PROGRAM

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1. PREFACE

“Sometimes we go up to the sky and watch the world with enthusiasm, sometimes we crash to the earth, and the world watches us in mockery.”

When we came into this world, we were not alone. During our lives, we all wished for our families, friends, and loved ones to be by our side. We were all like fingers from the same hand, yet not identical. Some of us became thumbs, while others became pinkies. We were different from each other but not privileged over one another. Or at least, that’s what we hoped for. Some became happy stars, while others ended up unhappy and lonely. We could never quite understand if the people around us truly loved us. We exhibited behaviours that were not suitable for our age, nature, or surroundings. We unintentionally broke everything around us. The more we broke, the more we were broken. Were we sick, or were we just children with different perceptions and emotions, seeking to be understood, to socialize, to be accepted, and searching for a branch to hold onto in the ups and downs of life?

This study emphasizes that every individual is “exceptional” and builds upon the fact that some are “twice exceptional” due to their intellectual or socio-emotional development. It is written with the belief that these children’s differences can be understood and with the conviction that with small touches, these differences can be harmonized and transformed into their potential.

The recognition of these children, whom we refer to as the above-ground resources of humanity, and the revelation and development of their competencies are humanitarian duties. The “Twice Exceptional Awareness Program” prepared for this special purpose aims primarily to create awareness among teachers and parents, but its target audience is every segment of society.

We dedicate this study to twice-exceptional children and the teachers who accompany them on their journey.

2. INTRODUCTION

Individuals who are diagnosed with giftedness/talent and at the same time have a deficiency, difficulty or disability in at least one area are called twice-exceptional (2E) (Neihart, 2008). These individuals may possess not only exceptional abilities but also conditions such as specific learning disabilities (SLD), attention deficit hyperactivity disorder (ADHD), or autism spectrum disorder (ASD) (Şentürk, Kefeli, & Emecan, 2022). While this definition is generally accepted epistemologically, some struggle with its acceptance ontologically, based on the idea that exceptional intelligence and disability cannot coexist simultaneously in an individual (Baum, Rizza, & Renzulli, 2006). Despite ongoing debates due to this paradoxical nature, there has been an observed increase in studies on this theme, especially in the United States, European countries and Turkey in recent years.

From this standpoint, it is proposed that awareness initiatives regarding twice-exceptional students, who possess different cognitive and socio-emotional development characteristics compared to their peers identified solely as intellectually gifted or requiring special education, should be promoted.

Increased awareness not only promotes equal opportunities in education but also supports twice-exceptional students in receiving the education they deserve, revealing and enhancing their competencies. With these thoughts in mind, the overarching goal of the “Awareness Training Program” designed for twice-exceptional students has been determined to foster awareness of the theme. Accordingly, the program aims to facilitate awareness development among teachers and parents, contributing to the establishment of a positive school environment tailored to twice-exceptional students.

In the development of the program, a comprehensive review of literature was conducted, encompassing legal regulations such as the “Education for All Handicapped Children Act” (1975), the “Individuals with Disabilities Education Act” (IDEA, 2004), empirical studies supported by certain funds worldwide addressing the existence of twice-exceptional students, and research conducted on twice-exceptionals between 1980 and 2000. This process led to the identification of program outcomes, which were prepared based on a taxonomic approach, considering components related to the concept of twice-exceptionality (such as the concept of giftedness/ talent, special education, etc.), the characteristics of twice-exceptional students, and their socio-emotional needs.

The instructional situations addressed in the program were prepared according to the 5E Learning Model. Contents related to the teaching-learning process were designed as a detailed guide for implementers and as activities fostering an active learning process for participants. The program was crafted in a flexible structure, taking into account differences

in socio-cultural background, educators' knowledge and skills, participants' readiness levels, the educational environment, and other variables, thereby allowing for enrichment and differentiation in the teaching-learning process.

The target group of the program, which focuses on gifted and twice-exceptional children, includes teachers, teacher candidates, educators and parents, as well as all relevant stakeholders involved.

3. BASIC APPROACH AND MODEL OF THE PROGRAM

The Twice-Exceptional Awareness Training Program has been designed with an inclusive approach that encompasses all stakeholders involved, including teacher candidates, teachers, and parents, among others. The main objective of the program is to raise awareness about twice-exceptional students. In line with this goal, the learning outcomes in the program, which was designed with a holistic approach, have been determined using a taxonomic understanding. Various methods, techniques have been employed in the educational situations designed within the 5E Model to ensure active participation of participants. Different assessment tools (such as self-assessment, checklists, etc.) focusing on process and outcome have been used based on the content of the activities. For overall program evaluation, it is recommended to use the "Twice-Exceptional Awareness Scale" and the "Program Assessment Form".

4. PROGRAM LEARNING OUTCOMES

1. Define the concept of giftedness.
2. List the common characteristics of gifted students.
3. Explain the characteristics of gifted students with examples.
4. Explain different strategies for teaching gifted students.
5. Predict the challenges that gifted students experience throughout their education process.
6. Recognize the significance of addressing the social-emotional needs of gifted students.
7. Define the concept of twice-exceptionality.
8. Distinguish the differences between the concepts of twice-exceptionality and giftedness.
9. Explain twice-exceptionality along with its main components (giftedness, learning difficulties, ADHD, SD, etc.).

5. PROGRAM CONTENT

5.1 SPECIAL EDUCATION

Education is an inevitable necessity for individuals to adapt to the ever-evolving and changing world. When considering the education process that encompasses a significant portion of individuals' lives, the most prominent factor that stands out is undoubtedly individual differences. Initially, individual differences are observed in individuals' physical appearances. However, individual differences are not only limited to physical appearance but also reflect in individuals' learning characteristics. Each individual's learning style, pace, goals, and application of learned knowledge may vary. The existence of individual differences in the education process necessitates planning and implementation of education processes according to certain approaches and principles.

One of the most important requirements for conducting educational activities is to ensure equal opportunities in education. In the education process, it is essential to provide equal educational opportunities to all individuals, considering their individual differences, valuing each individual, and allowing each individual to progress at their own pace by considering their learning style. Equal educational opportunities that consider individual differences are fundamental requirements of democratic and fair societal approaches and methods. Considering that classrooms in our schools do not consist of students with similar characteristics in terms of physical, behavioral, social, and academic aspects, it is necessary, albeit challenging, for teachers working in these classrooms to respond to the learning needs of all individuals with different experiences and learning characteristics. In this context, within the framework of equal opportunities in education, educational services should be provided to special individuals according to their needs.

When considering individual differences, some students may not benefit from the general education curriculum in the classroom at the same level as their typically developing peers and may require special education. Special education involves providing comprehensive, research-based assessment and instruction, support services, within specially designed programs to students with disabilities or exceptionalities in cognitive, behavioral, socio-emotional, physical, and sensory domains (Bryant, Smith, & Bryant, 2008). In achieving desired goals in special education practices, it is crucial to prepare and implement individualized education programs tailored to address all areas of the individual's development, taking into account their individual differences. Therefore, it is necessary to act within certain principles and systematically in the provision of special education services.

The primary goal in the education process of individuals with special needs is to

contribute to their becoming self-sufficient throughout their lives, acquiring independent living skills, and ensuring their social integration (Cavkaytar, 2013). The main aim in ensuring that services are provided in accordance with the principles stated in the field of special education is to deliver special education services in the healthiest way possible.

For individuals to benefit from special education services, they need to receive a diagnosis. Medical and educational evaluations are conducted to determine whether individuals have special needs. Based on the results of formal and informal assessments conducted in medical and educational evaluations, individuals are diagnosed. Following diagnosis, individuals are placed in relevant educational environments within the least restrictive educational setting framework.

Special Education: Numbers and Ratio

According to the World Health Organization's report, it is stated that 1.3 million people in the world experience some form of disability, and this ratio corresponds to approximately 16% of the world's population. Looking at these figures, one out of every six individuals experience some form of disability. Additionally, disabled individuals are at twice the risk of developing conditions such as depression, asthma, diabetes, stroke, obesity, or poor oral health (World Health Organization, 2023).

According to data from the United States for the 2021-2022 academic year, it is stated that there are 7.3 million students receiving special education services under the Individuals with Disabilities Education Act (IDEA) in the age range of 3-21, and this ratio constitutes 15% of students in public schools (National Center for Education Statistics, 2023).

Generally, when looking at the numbers and ratios related to disabled individuals, it can be seen that the numbers are not low and are increasing day by day. Therefore, in light of this data, it is important to plan well for the services to be provided to individuals with special needs according to their service areas (education, health, etc.); this will not only ensure that individuals with special needs receive better services but also minimize potential problems in the future delivery of these services.

5.2. GIFTEDNESS

The concept and nature of giftedness

Understanding the perspective of giftedness depends on the historical and cultural context (Limont, 2010). The most prominent philosophers over the centuries have been passionate about the mystery of ability. Confucius (551-479 BC) believed that gifted children are the wealth of a nation and should be given special care and support. He stressed that not

only those from wealthy families should be supported but also those from low-income families by placing them in the courts of mandarins or emperors (Limont, 2005). Representatives of ancient Greece, including Socrates (469-399 BC), advocated the theory that human beings are born with specific abilities or a certain potential of abilities. Aristotle advocated that everyone should be assigned roles according to the paradigm of ability they possess. He also emphasised that aptitude is not a fixed property and should be developed (Limont, 2010). It is important to emphasise that not every person who, in retrospect, has been identified as gifted or talented develops in areas of human functioning better than average people. Ability and talent are not infrequently hidden in a person, and therefore, conventional assessment of an individual's abilities, although regarded as valid, may lead to erroneous conclusions (Gierczyk, 2019). This is shown by the example of three individuals: Einstein, now recognised as one of the greatest physicists of the twentieth century, did not stand out from his peers as a child - he did not begin to speak until the age of four and to write at the age of seven. Caruso, the Italian opera singer known as the 'king of tenors', was told by one of his school teachers before his career that he could not sing because he did not have the right voice for it. On the other hand, Edison's mother heard from his teacher that there was 'something wrong' with her son's brain because he had an oversized head (CCEA). There are three stages in the approach to the colloquial view of giftedness and giftedness research: theological, metaphysical and empirical. The stage or theological approach views gifted individuals as having a higher power, supernatural beings. This position was evident in, for example, the views of Plato or Confucius, as mentioned above, who wrote about 'heavenly children'. In the metaphysical approach, there is a shift towards associating talents as more human and less supernatural. At the same time, the association, sometimes also observed nowadays, of a connection between genius and madness and mental illnesses has been strengthened. In the empirical period that began in the twentieth century and continues to this day, the identification of giftedness is based on scientific methods and research (Al-Hroub & El Khoury, 2018), and the multiplicity and diversity of definitions of giftedness lead researchers to categorise and synthesise them (Ledzinska, 2008). Stanislaw Popek collated the various conceptions of capabilities and concluded that one can speak of at least four approaches to them. Abilities in them are described as (Łukasiewicz-Wieleba, 2018):

- *synonymous with efficiency, proficiency and speed of the result, outcome; as a more significant or better capacity of, for example, memory; as a higher quality, depth and breadth of analysis, synthesis, and comprehension process; and as individual differences in the performance of people in comparable or similar situations;*
- *the actual ability to do something, a skill; as the potential ability to acquire some skill, as the maximum potential level of achievement;*

- *a feature of cognitive processes, relatively invariant, influencing high levels of achievement;*
- *individual characteristics of an individual's personality through which certain habits, skills and abilities can be formed.*

Analysing the theories of ability described in the literature, it is possible to see their wide variation. Over more than a century of research on abilities, they have been described as immutable and belonging to each individual, having their genesis in genetic determinants, and as those dependent on the individual's culture, environment and learning. Contemporary dynamic models of ability emphasise the impact of social and political influences on an individual's potential, the possibility of change and the importance of an individual's own activity for the development of ability (Łukasiewicz-Wieleba, 2018). Even though attempts have been made for many years to systematise the terminology related to giftedness and talent, the terminological dilemma remains. There is no unambiguous and universal definition of an exceptionally gifted child. Almost 100 meanings of the term 'giftedness' (Freeman, 2005) refer to a child's above-average development in psychological spheres such as intelligence or creativity. However, they often refer to aspects of the child's achievement and measurable academic performance (Hany, 1993). In English-language terminology, researchers use a wealth of terms on the issue, including ability, gifts, capacity, bright, aptitude, skills, gifted, talented, exceptional talent, prodigy, genius, and twice-exceptional. Finding and agreeing on a single definition of ability is difficult for two reasons. Firstly, a definition may narrow the range of areas considered in qualifying children as gifted. For example, a programme may only consider academic achievement, excluding art, theatre, music, leadership, public speaking or creative writing. Secondly, the definition may set a required level of excellence that must be achieved to be considered gifted (Al-Hroub & Khoury, 2018).

Contemporary research on ability is related to the psychology of individual differences. In the 19th, 20th and 21st centuries, the psychology of intelligence, creativity and motivation provided the basis for understanding ability. Currently, the importance of intelligence level for ability is not denied, but it is considered an insufficient indicator of outstanding ability and requires support from the external environment and internal factors such as motivation, self-denial and creative thinking, among others.

Since the development of aptitude, giftedness and talent is determined by various environmental, psychological and genetic factors, the diagram presented below (Diagram 1) is a gross simplification of the problematic nature of aptitude and is for illustrative purposes only.

Diagram 1: Hierarchy of capabilities



Psychologists, sociologists and educators dealing with giftedness have been struggling for many years with, among other things, a clear definition of the concept of giftedness, which has led to the development of many theoretical models that also have their application value (Dyrda, 2012; Acar et al. 2016, p.81). There is no unambiguous and universal definition of an exceptionally gifted child. As hinted at earlier, there are nearly 100 meanings of the term 'giftedness', almost all of which refer to the child's above-average development in psychological spheres such as intelligence or creativity. However, they often refer to aspects of the child's achievement and measurable learning outcomes (Hany, 1993). Sidney Moon (2006) distinguishes between two types of definitions of ability:

- conceptual (conceptual), which are based on theoretical concepts of ability in which an able person is described,
- operational, which operationally translates concepts of ability into the language of practice and provides information related to the process of diagnosing gifted individuals from the population

5.3. TWICE EXCEPTIONALITY

The concept of twice-exceptionality has emerged from the recognition of intersecting points between the fields of special education and gifted education over many years of research (Baldwin et al., 2015a). Over time, there have been numerous definitions of the twice-exceptional concept, with one of the earliest definitions being the simultaneous presence of giftedness and any learning disability in a student (Klingner, 2022). The terms such as "dual exceptional," "learning disabled," "gifted handicapped" and "gifted students with learning difficulties" have been used in literature to refer to these students in this group (Şentürk et al., 2022a). However, in recent years, there has been consensus and widespread use of the term "twice-exceptional (2e)" (Amiri, 2020). It addresses the needs of students who possess a "unique" cognitive capacity or talent along with a difficulty, disorder and/or disability (Baldwin et al., 2015b) The "Individuals with Disabilities Education Act" (IDEA) in the United States classifies disabilities into 13 different categories: "intellectual disability, hearing

impairment (including deafness), speech or language impairment, visual impairment (including blindness), emotional disturbance, orthopaedic impairment, autism, traumatic brain injury, deaf-blindness, other health impairments, specific learning disabilities, or multiple disabilities” (IDEA, 2004). Twelve of these categories (excluding intellectual disability) can coexist with giftedness. Foley Nicpon et al. (2013) described the convergence of giftedness and disability as a paradoxical situation and emphasized the necessity of a common definition to describe the characteristics and needs of twice-exceptional students. In this context, a commonly agreed-upon operational definition has been developed.

“Twice-exceptional learners are students who demonstrate the potential for high achievement or creative productivity in one or more domains such as math, science, technology, the social arts, the visual, spatial, or performing arts or other areas of human productivity AND who manifest one or more disabilities as defined by federal or state eligibility criteria. These disabilities include specific learning disabilities (SLD); speech and language disorders; emotional/behavioural disorders; physical disabilities; autism spectrum disorders (ASD); or other health impairments, such as attention deficit/hyperactivity disorder (ADHD). These disabilities and high abilities combine to produce a unique population of students who may fail to demonstrate either high academic performance or specific disabilities. Their gifts may mask their disabilities and their disabilities may mask their gifts” (Reis et al., 2014).

In educational settings, twice-exceptional students can manifest in three different groups affected by this masking effect (Baum, 1990) and each group has unique challenges in identification and intervention. The students;

1. identified as gifted but may struggle in certain academic domains and fail to demonstrate the expected level of achievement. During elementary school years, the students in this group can manage to get good achievement scores but as curricular and organizational demands rise and exceed their ability to compensate at secondary or high school years, their achievement levels begin to drop.
2. diagnosed with special education needs and their giftedness may be overlooked or unaddressed because of average or below-average performance in certain academic domains. These children are referred for special educational services, but not provided with advanced learning opportunities for their strengths.

3. who do not exhibit signs of either special education needs or giftedness, as their abilities and disabilities hide each other mutually. In this case, they can be perceived as “average” and identified as neither gifted nor learning disabled.

The coexistence of giftedness and disabilities can complicate the identification process, and make it difficult for teachers, educators and parents to recognize, understand and support twice-exceptional students. The masking effect in twice-exceptionality can result in misdiagnosis or missed diagnosis, where a student’s giftedness may compensate for their learning challenges or vice versa, leading to underrepresentation and under accommodation of twice-exceptional students. In this case, they cannot have sufficient access to the education and socio-emotional support they really need (Şentürk et al., 2022b). Thus; educators, teachers, parents and other professionals need to be aware of the twice-exceptionality phenomena and masking effect to ensure that the exceptionalities of twice-exceptional students are recognized and addressed effectively in educational settings.

As understood, identification of twice-exceptional students is a complex process that requires a nuanced approach. Traditional identification models may not always accurately define these students, highlighting the necessity for more precise and inclusive identification processes. Despite the challenges, screening models have been developed to assess variability in academic areas like reading and maths to identify these students (McCallum et al., 2013). Psychometric and dynamic assessments based on the curriculum have also been explored to identify cognitive characteristics in twice-exceptional students who show both high abilities and specific learning disabilities (Al-Hroub, 2021). It requires a comprehensive and multidimensional approach that considers both their exceptional abilities and disabilities. The identification strategies for twice-exceptional students can be summarized by the

Davidson Institute as follows:

- Adopt a comprehensive strategy and multiple measures for identifying twice-exceptional students, incorporating a variety of assessment methods including written tests and behavioural evaluations.
- Conduct both structured assessments and informal observations to gain a holistic understanding of the student’s strengths and challenges.
- Analyse IQ test results carefully, recognizing that many twice-exceptional children show irregular performance and asynchronous development.
- Adjust assessment criteria to accommodate learning discrepancies or disabilities, allowing for more inclusive identification of twice-exceptional students.
- In cases where students struggle with processing detailed information, consider

utilizing oral questioning as an alternative to formal written tests.

- Provide enough time for students to demonstrate their knowledge, offering extended timelines for assessments if necessary.

Furthermore, it is crucial to acknowledge the existence of twice-exceptionality as a distinct category to differentiate these students from their peers who are solely gifted or solely in need of special education. Research emphasizes the importance of understanding the unique characteristics and needs of twice-exceptional students. Educators and teachers play a crucial role in recognizing, referring and supporting these students. School counsellors also have a key role in helping families understand the identification of twice-exceptionality and developing appropriate interventions (Foley-Nicpon & Assouline, 2015).

5.3.1. CHARACTERISTICS OF TWICE EXCEPTIONAL STUDENTS

Distinctive characteristics of twice-exceptional students encompass a blend of exceptional intellectual abilities and learning challenges. They exhibit a unique set of characteristics that differentiate them from other student populations. These students often face challenges as they do not fit the traditional definitions of either exceptionality (Reis et al., 2014). They often exhibit asynchronous development, where there is a significant gap between their cognitive abilities and their academic performance in certain areas. Additionally, they may demonstrate high levels of creativity, critical thinking, and problem-solving skills, alongside difficulties with organization, attention, and executive functioning.

The academic self-concept and self-efficacy of twice-exceptional students is often low, as they may perceive themselves as imposters or inadequate (Baldwin et al., 2015a). Internally, these students may experience feelings of failure, depression, low self-efficacy, and worthlessness, while externally, they may exhibit behaviours such as aggression and hyperactivity (Foley-Nicpon et al., 2010). Additionally, they may display social, emotional, and behavioural characteristics like unhealthy perfectionism, intense emotions, low self-esteem, frustration, and a tendency to give up when faced with challenging tasks (Pfeiffer, 2015).

	Giftedness	SLD & Giftedness	ADHD & Giftedness	ASD & Giftedness
Academic Qualifications	<ul style="list-style-type: none"> • Rich vocabulary, • Fast reading skills • Early reading tendency • Powerful memory • Higher level thinking and problem-solving skills • Power of conceptualisation, synthesis and abstraction 	<ul style="list-style-type: none"> • Difficulty in reading despite early verbal development • Disgraphics • Dyslectic • Dyscalculia • Problems with short-term memory • Strong in critical and creative thinking • in-depth knowledge in the Specific interests • Preference for spatial tasks 	<ul style="list-style-type: none"> • Difficulty starting, following or completing a task • Strong in critical and creative thinking • Preference for spatial tasks 	<ul style="list-style-type: none"> • Appropriate cognitive development without language delay • Difficulty in understanding abstract concepts and tasks that require critical and creative thinking • Preference for spatial tasks • Preoccupation with one or more uniform and restricted types of tasks
Attention Problems	<ul style="list-style-type: none"> • Long attention span in areas of interest • Distraction in early boredom due to fast learning 	<ul style="list-style-type: none"> • Short attention span and rapid distraction • Excessive movement, inactivity or apathy 	<ul style="list-style-type: none"> • Inability to stay still, fidgeting, constant movement • Difficulty staying still • Rapid distraction 	<ul style="list-style-type: none"> • Specific or repetitive movements • Persistent preoccupation with parts of objects
Organisation Skills	<ul style="list-style-type: none"> • Following and finishing instructions quickly and easily • Detailed and creative thinking 	<ul style="list-style-type: none"> • Difficulty understanding and following instructions • Difficulty in expressing thoughts verbally and in writing • Difficulty doing work when there is no structure or predictability (non-verbal learning disability) 	<ul style="list-style-type: none"> • Difficulty in following and completing instructions • Difficulty in time management 	<ul style="list-style-type: none"> • Rigid adherence to dysfunctional routines or rituals

Social skills	<ul style="list-style-type: none"> • Developed sense of humour • Ability to communicate well with parents, teachers and other adults • High sense of responsibility 	<ul style="list-style-type: none"> • Problems reading in a social context (non-verbal learning disability) 	<ul style="list-style-type: none"> • Difficulty in making sense of subjects in their social context 	<ul style="list-style-type: none"> • Social in interaction quantitative deterioration in (at least two ways) • Lack of non-verbal behaviour • Peer relationship failure to develop • Lack of sharing spontaneous interest, happiness or achievements • Lack of social or emotional interdependence
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Citation: Reis et al, 2014 & Şentürk et al., 2022a.

Upon examining the table, it is evident that different groups of students with distinct characteristics emerge when giftedness is accompanied by various learning disabilities or difficulties. Despite all the differences, the common feature is their gifted potential, which is the most important aspect to know about twice-exceptional students. In conclusion, twice-exceptional students have a complex blend of abilities and challenges that require tailored educational approaches. Recognising and highlighting their strengths, addressing their weaknesses, and providing appropriate social-emotional support are vital in helping these students reach their full potential.

5.3.2. INSTRUCTIONAL NEEDS OF TWICE EXCEPTIONAL STUDENTS

Intervention strategies for twice-exceptional students are crucial for their academic and social development. Research emphasizes the significance of comprehensive assessments in identifying these students, determining their strengths and weaknesses, and devising appropriate educational recommendations (Assouline et al., 2010). Based on current empirical findings, it is recommended that primary intervention strategies should focus on the student's strengths and interests offering challenges and providing tasks compatible with his capacity. Secondary interventions should target the remediation of weaknesses and provide training in compensatory strategies (Neihart, 2008). Implementing Response to Intervention (RtI)

approaches has been recognized as beneficial because of its early intervention strategies and multifaceted approach to addressing both strengths and weaknesses (Pereles et al., 2009). Crepeau-Hobson and Bianco (2010) came up with an integrated model based on RtI for gifted students with learning disabilities. It follows a three-tier approach:

Tier 1: Begins with instruction and assessment in the general education classroom, providing opportunities for students to explore and demonstrate their interests, strengths, and talents. Universal screening, including above-grade-level screening, is conducted to identify students who may need additional support.

Tier 2: Involves targeted assessment to understand students' processing difficulties and strengths. Differentiated instruction and enrichment opportunities are provided within the core curriculum, with collaboration among school staff/specialists to develop a dually differentiated curriculum addressing students' abilities and challenges.

Tier 3: Reserved for students whose needs are not met at Tier 2, involving a comprehensive psychoeducational evaluation. This evaluation includes standardized assessment of cognitive ability and achievement, along with multiple methods for assessing both giftedness and learning deficits. An intervention plan is developed based on the evaluation data, including individualized strategies and services to address academic difficulties and support advanced learning needs including intensive methods like grade skipping, advanced placement, early Inlment. In this tier, ongoing progress monitoring and curriculum modifications are implemented as necessary.

It is also crucial to equip twice-exceptional students with social and emotional skills, including perseverance, self-regulation, and fostering relationships, to enhance their long-term outcomes (Neihart, 2008). Interventions targeting giftedness and disability have shown to enhance motivation, self-esteem, self-efficacy, and commitment to learning in these students. Additionally, programs that promote 2e students to work with peers having similar challenges and develop compensatory strategies have been found to be effective (Reis et al., 2000). For these students flexible, multidimensional and individualized education programs are required. Flexibility in programs is essential to accommodate their diverse abilities and needs. They may need extra time, different learning strategies, or instructional support, even within the same subject. For instance, utilizing computer-assisted applications can aid a gifted student with specific learning difficulties in reading and writing. This not only enhances academic achievement but also promotes socio-emotional development and boosts self-esteem. Another crucial aspect is the collaboration among teachers, specialists, counsellors, parents and also decision-makers. To summarize;

- Develop and encourage the student's strengths and interests
- Implement interventions prioritising giftedness and supporting disability to enhance motivation, self-esteem, and commitment to learning
- Assist students in acquiring compensatory techniques and approaches to overcome challenges
- Provide flexible, multidimensional curriculum/ programs and individualized education plans (IEP) to accommodate diverse abilities and needs
- Utilize various learning strategies, including extra time, different instructional approaches, and supportive tools.
- Promote the growth of their social and emotional skills
- Foster collaboration among peers with similar challenges
- Encourage collaboration among teachers, specialists, parents, and other stakeholders.

5.3.3. SOCIAL AND EMOTIONAL NEEDS OF TWICE EXCEPTIONAL STUDENTS

Twice-exceptional students have academic challenges as well as social and emotional problems within the current educational settings despite their high intellectual capacity or talents (Kaufman, 2018). Although they present a unique profile with distinct characteristics, their social and emotional needs show similarities in many aspects so meeting the socio-emotional needs are seen as crucial for their success and positive self-development. Rather than focusing solely on weaknesses, comprehensive plans must address cognitive, academic, social, and emotional needs such as:

Self-perception: There are numerous researches indicating that twice-exceptional students have a low academic self-concept. Their academic, social, and emotional self-perception are lower than their peers who have only giftedness or learning difficulty (Foley-Nicpon et al., 2015). They may feel misunderstood or out of place due to the paradox between their intellectual abilities and learning challenges. They need to realise their strengths as well as weaknesses to develop a positive self-concept and confidence.

Disappointment: The discrepancy between their intellectual capabilities and their academic achievements often leads to disappointment among twice-exceptional students. Despite their strengths, they may struggle to meet academic expectations, not being able to reflect in their school experiences, and sometimes experiencing difficulty in understanding even the most basic concepts or completing simple tasks, and may even face negative labels, such as lazy, spoiled or unmotivated, from teachers and family members leads to disappointment and undermines their courage to succeed (Baldwin et al., 2015b; Neihart, 2008).

Anxiety: Studies have highlighted the impact of negative school experiences on these students, resulting in increased stress and anxiety. This anxiety often stems from the challenges in completing tasks and achieving their goals, the inconsistency between their potential and actual performance, leading to feelings of inadequacy and fear of failure (Beckmann & Minnaert, 2018; Nielsen, 2002). The personal trait like unhealthy perfectionism can further deepen mental health issues in twice-exceptional students (Candler, 2017).

Social Skills: Twice-exceptional students experience twice as many social and emotional adjustment problems compared to their gifted peers (Neihart, 1999; Neihart et al., 2002). Deficiencies in social skills negatively affect peer relationships. They can struggle to make friends, collaborate with peers, or navigate social interactions effectively. In this case, they may feel isolated or disconnected from their school environment, leading to feelings of loneliness or social rejection.

Accordingly, supporting the social and emotional needs of twice-exceptional students requires a multifaceted approach that addresses their unique strengths and challenges. Here are some strategies for teachers and other education professionals:

- **Encourage Self-Awareness:** Help students understand their strengths and weaknesses, as well as how their learning differences may impact their social interactions and emotions
- **Teach Coping Strategies:** Teach students coping strategies to manage stress, frustration, and anxiety
- **Promote Social Skills and Peer Relationships:** Offer opportunities for twice-exceptional students to interact with peers who share similar interests and challenges, fostering a sense of belonging and support
- **Encourage Self-Advocacy:** Empower students to advocate for themselves by teaching them how to communicate their needs, seek assistance when necessary, and assertively express their thoughts and feelings
- **Provide a Supportive Environment:** Create a safe and nurturing classroom environment where students feel valued, accepted, and understood and involve all school staff in this process
- **Provide Individualized Support:** Offer individualized support and accommodations tailored to each student's unique needs
- **Offer Counselling Services:** Provide access to counselling services or support groups where students can discuss their feelings, concerns, and challenges with a trained professional or peers.
- **Involve Parents:** Collaborate with parents to gain insights into the student's strengths, challenges, and social-emotional needs, and develop strategies for support both at

home and at school.

- Remind yourself that supporting the social and emotional needs of twice-exceptional students is vitally important for their well-being, academic success, and overall development.

5.4. TRAJECTORY OF PARTICIPATING COUNTRIES

5.4.1. TURKEY

EDUCATION OF INDIVIDUALS IN NEED OF SPECIAL EDUCATION

The level of development of countries is directly proportional to the education opportunities they provide to their society and the quality of education practices. The quality of education services depends on valuing each individual and planning educational activities by putting the individual at the centre. As the value given to each individual in education services increases, the opportunity for individuals benefiting from both general and special education to encounter higher quality education also increases. In recent years, the rise of the understanding of putting the individual at the centre has led to significant developments in the field of special education in Turkey. Questioning what can be done to value all individuals, regardless of their disabilities, and to enable each individual to benefit from educational opportunities at a high level continues to shape and guide the services offered in general and special education, as well as educational policies in Turkey. The perspectives of societies towards individuals and the educational policies they adopt from the past to the present have led to very different developments in the field of special education both globally and in Turkey. In this context, the historical development of the field of special education, its legal frameworks, and the provision of special education services have been discussed concerning the education of individuals in Turkey who require special education.

The Historical Development of Special Education in Turkey

After going through challenging processes both globally and in Turkey, individuals with special education needs gained access to special education opportunities. Turkey, due to its geographical location, has been influenced by developments both in the West and the East in this regard. Looking at the historical process of special education worldwide, it can be observed that individuals with special needs were not even granted the right to life in ancient

times (Çitil, 2012). With the spread of Semitic religions, negative attitudes towards disabled individuals began to decrease in the West, and with the Renaissance and reform movements, the values attributed to individuals came to the forefront. Systematic efforts for the education of disabled individuals began in the 16th century. Historically, educational initiatives for the hearing-impaired individuals were initiated first, followed by efforts for the visually impaired and intellectually disabled individuals. In the United States, schools for disabled individuals were established in the 1800s. In the early 20th century, with the advent of intelligence tests, it became easier to measure the intelligence level of individuals and identify differences. While the number of special education schools increased in the first half of the twentieth century, the second half saw the acceleration of inclusion/integration practices. Especially in the 1970s, inclusion practices became stronger with the inclusion of inclusion in the laws of many countries and the passage of the Education for All Handicapped Children Act in the United States in 1975, and the Individuals with Disabilities Education Act (IDEA) passed in 1990 (P.L. 101-476).

In line with these developments in the field of special education worldwide, similar developments in terms of attitudes towards individuals with special education needs and educational opportunities can be seen in Turkey historically. Pre-Islamic information about disabled individuals is limited, and it is observed that after Islam, treatment and care services were provided for disabled individuals. The “Darülaceze” facilities built during the Seljuk period and the “Darüşşifa” and “Bimarhanes” established during the Ottoman period provided services to disabled and mentally ill individuals (Ünlü, 2018). Systematic provision of special education services is based on the “Enderun Schools” in the Ottoman period in the 16th century. Enderun schools were opened for individuals with superior abilities. In 1889, a School for the Deaf was opened for the hearing impaired, and later, a class was opened for the visually impaired, serving until 1926 (Çitil, 2009; Günay and Güngör, 2013). During the War of Independence, in 1921, a school was opened under the name of Special Izmir School for the Deaf and Blind, which provided services until 1950 under the Ministry of Health, Social and Aid (Akçamete and Kaner, 1999). With the adoption of the elimination of gender and class discrimination in education with the acceptance of the Republic, the importance given to education increased. In 1951, the planning and implementation of special education services were transferred to the Ministry of National Education (Akçamete and Kaner, 1999). With the transfer to the Ministry of National Education, there were many developments in terms of administrative, legal, and institutional aspects. In order to train personnel in the field of special education, a special education department was opened within the Gazi Education Institute in 1952 (Enç, Çağlar, and Özsoy, 1987). In 1955, the Psychological Service Center, which laid the foundation for today’s Guidance Research Centers, was established. In the same year, special classes were opened for individuals with intellectual disabilities in two

primary schools (Özsoy, 1990). As of 1950, it can be seen that both efforts to train special personnel and the number of special classes and schools were increasing, and some legal regulations were being made for the field of special education. Therefore, the 1950s were a turning point in the development of special education in Turkey.

The Legal Framework of Special Education Services in Turkey

As mentioned above, although the 1950s are important in terms of the legal framework of special education services in Turkey, there were also significant legal regulations regarding children's rights and individuals with special needs before 1950. The Geneva Declaration of the Rights of the Child (1923), the Law on Students to Be Sent to Foreign Countries (1929), the Law on the Education of Children with Exceptional Talents in Foreign Countries (1948), the Universal Declaration of Human Rights (1948) by the United Nations, and the Law on Children in Need of Protection (1949) are among these legal regulations. With these legal regulations, certain rights were granted to children, individuals with special talents, and individuals with special needs, and they were legally protected. Following the laws enacted after 1950, the rights of individuals in need of special education were expanded. The Law on the Education of Children with Exceptional Talents in Fine Arts by the State (1956), the Law on Children in Need of Protection (1957), the Declaration of the Rights of the Child (1959), the Primary Education and Training Law (1961), the 1961 Constitution, the Regulation on Children in Need of Special Education (1962), the Basic Law of National Education (1973), the United Nations Declaration on the Rights of Disabled Persons (1975), the 1982 Constitution, the International Labour Organization Convention No. 159 on Vocational Rehabilitation and Employment of Persons with Disabilities (1983), the Salamanca Statement (1994), the Law on Social Services and the Institution of Child Protection (1983), the Law on Children in Need of Special Education (1983), the Decree-Law No. 573 on Special Education (replaced the Law on Children in Need of Special Education), issued in 1997, are laws that have expanded the rights of individuals in need of special education. In the first half of the 21st century, the Regulation on Special Education Services was published, and the Convention on the Rights of Persons with Disabilities was signed by our country on the same date it was opened for signature by state parties on March 30, 2007. Nowadays, the main legal basis for the services provided for individuals in need of special education consists of the "Decree-Law No. 573 on Special Education," the "Regulation on Special Education Services," and the "Law No. 5378 on Disabled Persons."

In summary, when the historical process is examined, the laws enacted, education policies, internationally adopted decisions, and activities to train personnel in the field of special education have enabled individuals with special needs in Turkey to obtain social,

educational, and economic rights and benefit from the services provided.

Delivery of Special Education Services in Turkey

In Turkey, the Ministry of National Education (MoNE) is directly responsible for the delivery of special education services, and various units within the MoNE operate in this process. The Directorate General of Special Education and Guidance Services is the leading unit within the Ministry of National Education. Established in 1980, the Directorate General of Special Education and Guidance Services has been providing services since 2011 with 7 department presidencies and 1 special bureau. Among the seven department presidencies are the Department Presidency of Education Policies, the Department Presidency of Programs and Instructional Materials, the Department Presidency of Special Education and Inclusion, the Department Presidency of Developing Special Talents, the Department Presidency of Guidance Services, and the Department Presidency of Monitoring and Evaluation. Each unit carries out special education services within its own duties and responsibilities. For example, the Department Presidency of Developing Special Talents is responsible for directing and diagnosing specially talented students who will receive education in Science and Art Centers, conducting research, planning, implementing, evaluating, and developing activities to support the social, emotional, academic, and career development of specially talented students, organizing training for the families of specially talented students, coordinating the preparation of educational programs implemented in Science and Art Centers in cooperation with relevant units, and conducting research and examinations to determine policies, strategies, and objectives related to the education of specially talented individuals. The activities carried out within the Directorate General are conducted within the framework of Decree-Law No. 573 and the Regulation on Special Education Services. While the Directorate General is responsible for the delivery of special education services at all levels, it also collaborates with other general directorates within the Ministry of National Education and different public institutions. For example, the Directorate General of Basic Education, the Directorate General of Secondary Education, and the Directorate General of Special Education Institutions within the Ministry of National Education provide services for individuals in need of special education. Especially special education schools and special education rehabilitation centers fall within the scope of the Directorate General of Special Education Institutions. According to the 2022/2023 Ministry of National Education Statistics, there are 222 special education rehabilitation centers in Turkey, serving 531,016 students. There are 15 special education kindergartens, 13 special education primary schools, 5 special education middle schools, and 2 special education high schools providing services. According to the Ministry of National Education statistics for 2022-2023, a total of 507,804 students benefit from formal special

education services. Of these students, 8,799 receive preschool education, 191,632 receive education in the first stage, 208,503 receive education in the second stage, and 98,870 receive education in the third stage of special education. Out of the total 507,804 students receiving education at these levels, 384,250 continue with inclusive education practices. Apart from the Ministry of National Education, the Directorate General of Disability and Elderly Services within the Ministry of Family and Social Services provides care and protection services for people with disabilities and the elderly, while the Turkish Employment Agency provides vocational training and services for disabled individuals to establish businesses. Additionally, special education teachers and specialists are trained in Special Education Departments at Education Faculties in higher education institutions, and some universities conduct studies targeting both individuals in need of special education and their families through application and research centers.

Types and Levels of Special Education Services in Turkey

In Turkey, special education services vary according to the type and level of education. Special education services are provided from early childhood to higher education levels, including preschool, primary education, secondary education, and higher education. Early childhood education covers the educational activities of children aged 0-36 months, where children are educated alongside their parents, and their needs are considered. These educational activities are conducted for each child for 2 days a week, with two educational hours each day.

Preschool education, compulsory for individuals in need of special education who have completed 36 months, is primarily carried out in line with inclusive education practices. However, these children can also receive special education services in special education institutions or classes.

Primary and secondary education can be provided through inclusive education practices or by benefiting from special education schools. Guidance and Research Centers are responsible for directing students within the framework of the least restrictive environment. Students who cannot continue to secondary education for various reasons also have the opportunity to continue their education through distance education.

Individuals in need of special education who have completed secondary education can also continue to higher education. Upon application, necessary adjustments are made in the entrance exam of the Higher Education Institution according to the type of disability and characteristics of the individual. Based on the exam results, individuals in need of special education can enroll in a program and pursue higher education.

In addition to these education levels, special education services are provided in

various types of education such as home education, distance education, hospital education, complementary education, and family education.

In the provision of special education services to individuals with special needs in Turkey, the following principles are followed:

- Providing education services taking into account individual differences, developmental characteristics, and educational needs of students within the framework of the general objectives and basic principles of Turkish National Education.
- Ensuring that individuals in need of special education benefit from special education services according to their interests, desires, qualifications, and abilities.
- Starting special education services at an early age.
- Planning and implementing special education services without separating individuals in need of special education from their social and physical environments as much as possible, and covering the process of interaction and mutual adaptation with the community.
- Giving priority to the education of individuals in need of special education together with other individuals by adapting the objectives, content, and teaching processes according to their educational performance.
- Collaborating with institutions and organizations to ensure that individuals in need of special education can continue their education at all types and levels.
- Developing Individual Education Plans (IEP) for individuals in need of special education and implementing individualized education programs.
- Ensuring active participation of families in all stages of the special education process.
- Collaborating with relevant departments of universities and civil society organizations engaged in activities for individuals in need of special education in the development of special education policies.

In recent years, rather than placing individuals with special needs in separate schools, an educational policy emphasizing the placement of students suitable for inclusive education practices has been adopted more. When examining the educational practices of individuals with special needs in Turkey, it is observed that they benefit from full-time inclusion/integration practices with their peers in general education classrooms, semi-time inclusion/integration practices in general education schools, and separate special education schools with individuals with similar special needs. Additionally, support education services are provided through special rehabilitation centres and research centres within universities.

GIFTED EDUCATION IN TURKEY

Individuals are born with their own differences and strive to determine their own path according to their potential. The potential of individuals emerges through education tailored to their individual differences and needs. This idea is addressed in Plato's work "The Republic" by likening humans to mines:

"The education given to individuals with different qualities should be appropriate to their potential. The tasks to be assigned in the future will also be based on developing this potential. The most distinguished individuals are likened to gold mines, and those likened to gold mines will be trained as rulers. The assistants are likened to silver, and the craftsmen and farmers to iron and bronze. Those with the potential of gold will govern, those with silver will assist the rulers, and those with iron and bronze will obey." (Plato, 2008).

In many countries today, importance is placed on the education of gifted and talented individuals based on the understanding of individuals receiving education suitable to their potential. In Turkey, the education of gifted individuals is based on the definition of gifted individuals adopted by the Ministry of National Education (MEB). According to the Ministry of National Education, gifted individuals are children who perform at an advanced level compared to their peers in terms of intelligence, creative thinking, artistic ability, or academic success as determined by experts and who require special education in these areas. Based on this definition, it is observed that gifted individuals are significantly different from their peers in terms of characteristics and needs, and they require support through different educational programs outside of the normal curriculum (Bakioğlu, 2013).

To enable gifted and talented individuals to utilize their potential to the fullest extent, appropriate educational environments must be provided for them. In terms of the education of gifted individuals, Turkey is one of the countries with the first applications in the world, and its experiences date back to ancient times. The education of gifted individuals, which began in the Seljuks at the Nizamiye Madrasas, continued in the Ottoman Empire at the Enderun Schools.

Enderun Schools

The first educational institution in the world where the education of gifted and talented individuals is planned, comprehensive, and systematically implemented is the Enderun School. The Enderun School was established in the mid-15th century during the reign of Sultan Mehmed II (Kaya, 2013). In this school, a committee selected boys aged between 8 and 18 from Turkish and non-Muslim families. In addition to the lessons in the high madrasahs of the period, emphasis was also placed on arts education and character education at the Enderun School (Kılıç, 2015). Also known as the Palace School in the Ottoman Empire education system, the Enderun School provided education and training in various fields such as military, diplomacy, fine arts, and sports, which were highly student-centered and practical (Kefeli, 2019). Today, Enderun, which serves as a source for practices related to the education of gifted and talented individuals in many developed countries, has formed the management, science, and art cadres of a 600-year-old empire (Kurnaz, 2014).

Education of Gifted and Talented Individuals in the Republican Period

In the Republican period, many practices regarding the education of gifted individuals were implemented in the historical process. For example, science high schools were established in 1962 in line with the decisions of the VII National Education Council to train gifted students in the fields of science and mathematics. For this purpose, Ankara Science High School was opened in the 1963-1964 academic year. In this school, which selected gifted students through an exam among those who completed middle school, special education was provided by teachers trained in the USA and METU with financial support from the Ford Foundation and information support from the Bronx Science High School in New York. This practice, enriched with a boarding school environment, laboratory and library facilities, excursions and observations, debates, small group work, and individual support practices, lasted for four years but lost its uniqueness after the withdrawal of support from the Ford Foundation. Today, science high schools continue their education as schools providing uniform mass education in science and mathematics, rather than offering individualized education tailored to the pace, interest, and learning style of students, unlike normal high schools, based on the transition exam and grade point average (Bakioğlu, 2013).

Implementation within Formal Education: Support Rooms

One of the sole opportunities available for gifted students within the framework of formal education, according to national regulations, is the provision of support rooms. Based

on evaluations conducted at the Guidance Research Centers, students diagnosed as “gifted “ receive two types of enrichment measures within the basic education: Enrichment A (Science Art Center + In-Class Practices + Support Room), and Enrichment B (In-Class Practices + Support Room) in secondary education. Thus, identified gifted students can benefit from support rooms in their schools. In a circular published on 18/05/2015 (Circular No: 2015/15), emphasis was placed on the obligation to establish support rooms in schools where individuals with special education needs receive education, and responsibility and planning authority in this regard were delegated to the school administration. According to the Special Education Services Regulation, a support room is defined as “an environment arranged to provide support education services to students continuing their education through inclusive practices and gifted students in the areas they need” (Afat, 2017). Support rooms are opened by the provincial directorates of national education based on the recommendations of the special education services board. The planning of the educational services to be conducted in the support room is carried out by the school administration, and an Individualized Education Program (IEP) is implemented considering the students’ educational performance. Additionally, group education can be provided with students who are at the same level in terms of educational performance. Students can benefit from support rooms for a maximum of 40% of their weekly class hours. The content of the program to be received by the students is prepared and supervised by the “Unit for Preparing Individualized Instructional Programs” within the school. It is not a requirement for the support room to be a fixed physical space. Therefore, support education services can be provided in different spaces within the school when the minimum conditions are met (Afat, 2017).

Implementations Out of Formal Education

Science and Art Centers

The first Science and Art Center (SAC) in Turkey was opened in Ankara in 1995. SACs are independent special education institutions established to ensure that students with special or exceptional abilities attending pre-school, primary, and secondary education institutions are aware of their individual talents without disrupting their education in formal education institutions and to help them develop and utilize their capacities to the fullest extent (MEB, 2013).

The selection of students for SACs consists of a diagnosis process that includes initial nomination by commissions formed in formal education institutions, group screening, and individual examination (Alevli, 2019). The initial nomination process is carried out by guidance commissions formed in formal education institutions. The school guidance commission consists of the school principal, vice principals, psychological counsellors, and at least one

classroom teacher from grades 1, 2, and 3, as determined by the school principal. The procedures for student diagnosis for SAC are carried out among the students nominated by the commission according to talent areas in grades 1, 2, and 3. Up to 20% of the total number of students per talent area per grade level specified in each class level can be nominated (Support Rooms, Science and Art Centers Student Diagnosis and Placement Guide). Once students are diagnosed, they start their education at Science and Art Centers in the second grade of primary school and continue until the 12th grade of high school. At SACs, gifted individuals receive education through a project-based teaching model tailored to their talent levels, and they are expected to carry out projects in line with the desired qualities.

After completing each program, students are awarded a “Completion Certificate” by the center’s administration (MEB, 2007). The periods of SACs are determined by the Special Education Regulation. As seen, in the educational process consisting of five programs, students become eligible to graduate from SACs after completing each program. In SACs, enriched education programs are prepared and implemented based on the gains in formal education, emphasizing the use of knowledge, with students being active participants. In this way, students are nurtured to become individuals who learn by doing, producing, solving problems, thinking creatively, and conducting scientific research and inventions under the guidance of lead teachers (Levent, 2011). According to the Ministry of National Education data for 2022-2023, there are 393 Science and Art Centers in Turkey, supporting 83,051 gifted and talented students (MEB, 2023).

Another typical example of post-school programs in Turkey is the Gifted Education Programs (ÜYEP) conducted at Anadolu University campus.

Gifted Education Program

Established in 2007 at Anadolu University, the Gifted Education Program (ÜYEP) is a post-school program designed for gifted students. ÜYEP has unique diagnosis, curriculum, teaching, evaluation, and teacher training models. The ÜYEP curriculum is developed based on successful intelligence theory, as well as research on creativity and problem-solving (Sak, et al., 2015). In ÜYEP, students receive enriched and accelerated education, primarily in mathematics and natural sciences. As a program type, ÜYEP utilizes a post-school homogeneous grouping strategy and offers education on weekends and during summer periods. Due to its emphasis on achievements in mathematics and natural sciences, ÜYEP offers only enriched and accelerated courses in these areas. The ÜYEP curriculum model consists of analytical ability, creative ability, practical ability, knowledge components, problem-solving, and thinking skills (Akkaş and Tortop, 2015).

Gifted and Talented Bridge Education Program

The Gifted and Talented Bridge Education Program (ÜYÜKEP) is a program developed by experts within Bülent Ecevit University in Zonguldak. ÜYÜKEP is a university-based program with unique curriculum components, mentor training, and student selection criteria. ÜYÜKEP consists of three stages as academic calendars of 10-12 weeks for primary, middle, and high school levels. In creating ÜYÜKEP, contemporary models related to gifted education were examined to create a model suitable for our country, culture, and education system (Tortop and Ersoy, 2015).

ÜYÜKEP aims to train academically gifted students as scientists. Consisting of three instructional stages, ÜYÜKEP has been implemented since 2013 within the Special Education Services Implementation and Research Center (ÖZELMER) at Bülent Ecevit University in Turkey. ÜYÜKEP focuses on mentorship and e-mentorship approaches. Mentors in ÜYÜKEP can be university researchers.

TWICE EXCEPTIONAL STUDENTS IN TURKISH EDUCATION SYSTEM

The concept of twice-exceptional, where the fields of gifted education and special education intersect, has attracted the attention of researchers and educators in Turkey for a few years. It has been observed that there were no publications specifically focusing on twice-exceptional students using that term in the Turkish literature between the years 2014-2019 (Yılmaz-Yenioğlu & Melekoğlu, 2021). However, there was a limited number of studies examining students identified as having both giftedness and conditions like ADHD or SLD. The current situation of Turkey in terms of supporting twice-exceptional students can be characterized by a growing awareness of their existence and needs among researchers and educators although not enough. Challenges persist in the identification, understanding, and support of twice-exceptional students, including issues with assessment tools, professional expertise, and teacher training.

The Regulation on Special Education Services of the Ministry of National Education (MoNE), which is the fundamental legal framework for both the education of gifted students and students with special needs, does not include any expression or implication for twice-exceptional students (MoNE, 2018). Here, the needs and education of students with giftedness and those in need of special education are in-depthly defined. Furthermore, the possibility of a student having multiple disabilities or conditions, that is, having more than one difficulty or disorder, is mentioned but the possibility of a gifted student having any kind of disability is completely disregarded (İlhan Emecan, 2023). In this case, the students have been identified from a single perspective. There is no numerical data available regarding the number or

proportion of twice-exceptional students within the student population in Turkey. However, there is no doubt that these students are with their peers in various types and levels of schools. The lack of formal acknowledgment of twice-exceptional students in legislation indicates a deficiency in policies and implementation strategies for addressing the needs of this unique student population. Efforts are underway to advocate for policies that explicitly recognize and support twice-exceptional students, as well as to provide awareness and training programs for educators and develop assessment tools tailored to identifying these students accurately (Şentürk et al., 2022b).

In conclusion, the study of twice-exceptionality in Turkey is still in its early stages, with a growing recognition of the need to understand and support this unique student population effectively. However, there is a clear call for further research, policy development, and professional development initiatives to ensure that the needs of twice-exceptional students are adequately met within the Turkish education system.



5.4.2. POLAND

GIFTED AND DOUBLY EXCEPTIONAL PUPIL IN THE POLISH EDUCATIONAL SYSTEM

There is no single precise definition of a gifted pupil in the Polish educational system, which would be regulated by one specific piece of legislation. The term 'gifted pupil' is used in the context of pupils demonstrating above-average skills, abilities or talents in specific areas of learning or specific fields (Gierczyk & Hornby, 2021). In Poland, gifted students are included in the group of students with special educational needs (Bartnikowska & Antoszewska, 2017).

Typically, gifted students are identified by a variety of criteria, such as:

- Test and assessment results at school.
- Student activity in subject competitions and Olympiads.
- Interpersonal skills, creativity or analytical skills.
- Recommendations from teachers and professionals.

An analysis of the available literature and research on gifted students in the Polish educational system by Uszyńska-Jarmoc, Kunat and Mazur (2015, p. 22) shows that:

There are significant shortcomings in the Polish educational system regarding the process of identifying pupils' abilities and talents; most teachers do not accurately identify pupils' abilities. The Supreme Chamber of Control recommended that the Minister of National Education take a legislative initiative to introduce definitions of the terms 'abilities' and 'talents' to avoid ambiguity and diversity in diagnosing and supporting students' talents (Porzucek-Miśkiewicz, 2018).

Teachers do not have qualitative tools to diagnose pupils; they give low marks to schools' activities in identifying and supporting children's potential. The so-called selective model of educational policy towards gifted students is in place; the most common criterion used by teachers for selection is students' school achievements, grade point average, competition results or student observation, and diagnosis based on standardised tools is rarely used (such diagnosis can be carried out, for example, by a psychological-pedagogical counselling centre (Grygier et al., 2013).

In Poland, work with gifted students is regulated by several legal acts and normative documents that define the principles and standards of education for gifted students. Key documents may include:

1. The Act on the Educational System - provides a general framework for the functioning of the educational system in Poland, including rules on supporting gifted pupils and providing them with equal educational opportunities.
2. The Minister of National Education Regulation of 9 August 2017 on the principles of organising and providing psychological and pedagogical assistance in public kindergartens, schools and institutions indicates that a group of students with special talents should be covered by assistance.
3. Regulation of the Minister of National Education of 9 August 2017 on the conditions and procedure for granting permission for an individual programme or course of study and organisation of an individual programme or course of study (Journal of Laws of 2017, item 1569)- a student may implement an individual programme or course of study at any educational stage and in any type of school.
4. Ministry of Education documents and guidelines - regular documents and guidelines published by the Ministry on working with gifted students, which set out best practices and how to support students' abilities and talents.
5. Educational programmes of schools and educational establishments- schools and educational establishments have the opportunity to develop their own programmes that consider the needs and abilities of gifted pupils and identify ways to support and develop them.

The legislation above sets out the paths that can be taken to develop the pupil's talents. The gifted pupil, due to his/her special needs, should be supported by teachers according to their diagnosis. Furthermore, gifted pupils are entitled to special forms of teaching and support (<https://www.gov.pl/web/edukacja/uczen-zdolny>):

Interest circles-which enable you to pursue your passions and interests beyond the standard curriculum.

Consultation and additional activities for gifted students to help them deepen their knowledge or solve more advanced problems.

Subject competitions and Olympiads- gifted students are often encouraged to participate in subject competitions and Olympiads, which allow them to measure themselves against other students and develop their skills in a competitive environment.

Individual Study Programme- enables the student to deepen his/her knowledge in specific areas in which he/she shows special academic ability above the average level. It is implemented as part of the educational activities at school, but there may also be extracurricular and out-of-school activities, although these are not obligatory.

The Individual Course of Study (hereafter ITN) allows a pupil to take selected educational classes in one, some or all of the applicable subjects and is designed to enable

particularly gifted pupils to complete the various stages of their education at an accelerated rate. Under the ITN, a pupil may take selected educational classes of his or her own class or of a higher class, either at his or her own school or at another school, as well as attend classes at a school with a higher educational level. Furthermore, he or she may follow all or part of the curriculum at his or her own pace. Within one school year, a pupil has the opportunity to follow the curriculum of two or more classes.

Psychological support to help gifted students cope with the pressures and challenges of their abilities

Specialised corrective-compensatory classes or classes developing emotional-social competencies, which can be implemented in schools or psychological-educational counselling centres.

Tutoring can include a variety of forms, such as extracurricular activities outside the classroom, individual consultations, conducting research projects or preparing for academic competitions. This type of support aims to adapt to the student's individual needs, stimulate his or her interests and develop skills in areas where he or she shows particular ability.

In some schools, a Gifted Student Coordinator is appointed, or School Capability Support Systems are created to support students who want to develop their interests and to support teachers and parents interested in the professional development of children's abilities (Porzucek-Miśkiewicz, 2018)

In addition to general education, specialised education and ministerial projects, there are several institutions, including universities, the Copernicus Science Centre in Warsaw, youth cultural centres and centres offering enriched programmes for students in various activity areas (Limont, 2012).

In recent years in Poland, increased interest in the issue of doubly exceptional pupils can be seen in the literature but also in legislation. Among doubly exceptional pupils, three groups can be distinguished. The first group includes pupils with hidden deficits that do not prevent them from being identified as gifted but may cause some difficulties at school. In this group, the gap between expectations and actual school achievement is often significant. The second group consists of students whose learning difficulties are severe enough to have been identified but whose talents are masked by these difficulties. They are usually seen primarily as students with problems rather than as gifted. The third group is made up of pupils whose deficits and giftedness overlap so that they are seen as average pupils. They are categorised neither as gifted nor as having specific deficits. 2E pupils often face difficulties in achieving results that match their abilities and talents because of their deficits. This group of students typically benefit from therapeutic or compensatory programmes to support them with their individual learning needs; unfortunately, they are much less often included in classes or programmes for gifted students (Cybis et al., 2013).

5.4.3. BULGARIA

EDUCATION OF SEN STUDENTS IN BULGARIA

With the adoption of the new Preschool and School Education Act (PSEA, 2016), children with special needs in Bulgaria study in mainstream classes. For better integration, a series of normative documents have been introduced (Inclusive Education Ordinance, 2017). According to the Act “special educational needs” include those due to sensory impairments, physical disabilities, multiple disabilities, intellectual disabilities, speech-language impairments, specific learning disabilities (dyslexia, dyscalculia, dysgraphia), speech-language impairments, autism spectrum disorders, emotional and behavioural disorders.

The Inclusive Education Ordinance (2017) in Article 1 sets out the state education standard for inclusive education. The same document specifies the terms and conditions for the provision of general and additional support for the personal development of children and students. The support (general and additional) in kindergartens and schools is provided by a psychologist or pedagogical advisor, speech therapist, resource teacher, and other specialists depending on the needs of children and pupils. Early assessment of children’s personal development support needs is carried out at the pre-primary stage. By screening children aged 3 to 3 years and 6 months, the risk of learning difficulties is determined. Screening is conducted individually with each child after parental permission is obtained. Parents are informed of the results of the screening and together with the coordinator (experienced teacher, pedagogical counselor), the type of support the child needs is determined.

In most schools, support teams have been formed that include resource teachers, special educators, psychologists, and speech therapists. All pupils are entitled to what is known as ‘general support’, which is designed to help a pupil cope with learning material in the event of temporary difficulties, after prolonged absence, or when emotional and behavioural problems are identified. The general support is provided by the teachers of the different subjects, the school psychologist and/or the speech therapist within 40 hours outside school hours. The principal of the school shall notify the parents, who are obliged to ensure the student’s presence.

Additional support applies to students who are formally diagnosed with special educational needs. Such diagnosis is carried out by specially formed teams of the Regional Support Centres for Inclusive Education on the recommendation of the school support teams and following a request from the child’s parents. The additional support shall last from 60 to 120 hours during the school year and shall be defined in the support plan according to the needs of the child.

There is also a small number of special schools for students with sensory impairments. In these schools, education is focused on the social integration and professional realization of children and students. These are the schools for students with visual or hearing impairment. Article 192 of the Law on Pre-school and School Education regulates the number of children and students with SEN in one group of kindergarten or in one class - up to 3. When there is no other group or class in the settlement that provides the same type of education, then with the permission of the Regional Department of Education a higher number is allowed. In this case an assistant teacher shall be appointed on the proposal of the school support team.

Students with special educational needs can study in all forms of education - day, evening, combined, distant, or dual system. The form of education is chosen by the student or parent based on the recommendation of the personal development support team. Based on the school curriculum, an individual learning plan is developed for pupils who study in an individual form of education, which may contain only part of the subjects defined in the framework, model, or school curriculum.

In Bulgaria, support for children and students with SEN is provided, in addition to kindergartens and schools, by the Centers for Support of the Process of Inclusive Education and/or the Centers for Personal Development. Their services are in several directions:

- preventive, diagnostic, rehabilitative, corrective, and re-socialisation work with children and pupils;
- resource support for children and students with special educational needs;
- pedagogical and psychological support;
- implementation of support and training programs for families of children and students with disabilities.
- career guidance and counseling.

The number of children with special educational needs in the country has been gradually increasing in recent years and in the current school year (2023-2024) there are more than 27 000 children with special educational needs. For the needs of these children and pupils, 5,500 trained professionals are provided for the whole country, working mostly in large cities. The shortage of qualified staff to provide adequate support to children and pupils in need is a major problem.

EDUCATION OF GIFTED STUDENTS IN BULGARIA

According to Dobrinka Todorina's definition, "a gifted child is a child who shows considerably higher than average achievements, general intellectual giftedness, special

abilities, compared to his peers, in the field of science, art or sports and manifests them permanently". (Todorina, 2001)

A larger study on the topic of gifted children was conducted in 2013, and several key tasks were identified:

- Do teachers have the knowledge to diagnose gifted children?
- What are the characteristics of gifted children?
- Do they know methodologies for the development of gifted children?
- Problems and perspectives for working with gifted children

In 2017, the Inclusive Education Ordinance (2017) came into force in Bulgaria, which defines the terms and conditions of general and additional support for the personal development of children and students /Articles 1 and 2/.

The Ordinance also defines the structure, modalities and conditions for the approval of individual learning plans and individual learning programmes for pupils with special educational needs and pupils with outstanding gifts under Art. 95, para. 1, items 1 and 2 of the Pre-school and School Education Act (2016).

In Section III of the same Ordinance - Provision of general support for personal development in a personal development support centre Article 33 (1) is stated that general support for the personal development of children and pupils shall be provided in personal development support centres, in the National and regional Children's Palaces, regional children's science and technology creativity centres. Schools also provide so-called "general support", which includes interest-oriented activities for the development of pupils' interests, abilities and competencies in the fields of science, technology, arts and sports.

The personal development support centres create an education plan for children and pupils formed in groups according to age or level of preparation. Training in the centre may be year-round, temporary / for participation in scientific, cultural, educational and sporting events at municipal, regional, national and international levels or temporary groups during the holidays.

From 2022, Southwest University "Neofit Rilski" - Blagoevgrad offers a one-year or two-year master's programme for additional qualification of graduates of pedagogical specialisations "Pedagogy for gifted children". The programme is open to persons with an aptitude for creative activity and motivation to join the national imperative of discovering and developing the creative potential of the nation - children and adolescents with outstanding gifts who can be useful not only to themselves but also to the whole society.

Students who study in the master's program master in-depth scientific knowledge about preparing gifted children and adolescents concerning:

- Characteristics of gifted children and adolescents;
- diagnosis of giftedness, ability and talent;
- education and value development of gifted children and adolescents;
- educational and information technologies in work with the gifted;
- development of the general intellectual and special abilities of children and adolescents with outstanding gifts in the field of science, art, and sport in the classroom, extracurricular and out-of-school forms of education;
- management of the learning environment for gifted children and adolescents;
- pedagogical counseling for gifted children and their parents;
- guidance and career development of gifted pupils.
- During the training, students form the following skills:
- Conduct research to identify giftedness, ability and talent;
- to develop tools for research and development of interests, inclinations, general and special abilities of children and adolescents with outstanding gifts;
- apply procedures for effective creative activity.

Graduates of the master's program acquire competencies to:

- create and apply methods and technologies for the diagnosis, education and development of gifted children and adolescents in the classroom and in after-school and out-of-school activities in language, literature, mathematics, natural sciences, music, fine arts, sports, technology, artistic construction, choreography, etc.
- developing individual educational programmes for the development of gifted children and adolescents and creating individual educational spaces for them;
- psychological and pedagogical counseling of gifted children and adolescents and their parents in connection with their diagnosis, development and future professional realization.

The programme also enables the development of some socially significant personal qualities in the students, necessary for their work with gifted children and adolescents, based on transforming the informational function of the teacher into a facilitator and mediator function.

In recent years, many efforts have been made to nurture the abilities and performances of talented and gifted students, but there are still some problems:

Teachers do not have a well-established and generally accepted methodology for assessing gifted students but make such assessments based on students' achievements

and personal experience.

Not all schools have the modern equipment and qualified staff needed to work fully with gifted children.

TWICE EXCEPTIONAL STUDENTS IN BULGARIA

The term “twice exceptional” is not familiar to the majority of people in Bulgaria. Brief research among teachers, specialists (SEN teachers, school psychologists, speech therapists), and parents shows that 99% of them haven’t heard the term and don’t know what it means. Only one SEN teacher shared that she had read an article some time ago about gifted children who also have some disability. The research on the internet revealed only one article on the topic, translated from English: “Helping gifted students with learning disability” was published on the website of the Family Center for premature children and their parents “Small miracles” (a private institution) in 2021 (<https://chudesa.bg/1239-kak-da-pomognem-na-nadarenite-uchenici-koito-imat-obuchitelni-zatrudnenia/>; the original article here: Helping Gifted Students with Learning Disability (psy-ed.com).

In case a student has both – some learning disability (e.g. dyslexia or dyscalculia, ADHD or autism) and a talent in art, music, or sport, this usually is not taken into account, and the priority attention is paid to the difficulty. Talent development is left entirely in the hands of parents.

And because the demands at school are high, achieving relatively good results requires a learning-disabled student to put in many times more effort and, of course, much more time, often parents - in their quest to support their child in achieving good academic results - neglect music, drawing, sports... As a result, the talents of many children with learning difficulties go unnoticed, undiscovered, and underdeveloped.

The concept of twice exceptionality cannot be found in any official document or regulation. The Preschool and School Education Act and the Inclusive Attention Ordinance regulate support for children and students with learning difficulties of gifted children, but they are seen as two completely different and independent categories from each other.

Thus, the “2E project” is very important and will be the first big step towards increasing the awareness about the topic among teachers, specialists, parents and society in general.

5.4.4. ITALY

EDUCATION OF INDIVIDUALS IN NEED OF SPECIAL EDUCATION IN ITALY: A HISTORICAL AND LEGISLATIVE OVERVIEW

The evolution of Italy's educational approach towards individuals in need of special education reflects a broader commitment to human rights and personalization in education. Through progressive legislation and a societal commitment to inclusion, Italy has modelled a shift from segregated, specialized institutions to a comprehensive, inclusive system that recognizes and supports the diverse needs of all learners. This ongoing journey not only highlights the importance of adaptive legislation and societal attitudes but also underscores the need for continuous improvement and commitment to educational equity.

The journey toward inclusive education in Italy has been a transformative path marked by significant legislative milestones and societal shifts. Historically, the Italian education system for individuals with disabilities originated in the late 18th century with the establishment of specialized institutions for the deaf and blind, inspired by the model of the Institute founded by the abbey De l'Épée in Paris. Initially, these schools were often charities or operated under the auspices of the Catholic Church. It was not until the introduction of compulsory education in 1923 that a formal public school system, segregating students based on their disabilities, was established.

The transition towards inclusion began in earnest in 1971, catalyzed by societal movements against exclusion and the opening of asylums. This period marked the initiation of mainstream education for students with disabilities, though it initially lacked formal provisions and support, leaving families to manage the integration of their children into mainstream schools independently.

Legislative Milestones and Their Impact

The Italian legislative framework began to significantly evolve with the Law 517 of 1977, following the recommendations of a Parliamentary Commission of Inquiry set up in response to protests against unregulated integration. This law marked a pivotal turn by closing special schools and introducing the role of specialized support teachers, thus formalizing support within mainstream education settings.

Further legislative advancements were made with Law 104/1992, which laid the foundations for the rights of persons with disabilities in education. This law guaranteed educational rights for all students, focusing primarily on those with disabilities but also

extending its principles to support personalized learning needs, potentially benefiting gifted students as well.

In 2010, Law 170 was introduced, focusing specifically on students with Specific Learning Disorders (SLD). This law further promoted inclusive educational practices and personalized learning approaches, thereby supporting a diverse student body with varying educational needs.

Understanding BES (Bisogni Educativi Speciali)

ES, or Special Educational Needs, in Italy includes a wide range of conditions that require individualized educational approaches. These conditions are not solely based on disabilities but also encompass temporary or long-term challenges that can affect learning. These challenges may include socio-economic disadvantages, language barriers for newly arrived immigrants, and behavioral or relational difficulties, among others. BES covers not just certified disabilities but also situations where students face educational barriers without a formal diagnosis.

The educational response to BES is tailored to the individual's needs, often involving a Personalized Educational Plan (PEP) or an Individualized Educational Plan (IEP). These plans are crucial for integrating students with various educational needs into mainstream classrooms effectively. They detail adaptations in teaching methods, the use of compensatory tools like digital aids or personalized assessment methods, and adjustments to classroom activities to ensure all students can participate fully and equitably (Enel Cuore Onlus) (AlgorEd AI).

Current Inclusive Practices

Italian schools are increasingly equipped to handle a diverse range of educational needs, aiming to ensure no student is left behind. This inclusivity extends beyond just the physical integration of students into classrooms; it encompasses the full adaptation of educational content, methods, and environments to meet varied needs. Technologies and aids such as speech-to-text apps, specialized software, and alternative assessment methods are employed to support students with specific learning disorders like dyslexia or dyscalculia.

Moreover, the approach is holistic, stressing not just academic success but also social integration and emotional well-being. The goal is to foster an environment where all students, regardless of their educational needs, can thrive and contribute to their educational community. This strategy includes removing physical barriers in schools and providing orientation aids for the visually impaired, although challenges remain in fully achieving these goals across all schools(Enel Cuore Onlus).

GIFTED EDUCATION IN ITALY

The approach to gifted education in Italy is comprehensive, involving a blend of legislative support, educational strategies, and societal engagement. The goal is to create an educational environment that not only recognizes giftedness but also actively contributes to the full development of high-potential individuals. This commitment is evident in the ongoing development of policies and educational practices aimed at nurturing the diverse talents of Italian students.

Identification and Educational Strategies for Gifted Students

In Italy, the recognition and support of gifted and high-potential students have evolved to reflect a more inclusive approach to educational needs. The educational framework is supported and facilitated by INVALSI (Istituto Nazionale per la Valutazione del Sistema Educativo di Istruzione e di Formazione). This institute is responsible for evaluating the educational system and ensuring that standards are maintained and improved, particularly in identifying and nurturing gifted students and those displaying significantly higher levels of ability compared to their peers in one or more academic areas. The approach to supporting these students involves a combination of acceleration and enrichment strategies. Acceleration may include early school entry, grade skipping, or advancing in specific subjects, while enrichment involves deepening knowledge and skills without skipping grades. Schools are encouraged to customize learning experiences to sustain students' engagement and intellectual curiosity. For instance, students may be allowed to skip grades or undertake advanced coursework in specific subjects. Schools might also offer specialized tracks or projects that cater to the intellectual and creative strengths of these students, such as advanced science classes, mathematics workshops, or literature clubs that go beyond the regular curriculum.

A notable aspect of the approach involves the training of teachers to recognize and nurture talent effectively. Professional development programs are provided to equip teachers with the skills needed to cater to gifted students, which includes strategies for both identifying these students and supporting them in ways that challenge and extend their learning effectively.

Legislative Overview

Italian legislation acknowledges the educational needs of gifted students through several policies, with a key document being the Ministerial Directive of 27 December 2012. This directive explicitly includes high-ability students under the umbrella of Special Educational

Needs (BES), which traditionally encompassed only those with learning disabilities or socio-economic disadvantages. Further guidance is provided by the Nota Ministeriale n. 562 of 3 April 2019, which reinforces the need for personalized educational approaches tailored to the unique capabilities and potential of each student. These legislative frameworks underline the importance of flexibility in educational pathways and the adaptation of teaching methods to foster the intellectual growth of gifted students.

Challenges In Mainstream School And Society

Despite the progressive policies and legislative frameworks, societal attitudes towards gifted education in Italy can sometimes reflect a mixed picture. The Italian educational system faces challenges in providing adequate support for gifted students. There is often a lack of awareness or misconceptions about the needs of gifted students, which can lead to insufficient support in mainstream classrooms. These students might face challenges such as under-stimulation in standard class settings, social isolation, or emotional distress due to asynchronous development. One significant issue is the variability in the application of policies across different regions and schools, often resulting in inconsistent support and recognition of giftedness. Additionally, there is a lack of trained personnel who specialize in gifted education, which can lead to gifted students not being challenged sufficiently in the classroom. These factors can contribute to underachievement and disengagement among gifted students, undermining their educational development.

While the main focus of gifted education initiatives is in public schools, private institutions and extracurricular programs also play a significant role. These settings often offer more specialized courses or advanced programs that may cater better to the needs of highly capable students. Furthermore, summer programs, workshops, and competitions provide additional opportunities for enrichment that may not be available within the public school system.

TWICE-EXCEPTIONAL STUDENTS IN ITALY

Introduction

As Italy continues to evolve its educational practices to accommodate all students, the focus on twice-exceptional students is crucial, since only in the last few years the topic has really arose and become a reality. Through ongoing educational reform, professional development, and a commitment to tailored educational experiences, Italy is making significant strides in recognizing and nurturing the potential of all students, particularly those who are

twice-exceptional. In Italy, the recognition and educational support for twice-exceptional (2E) students have gained increasing attention, but is still on its early stages. These students may present a unique set of capabilities alongside disabilities such as ADHD, autism spectrum disorders, or learning disorders like dyslexia, which necessitate a tailored educational approach, which not always can be provided.

Identification and Educational Strategies

Identifying twice-exceptional (2E) students in Italy involves a comprehensive, multi-disciplinary approach that assesses both their high abilities and their specific challenges. This process typically includes psychological evaluations, educational assessments, and consultations with parents and teachers to obtain a holistic understanding of the student's capabilities and needs. The Università Cattolica's SPAEE, for example, specializes in educational psychology and provides diagnostic services that help in identifying 2E students by analyzing their cognitive and emotional profiles alongside their academic performance.

Once identified, 2E students are provided with personalized educational plans that address both their giftedness and their disabilities. These plans are designed to leverage their strengths to help overcome or compensate for their weaknesses, and may include the following strategies:

1. **Differentiated Instruction:** This involves adjusting the learning environment, content, process, and products of learning to meet the diverse needs of 2E students. Teachers may use varied teaching methods such as visual aids, hands-on activities, or digital tools to cater to different learning preferences and challenges.
2. **Use of Technology:** Adaptive technology can be particularly beneficial for 2E students. For instance, software that reads text aloud can help students with dyslexia engage with complex literary materials that they might excel in understanding if not hindered by their reading difficulties.
3. **Strength-Based Learning:** Focusing on areas where 2E students show exceptional abilities can also boost their self-esteem and motivation. For example, a student who excels in math but struggles with reading might be given advanced math problems to solve while also receiving support in literacy.
4. **Social-Emotional Support:** Many 2E students experience social and emotional difficulties. Schools may provide counseling and social skills training to help these students navigate the complexities of their dual exceptionalities.

In practice, these strategies are being implemented in various educational settings

across Italy. For instance, some schools have developed specific programs that integrate special education techniques with gifted education practices, providing a dual-focused curriculum that helps 2E students thrive academically and socially by simultaneously addressing learning disabilities and promote advanced learning opportunities. These programs often involve collaborative efforts between special education and gifted education teachers to create a learning environment that is both supportive and intellectually stimulating.

A notable example is a project led by the Università Cattolica, which involves seminars and workshops aimed at educating educators about the characteristics and needs of 2E students, ensuring a better-prepared teaching force to meet these students' unique demands.

Challenges and Support Framework

One of the main challenges in supporting 2E students is the lack of widespread recognition and understanding of their unique needs, which can lead to both underestimation and under-support of their true potential. Moreover, the variability in the availability of resources and trained professionals across regions can lead to inconsistencies in the support these students receive.

To address these issues, educational institutions are increasingly focusing on professional development for teachers and educators, aiming to equip them with the skills necessary to identify and effectively teach 2E students. This includes training on differentiated instruction strategies and the use of adaptive technologies that can cater to a diverse range of needs within the classroom.

Legislative Framework

The Italian educational policy framework includes directives that recognize the rights and needs of students with disabilities and giftedness, under the broader category of Special Educational Needs (BES). This includes legislative measures that mandate personalized learning plans tailored to the unique profile of each student, ensuring that all students receive the education that best suits their individual needs. Other than that, unfortunately in Italy there is still only the “good will” of teachers and school staff members that tries with the resources available to compensate the twice exceptionality of the student.

5.4.5. CZECH REPUBLIC

GIFTED AND TWICE EXCEPTIONAL STUDENTS IN THE CZECH REPUBLIC

General overview

Czech gifted students belong to the group of students with special needs. They are supposed to be officially identified by state educational and psychological counselling centres which also prepare a list of study accommodations for schools. The students are entitled for specific support within their classes and schools.

The Czech School Law formally started an inclusive policy and inclusive educational system in 2016. Ever since the main trend has been to include all students with special needs in mainstream classes. Despite the educational inclusion there are still few schools throughout the country which offer special classes for gifted pupils and there are few private schools which exclusively organises education of gifted students, e.g. ZŠ Cesta k úspěchu, Mensa gymnázium.

Otherwise, the gifted pupils are involved in regular classes. They may have an individual educational plan and they receive certain study accommodations. In some cases, they have their mentors, they attend different classes for various school subjects (i.e., they have an individual schedule, and they learn with older students when they need more stimuli, and their knowledge is more mature than their classmates in the original class).

However, the research has repeatedly shown that the education of gifted students is generally neglected, non-systematic and unstable. A private organisation Qiido, s. r. o. which works with gifted students conducted a survey among several hundred school headmasters in 2016. The outcomes confirmed that the majority of the schools were uncertain in the process of identification and support of gifted students. The higher level of education, the lower number of identified gifted students were reported. Most of the headmasters also agreed the school staff would need further education on gifted students. They lack methods and approaches for their complex education.

The Czech School Inspection conducted a similar survey in the school year 2021-2022 when they observed and interviewed a representative sample of elementary and secondary schools (Pavlas et al., 2022). Despite the time difference between the first and second reported surveys the outcomes appeared rather similar. The schools reported a much lower number of gifted students (only 5% while the estimations predict 10-15% of population). Furthermore, the schools still seem rather helpless in the support of such students.

Another alarming outcome of both surveys was a complete ignorance of twice

exceptional students. The first survey did not mention such students at all. The latter only includes a brief note in final recommendations for teachers. I.e., the authors emphasize that some of the gifted students may show other special educational needs such as learning difficulties, ADHD, ASD, etc. and teachers should be aware of such facts.

The official guidance for schools is offered by the National Educational Institute, Czech Republic, which is an organisation under the Ministry of Education. Unfortunately, their impact on the elementary and secondary school in the country seems rather vague.

Twice Exceptional Students in Czech Educational System

Twice exceptional students are acknowledged by the Czech educational system. However, official documents rarely mention specific approaches to their education. Even the Czech School Inspection pays rather marginal attention to them.

These students are cared for by several non-governmental organisations and university institutions. Among the traditional ones are Akademie nadání, z.s. and/or Nadané děti. The latter works as a group of professionals in Masaryk University. The leader of this team has published several books on twice exceptional students (Portešová, 2014; Portešová, 2011). The working group also publishes a professional journal on gifted children. Papers on twice exceptional children and adolescents can be found in the journal as well. The journal has also adapted and published Top 20 principles from psychology for preK–12 creative, talented, and gifted students' teaching and learning which were originally created by the American Psychological Association (2017). The Czech version included links and suggestions relevant in the Czech environment and school system (Portešová et al., 2018).

The education of twice exceptional students requires two main areas of further elaboration:

- Identification and assessment of such students.
- Further support, appropriate study accommodations, and appropriate teaching of such students.

Twice exceptional students may often be considered as a) talented students who under reach their potential (i.e., their specific difficulties are overlooked), b) students with difficulties (i.e., teachers do not realize their talents; they only focus on deficits), c) average students (i.e., their teachers fail to identify both – their talents and their deficits, thus the students only compensate their difficulties with their talents). The professional assessors must also be aware that standardized assessment tools which focus on gifted children and adolescents were not created for twice exceptional individuals. Therefore, the assessors

need to be rather cautious when interpreting the results. Otherwise, even the professional complex assessment may fail to recognize twice exceptional students (Smítková, 2017).

The identification of such students at schools is even more complicated. Noteworthy Czech research was conducted by Němcová (2019). Elementary school teachers (the research target group) were given fictional case studies, which involved details on pupils' talents as well as their school difficulties linked to dyslexia symptoms (as one of the most frequent groups of the twice exceptional students covers the combination of giftedness and dyslexia). The results showed that the majority of teachers focused on the difficulties. Furthermore, they only suggested further educational interventions in this area. Less than a half of interviewed teachers identified the twice exceptionality. The gender of students appeared irrelevant. However, the style of presenting the information on the students was significant – when the last part of a case study reported information on one's talents, the teachers emphasized this aspect of education more frequently, while a mention of learning difficulties at the end of a report led the teachers to more intense focus on dyslexia symptoms.

The main outcomes of all surveys and research confirm that Czech teachers need further support in teaching gifted and twice exceptional students. They lack skills to identify such students. Furthermore, they lack resources on how to work with them on an everyday basis. The twice exceptional students are often inadequately assessed and supported.

The logo features a stylized figure with arms raised in a 'V' shape, rendered in shades of blue and yellow. To the right of this figure, the words "Twice Exceptional" are written in a large, light blue, sans-serif font. A small yellow star is positioned above the letter 'e' in "Exceptional".

Twice
Exceptional

6.

2E AWARENESS TRAINING PROGRAM CHART

Time	Theme	Learning Outcome	Duration	Method
08:30-09:00	Prep	Pre-test: Twice Exceptional Awareness Scale	30'	
09:00-09:50	What is giftedness?	1. Define the concept of giftedness. 2. List the common characteristics of gifted students. 3. Explain the characteristics of gifted students with examples.	50'	Presentation Brainstorming
09:50-10:00				
10:00-10:50	Education of gifted students	4. Explain different strategies for teaching gifted students. 5. Predict the challenges that gifted students experience throughout their education process. 6. Recognize the significance of addressing the social-emotional needs of gifted students.	50'	Case studies real-life scenarios
10:50-11:00				
11:00-11:50	What is twice exceptionalism?	7. Define the concept of twice-exceptionality. 8. Distinguish the differences between the concepts of twice-exceptionality and giftedness.	50'	Presentation Mindmap
11:50-12:00				
12:00-12:50	Twice exceptionalism as a paradox	9. Explain twice-exceptionality along with its main components (giftedness, learning difficulties, ADHD, ASD, etc.).	50'	Vignettes Venn diagram
12:50-14:00		Lunch		

Time	Theme	Learning Outcome	Duration	Method
14:00-14:50	Strengths and challenges of twice exceptional students	10. Identify both strengths and weaknesses of twice-exceptional students. 11. Provide examples of the challenges that twice-exceptional students face at school, family and social settings.	50'	Film analyses Interviews, documentaries
14:50-15:00				
15:00-15:50	How to support twice exceptional students?	12. Recognize the unique educational needs of twice-exceptional students. 13. Acknowledge the importance of providing social-emotional support for the academic development of twice-exceptional students.	50'	Presentation Brainstorming Q&A
15:50-16:00				
16:00-17:00		Post-test : Twice Exceptional Awareness Scale Program Assessment	60'	

7. SAMPLE ACTIVITIES FOR THE TRAINING

Title	Embracing Differences
Theme	Understanding the Needs of Twice-Exceptional Students
Duration	45 minutes
Learning Outcomes	- Recognize the social-emotional needs of twice-exceptional students. - Identify the educational needs of twice-exceptional students
Method	Film Analysis, Q&A, Discussion
Tools / Materials	Projector, Laptop or Smart Board, paper, pen
Prep for Trainers	The trainer is to watch the movie “Taare Zameen Par” (Stars on Earth), decide on the scenes and get ready to be used in this activity.

Learning-Teaching Process

1- The trainer begins with an attention-grabbing activity. Participants are asked to take a pen and paper. The trainer gives directions, as: “Can you draw a button and hole on the paper?” And they are reminded not to look at each other’s work. After a while, participants are asked to swap their drawings with the next ones and evaluate the drawings and notice both the differences and similarities. Then, the trainer selects a few example drawings. The drawings are displayed for everyone to see. The trainer initiates a large group discussion by stating, “Even though the same directive was given about a commonly accepted-known (concrete) concept, how can each drawing have differences?” Following the discussion, the trainer concludes the activity by explaining “Although we are aware that we all perceive things differently, we still expect everyone to understand and do in the same way. Its reflection in education is to expect every student to learn and perform in the same way and that is impossible.

2- In the second part of the activity, film analysis is conducted to emphasize the concept of “twice-exceptional” in scenes from the movie “Taare Zameen Par,”

directed and acted by Amir Khan. It reflects challenges faced by children, particularly focusing on the character of Ishaan, a dyslexic child who is also artistically talented. In terms of twice exceptionality, the film provides a powerful portrayal of a child who struggles academically, difficulty in fitting into the traditional education system due to his learning disability (dyslexia) but has highly artistic talents. The child's meeting with Ram, his teacher, is reflected as a milestone in the film. After that, the importance of understanding and accommodating the diverse needs of twice-exceptional children in educational settings and supporting their strengths instead of focussing their deficiency is emphasized.

3- The film scenes, prepared by the trainer, are watched together. Appropriate discussion questions are posed to the participants during or after the viewing to create a discussion environment.

Discussion Questions:

- How do Ishaan's struggles in the film reflect common stereotypes about students who face learning differences?
- How does the misunderstanding of Ishaan's behavior impact his confidence and performance in school?
- Do you think the traditional educational system fails to recognize and support students like Ishaan?
- What role does Ishaan's art teacher play in his journey? How does this reflect the importance of teachers?
- What can teachers do for more inclusive and flexible approaches to assessment and curriculum design?
- Why is it important for educators to focus on students' strengths and interests rather than just their weaknesses?
- What changes do you think are needed in schools to better support students with diverse learning needs?

Evaluation

Participants are asked to create a metaphor statement;
"Twice-exceptional students are like... because..."

Differentiation (Optional)

The first and second stages are conducted in the same manner. In the third stage, a semiotic analysis method can be used for the analysis of the scenes.

Note for the trainer: Under the basic understanding of Aristotle's rhetoric, it is evaluated in terms of ethos, pathos, and logos:

Ethical rhetoric (Ethos); harmony between the speaker's speech and their character.

Emotional rhetoric (Pathos); influencing the listener's emotions.

Rational rhetoric (Logos); reasoning or logic in speech.

The analysis is conducted for the scene where Ram visits Ishaan's home and meets his parents. **Ethos:** The first thing that catches the attention in the film scene is Ram's attire. Compared to the traditional attire of the parents, Ram has adopted a modern style. This situation implies that the father does not find him trustworthy based on his looks and attitude. However, later, Ram's identity as a teacher, which is considered prestigious in society, comes to the forefront. Ram introduces himself as a teacher and starts speaking. While speaking, he constantly looks at the parents and emphasizes that what they are doing is wrong. This situation indicates that the family, especially the mother, is under the influence. **Pathos:** The mother is under the influence of Ram's ethos, but the father does not share the same attitude. Traditionally, he cannot overcome preconceptions, such as relating Ishaan's academic failure and inability to write to his misbehavior, non-conformity, and potential flaws in intelligence. It can also be said that Ram's ethos has a negative effect on the formation of the father's pathos. This section should focus on what twice-exceptional students will be exposed to when they are not understood. **Logos:** The father only begins to be affected when Ram uses logos. The fact that Ram first uses Ishaan's notebooks and speaks based on the consistency therein indicates a differentiation in the father's attitude. The preconceptions in the father's cultural codes have been transformed into different pathos only through logos. When focusing on Ram's logos, emphasis should be placed on the characteristics and emotional development of twice-exceptional students.

Title	What is giftedness?
Theme	Addressing the educational and social-emotional needs of gifted students
Duration	50 minutes
Learning Outcomes	<ul style="list-style-type: none"> - Define the concept of giftedness. - List the common characteristics of gifted students. - Predict the challenges that gifted students experience throughout their education process. - Recognize the significance of addressing the social-emotional needs of gifted students.
Method	Presentation, Question-Answer, Case Study
Tools / Materials	Projector, Laptop or Smart Board
Prep for Trainers	Evaluation form is duplicated for each participant

Learning-Teaching Process

1. INTRODUCTION

The trainer begins with an activity to draw attention. By sharing the image “Which of two are gifted?” from Appendix -1. The trainer asks, “Two of these children are gifted. Which ones do you think are gifted?” Answers are taken from the participants, and they are asked “Why do you think so?”. After discussions, it is emphasized that it is not appropriate to label/ identify someone physically or at the first sight as gifted and that certain indicators and a process are needed. So, either all or none of them are gifted.

2. EXPLORATION

Participants are asked if there are any gifted children around them, and if so, what characteristics they have. Answers from participants are gathered. The life story of William James Sidis is shared or shown as a short film. It is provided in Appendix -2, “Who is William James SIDIS?” or a video from YouTube <https://www.youtube.com/>

[watch?v=L0zOdg7PCkQ](https://www.youtube.com/watch?v=L0zOdg7PCkQ) After that, participants are asked to list the common characteristics of gifted children.

3. EXPLANATION

After participants' views on the characteristics of gifted individuals, an explanation is given about the definition of giftedness and their characteristics according to the Turkish Ministry of National Education (MoNE).

Appendix -3, "Trainer Information Note," is provided.

4. DEEPENING

After the trainer makes explanations about the characteristics of gifted individuals, emphasizing the need for differentiation in education provided to gifted students based on their characteristics, a large group discussion is initiated by posing the question, "What should education for gifted students look like?" Participants are asked to think about Sidis's life and the characteristics of gifted individuals. After discussions, definitions of giftedness from theorists such as Renzulli and Tannenbaum are introduced.

Appendix -4, "Renzulli and Tannenbaum Models," are provided. After explaining these theories based on Sidis's life story, the trainer concludes the activity by stating that teachers need to differentiate and enrich the process to support gifted students both academically and socially-emotionally in their educational settings

Evaluation

Participants are given the following form:

Statement	Yes	No
Gifted children succeed effortlessly.		
Being gifted means being gifted in every domain.		
Gifted students are "nerdy" types, like "bookworms".		
Gifted children are more mature than their peers.		
Gifted children are self-sufficient.		
Strategies like acceleration, grade skipping, and special schools are harmful to the child.		
An academically unsuccessful child cannot be gifted.		

APPENDIX -1

Which two of these images are gifted?

1



2



3



4



4

5

6

APPENDIX -2

Who is William James Sidis?

William James Sidis was born on April 1, 1898, as the child of a family who immigrated from Russia to the United States. His extraordinary intelligence was noticed by his mother when he could utter some words at the age of six months. It is said that he mastered the alphabet at the age of eight months. At the age of 1.5, he started reading daily newspapers. Seeing William's "genius," his mother gave up her medical career and devoted all her time to her remarkable child. At the age of six, he had the intelligence of a high school student. Before he turned eight, he could speak English, Latin, Greek, Hebrew, French, German, and Russian. He could calculate which day of the week any given date fell on. The extraordinary abilities of the "prodigy" made him the center of media attention; The New York Times featured William James Sidis on its front pages. By now, everyone in the United States was aware of the prodigy. Although he passed Harvard's entrance exams at the age of nine, he was not admitted to the school because he had not reached the required emotional maturity. He reached the emotional maturity that Harvard deemed adequate at the age of eleven and was admitted to Harvard. That same year, he even gave lectures to Harvard professors. After successfully completing his education at Harvard, Sidis began studying law at the age of sixteen. However, things did not go as planned. Joining a political group, William was arrested

and imprisoned during a political demonstration. With the help of his family's influence, the prison sentence was converted into another punishment. Sidis fell out of favour with the public due to his participation in the demonstrations and being an atheist. Sidis, who was the centre of media attention during his rise, also became the centre of media attention during his fall. This attention bothered Sidis. He spent the rest of his life away from science; he tried to make a living by working in small jobs and died on July 17, 1944. Some blamed Sidis's family, who used him as their personal project, while others blamed the journalists who never left Sidis alone.

Source: <https://www.youtube.com/watch?v=mAvYhBTcLaY> (TR)
<https://www.youtube.com/watch?v=L0zOdg7PCkQ> (ENG)

APPENDIX -3

Teacher Information Note

According to legal regulation of Turkish Ministry of Education (2007), "gifted individuals are defined as ones who are quick to grasp compared to their peers, having leadership qualities, pioneer in creativity and art fields, having specific academic skills, better understanding abstract thoughts than their peers, prefer to act independently in line with their interests, and perform at a high level." The distinguishing features of gifted individuals are listed as follows:

- Being ahead of their peers in all areas of development,
- Having a constant hunger for learning and knowledge,
- Curiosity,
- Having a rich vocabulary,
- Quick learning, grasping, and retention,
- Transferring knowledge to other areas by generalizing and abstracting,
- Using qualitatively different problem-solving and learning strategies,
- Establishing interest among seemingly unrelated tasks,
- Creativity,
- Independent work,
- Determination and perseverance,
- Being sensitive to the feelings, thoughts, and needs of others,
- Expressing oneself clearly,
- Sense of humor,
- Self-examination and self-criticism.

After the trainer shares the above information, they mention that, in addition to these positive characteristics, gifted individuals also have some common characteristics that can be considered negative. Examples such as the following can be used:

“Gifted individuals tend to avoid collaboration and prefer individual work. In addition, having a stubborn nature, being disorganized and messy in matters considered unnecessary (such as clothing and room clutter), facing situations arising from excessive emotionality (situations arising from an advanced sense of justice and compassion), acting indifferent due to their dislike of routine, and showing behaviors such as neglect are known to make their lives difficult” (Şentürk, 2019).

APPENDIX -4

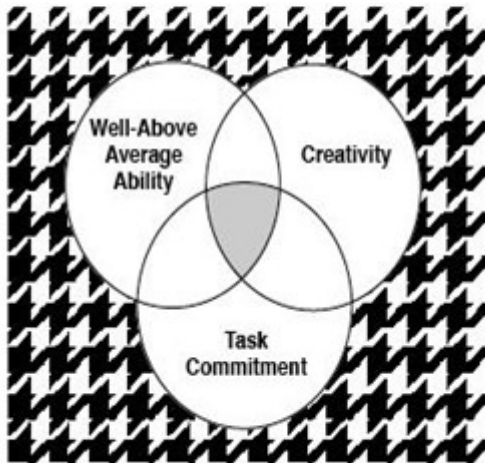
Renzulli and Tannenbaum Models

Renzulli (1986) considers giftedness as a composite of above-average ability, motivation, and creativity. According to Renzulli, a gifted individual has three interacting sets of characteristics. These are the sets of general and specific ability level, creativity, and motivation. General abilities include fluency of words, verbal and numerical reasoning, abstract thinking, and rapid, healthy, and selective recall of information. Specific abilities include talents in arts such as drawing, dancing, music, and theatre; and technical fields such as mathematics, physics, and chemistry. The creativity set encompasses the ability to generate new thoughts and use them to solve new problems. Motivation is the ability to take on superior tasks and responsibilities. The characteristics in the creativity and motivation sets are variable and can be developed with appropriate education, whereas the set of abilities above average is permanent (Şentürk and Kefeli, 2019). Renzulli emphasizes that the presence of the three rings he has identified alone is not enough to be gifted, and he stresses the need for a common set formed by the three rings. Renzulli also claims that the concept of giftedness includes variables other than IQ and argues that it is possible to be weak in certain areas while being very good in others.

After sharing Renzulli’s theory of giftedness, participants are asked to interpret Sidis’s life from the perspective of Renzulli in the context of educational and social- emotional needs. Then Tannenbaum’s theory of giftedness is shared.

General Performance Areas

Mathematics	Visual Arts	Physical Sciences
Philosophy	Social Sciences	Law
Religion	Language Arts	Music
Life Sciences		Movement Arts



Specific Performance Areas

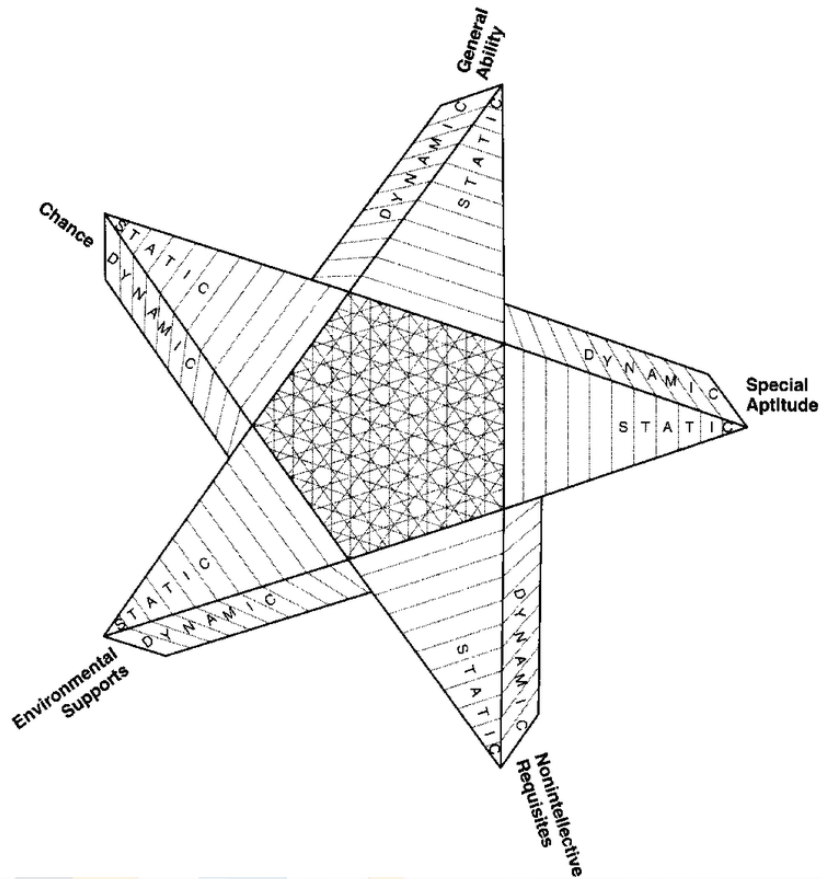
Cartooning	Demography	Electronic Music
Astronomy	Microphotography	Child Care
Public Opinion Polling	City Planning	Consumer Protection
Jewelry Design	Pollution Control	Cooking
Map Making	Poetry	Ornithology
Choreography	Fashion Design	Furniture Design
Biography	Weaving	Navigation
Film Making	Play Writing	Genealogy
Statistics	Advertising	Sculpture
Local History	Costume Design	Wildlife Management
Electronics	Meteorology	Set Design
Musical Composition	Puppetry	Agricultural Research
Landscape	Marketing	Plant Science
Architecture	Game Design	Animal Learning
Chemistry	Journalism	Film Criticism
etc.	etc.	etc.

* This arrow should read as "... brought to bear upon ..."

Three-ring model of giftedness (Renzulli, 1986)

Tannenbaum's Star Model of Giftedness suggests that for an individual to be considered gifted, five factors must come together: general ability, specific ability, non-intellectual factors, environmental support, and chance. Each of these factors is necessary but not sufficient on its own to constitute giftedness. Therefore, the combination of four factors without the fifth does not mean anything. Tannenbaum emphasizes that intelligence should be determined by factors other than IQ scores. The Star Model includes the following components:

- General ability
- Special aptitude
- Non-intellectual requisities
- Environmental supports
- Chance



Tannenbaum's five factors of giftedness (Tannenbaum, 1983)

APPENDIX – 5.
Self-Evaluation Form

Activity Title	What is giftedness?
What did I learn from this activity?	
If I had prepared this activity myself, what would I change?	
Where can I apply what I learned in this activity?	

Title	Giftedness Garden: Blossoming Traits
Theme	What is giftedness?
Duration	50 minutes
Learning Outcomes	<ul style="list-style-type: none"> - Define the concept of giftedness. - List the common characteristics of gifted students. - Explain the characteristics of gifted students with examples.
Method	Participants create a garden with flowers representing various traits of giftedness, leading to discussions about how these traits manifest and are nurtured in educational settings.
Tools / Materials	<ul style="list-style-type: none"> - Flower cutouts made of paper or felt, each with a different color or shape. - Markers or pens for writing on the flowers. - Sticks or pins to 'plant' the flowers into garden plots (large paper sheets or fabric). - Tape or magnets, depending on whether you use a wall or table for your garden setup.
Prep for Trainers	<ul style="list-style-type: none"> - Prepare the flower cutouts and ensure there are enough traits listed for the number of participants. - Set up the garden plots on large papers or cloths where participants can 'plant' their flowers. - Write a brief guide on the characteristics of giftedness to help facilitators lead discussions.

Learning-Teaching Process

Introduction (10 mins):

- Start by introducing the concept of giftedness and its diverse manifestations.
- Explain the activity and its metaphor of a garden where each flower represents a trait of giftedness.

Garden Creation (15 mins):

- Distribute the flower cutouts to participants and instruct them to write a characteristic of giftedness on the back of each flower without showing it to others.
- Participants then 'plant' their flowers in the communal garden plot by attaching them to the setup area.

Discovery and Discussion (20 mins):

- Once all the flowers are planted, allow participants to walk around the garden and read the traits on the back of each flower.
- Facilitate a group discussion where participants reflect on the traits they discovered and share how these could appear in students they teach or interact with. Discuss strategies for nurturing these traits in educational environments.

Conclusion and Reflection (5 mins):

- Wrap up the session by summarizing the key characteristics of giftedness discussed and the importance of recognizing and supporting these traits in students.
- Encourage participants to think about how they can apply this understanding in their own teaching or educational roles.

Discussion Questions:

- What traits did you notice most frequently among the flowers in the garden?
- How do these traits align with your understanding of giftedness?
- Can you think of specific examples of how these traits might manifest in students you've encountered?
- How do you believe these traits can positively impact a student's learning experience?
- What challenges might arise when working with students who exhibit these traits?
- How can educators effectively nurture and support these traits in the classroom?
- Are there any additional traits or characteristics of giftedness that you think should be included in our garden?
- How might the presence of multiple gifted traits in a student influence their social interactions and peer relationships?
- Can you share any personal experiences or anecdotes related to supporting students with these traits?
- Reflecting on today's activity, what strategies or approaches do you plan to implement in your teaching practice to better accommodate gifted students?

Evaluation

Participants are asked to create a metaphor statement;
"Gifted students are like... because..."

Differentiation (Optional)

The Gardens can be formed so that each participant has his own garden and can bring it home as a reminder.

ANNEX I

List of giftedness traits

- High intelligence
- Creativity
- Intense curiosity
- Rapid learning ability
- Strong problem-solving skills
- Advanced vocabulary and language skills
- High sensitivity or empathy
- Perfectionism
- Exceptional memory
- Unusual sense of humor
- Deep concentration or focus
- Innovative thinking
- Independence or self-directed learning
- Intuitive understanding of complex concepts
- Unique interests or passions
- Strong leadership abilities
- Heightened awareness of social justice issues
- Emotional intensity or sensitivity
- Advanced critical thinking skills
- Strong desire for intellectual stimulation

ANNEX II (Flower Samples - www.freeimageslive.co.uk)



Title	The Puzzle of Twice-Exceptionality
Theme	What is twice exceptional?
Duration	50 minutes
Learning Outcomes	<ul style="list-style-type: none"> - Define the concept of twice-exceptionality. - Distinguish the differences between the concepts of twice-exceptionality and giftedness.
Method	Participants work collaboratively to solve a metaphorical puzzle representing the complexities of twice-exceptionality.
Tools / Materials	<ul style="list-style-type: none"> - Puzzle pieces (each representing a different aspect of twice-exceptionality) - Puzzle board or large paper for assembling the puzzle - Marker pens for annotation
Prep for Trainers	<ul style="list-style-type: none"> - Prepare puzzle pieces with traits and characteristics of twice-exceptionality. - Set up a workspace with the puzzle board and materials.

Learning-Teaching Process

Introduction (5 mins):

Introduce the concept of twice-exceptionality, explaining that it refers to individuals who are both gifted and have a disability or learning difference. Emphasize the complexity of understanding twice-exceptionality and the importance of recognizing and supporting these individuals in educational settings.

Activity Setup (5 mins):

Distribute puzzle pieces to participants and explain the task of assembling the puzzle.

Encourage participants to examine the puzzle pieces closely and discuss their observations with their group members.

Puzzle Solving (25 mins):

Participants work together to arrange the puzzle pieces into a coherent whole on the puzzle board or large paper.

Encourage collaboration and discussion among group members as they consider the connections between different traits and characteristics of twice-exceptionality.

Reflection and Discussion (15 mins):

After completing the puzzle, participants annotate the puzzle board with insights, observations, and questions about twice-exceptionality.

Encourage participants to reflect on the complexity of understanding and supporting individuals with twice-exceptionality, as well as the similarities and differences between giftedness and twice-exceptionality.

Facilitate a brief discussion based on the reflections and observations shared during the annotation process.

Discussion Questions:

- What challenges did you encounter while solving the puzzle, and how did you overcome them?
- How did the unique shapes of the puzzle pieces affect your approach to solving the puzzle?
- What parallels do you see between assembling the puzzle and understanding the complexities of twice-exceptionality?
- In what ways did collaboration and communication with your group members contribute to solving the puzzle?
- How did you decide which puzzle pieces to place next, and what factors influenced your decisions?
- Did you notice any patterns or connections between certain puzzle pieces, and how did this influence your strategy?
- Reflecting on the completed puzzle, what insights or observations do you have about the nature of twice-exceptionality?
- How do you think the experience of solving this puzzle relates to supporting twice-exceptional students in educational settings?
- What strategies or approaches did you find most effective in solving the puzzle, and how might these translate to supporting 2E students?
- What did you learn from this activity about the importance of understanding and accommodating the unique strengths and challenges of twice-exceptional individuals?

Evaluation

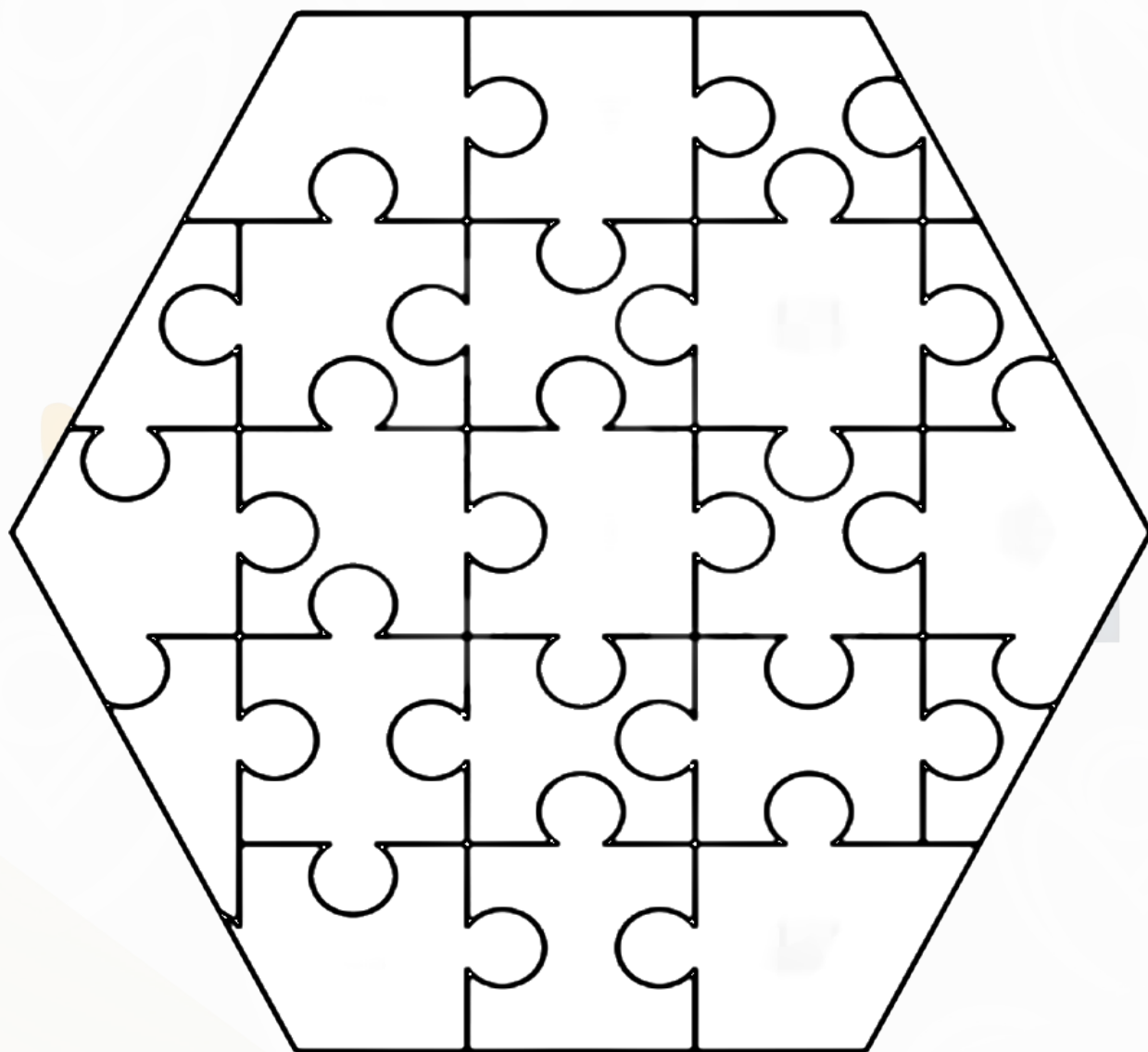
Participants are asked to create a metaphor statement;
“Twice-exceptional students are like... because...”

ANNEX I

List of twice-exceptional students' traits

- High intelligence
- Creativity
- Perfectionism
- Intense curiosity
- Emotional sensitivity
- Advanced problem-solving skills
- Anxiety
- Exceptional memory
- Unique interests or passions
- Sensory sensitivity
- Rapid learning ability in specific areas
- Executive functioning challenges
- Strong critical thinking skills
- Impulsivity
- Independence or self-directed learning
- Heightened empathy
- Attention difficulties
- Advanced vocabulary and language skills
- Hyperfocus on areas of interest
- Overexcitability
- Social challenges
- Intuitive understanding of complex concepts
- Depression
- Unconventional thinking patterns
- Exaggerated perfectionism

ANNEX II Example of Puzzle (write the traits inside each piece)



Title	Case Study Carousel: Exploring Real-Life Scenarios
Theme	Strengths and Challenges of Twice-Exceptional Students
Duration	50 minutes
Learning Outcomes	<ul style="list-style-type: none"> - Identify both strengths and weaknesses of twice-exceptional students. - Provide examples of the challenges that twice-exceptional students face in school, family, and social settings.
Method	Interactive group activity where participants rotate through multiple stations, each featuring a different case study of a twice-exceptional student. This setup encourages comprehensive understanding through discussion and analysis.
Tools / Materials	<ul style="list-style-type: none"> - Case Study Printouts: Prepare detailed descriptions of several twice-exceptional students, each highlighting different combinations of strengths and challenges. - Analysis Worksheets: Create worksheets that prompt participants to identify and discuss the key aspects of each case. - Timer: To ensure each group spends an equal amount of time at each station. - Station Markers: Signs or posters to indicate each station and provide a brief summary or question about the case study featured at that station.
Prep for Trainers	<ul style="list-style-type: none"> - Select Case Studies: Choose a diverse set of scenarios that illustrate various twice-exceptional profiles, ensuring a range of issues and settings are covered. - Prepare Materials: Print out the case studies and worksheets. Set up stations around the room with enough space for group discussion. - Review Discussion Questions: Ensure questions on the worksheets guide participants toward the learning outcomes, such as identifying strengths, weaknesses, and practical strategies for support.

Learning-Teaching Process

Introduction (5 mins):

- Explain the concept of twice-exceptionality, emphasizing the dual nature of having exceptional strengths and significant challenges.

- Introduce the carousel format, explaining the goals and structure of the activity.

Rotation through Stations (25 mins):

- Divide participants into small groups.
- Set the timer to alert groups when to rotate (suggest 5 minutes per station).
- Groups move from station to station, spending allotted time at each to read the case study and fill out the analysis worksheet.

Group Discussion (10 mins):

- After all groups have visited each station, reconvene as a whole group.
- Facilitate a discussion where each group shares their observations and insights from one of the case studies they found particularly impactful.
- Encourage discussion on different strategies that could be employed to support the students described in the case studies.

Wrap-Up (5 mins):

- Summarize the key findings from the group discussions.
- Highlight the importance of recognizing and addressing both the strengths and challenges of twice-exceptional students.
- Open the floor for any final questions or reflections from participants.

Evaluation

Participants are asked to create a metaphor statement;

“Twice-exceptional students are like... because...”

ANNEX I

Questions for the trainer to encourage discussion:

1. Identifying Strengths and Challenges:

- What are the key strengths demonstrated by the student in this case study?
- What challenges does the student face in school, at home, and in social settings?
- How do these strengths and challenges impact the student's daily life and learning experiences?

2. Strategies for Support:

- Based on the strengths and challenges identified, what specific strategies might be effective in supporting this student?
- How can educators leverage the student's strengths to help overcome or mitigate their challenges?
- What role can parents and peers play in supporting the development and well-being of twice-exceptional students?

3. Educational Implications:

- What adjustments or accommodations might be necessary in the classroom to support the learning needs of this student?
- What training or resources might teachers need to effectively support twice-exceptional students?

4. Social and Emotional Considerations:

- What are some potential social and emotional challenges that twice-exceptional students might face?
- What practices can be put in place to foster a supportive and inclusive community for twice-exceptional students?
- What misconceptions might exist about twice-exceptionality, and how can they be addressed?

5. Reflection on Learning:

- From your discussion, what was the most surprising or insightful aspect of the twice-exceptional profile you explored?
- What steps can you take in your professional practice to better identify and support twice-exceptional students?

ANNEX II Analysis Worksheet for Case Study Carousel

Participant Name : _____

Date : _____

Case Study Title : _____

Station Number : _____

1. Description of the Student

- Age:
- Exceptionalities:
- Strengths:
- Challenges:

2. Key Strengths

List the key strengths of the student as described in the case study:

- Strength 1:
- Strength 2:
- Strength 3:
- Additional strengths:

3. Key Challenges

List the key challenges faced by the student in various settings (school, home, social):

- Challenge 1:
- Challenge 2:
- Challenge 3:
- Additional challenges:

4. Impact on Learning and Daily Life

Describe how the student's strengths and challenges impact their learning and daily life:

- Impact on Learning:
- Impact on Daily Life:

5. Potential Support Strategies

Suggest strategies that could be implemented to support the student in overcoming challenges and enhancing their strengths:

- Strategy 1:
- Strategy 2:
- Strategy 3:
- Additional strategies:

6. Personal Reflection

Reflect on this case study:

- What did you find most insightful about this case study?
- How can the insights gained from this case study be applied to your practice or understanding of twice-exceptionality?

Additional Notes:

ANNEX III Case studies handouts

Case Study 1: “Ella’s Artistic Vision”

Age: 10

Exceptionalities: Gifted in visual arts, has ADHD

Strengths: Exceptional drawing and painting skills, highly creative, great color sense

Challenges: Struggles with attention in non-art subjects, impulsive behavior, difficulty organizing tasks

Setting Focus: School and after-school activities

Narrative: Ella is a 10-year-old whose artwork captivates everyone who sees it. Her ability to blend colors and create vibrant compositions is well beyond her years. However, Ella faces significant challenges in school; she has difficulty staying focused in classes that do not engage her visually. Her ADHD manifests in impulsive actions and difficulty following multi-step instructions unless they involve art. To support Ella, her teachers use visually engaging teaching methods and break tasks into shorter, manageable segments.

Case Study 2: “Liam’s Numbers and Letters”

Age: 12

Exceptionalities: Mathematically gifted, dyslexia

Strengths: Advanced mathematical reasoning, problem-solving skills, enjoys puzzles

Challenges: Reading difficulties, writing issues, slow reading speed affects test performance

Setting Focus: School, particularly math and language arts classes

Narrative: Liam, aged 12, excels in mathematics, where he easily grasps complex concepts and enjoys solving challenging problems. However, Liam has dyslexia, which complicates his ability to read and write at grade level, affecting his performance in non-math subjects. His school has implemented accommodations such as extra time on tests, access to text-to-speech software, and math assessments that minimize the need for written responses to leverage his numerical strengths without being hindered by his dyslexia.

Case Study 3: “Zara’s Social Quandary”

Age: 8

Exceptionalities: Highly gifted verbally, social anxiety

Strengths: Advanced vocabulary, excellent memory, articulate

Challenges: Fear of speaking in groups, struggles with peer interactions, anxiety during presentations

Setting Focus: School, social interactions, family gatherings

Narrative: Zara is an 8-year-old with a remarkable ability to express herself and an impressive vocabulary. Despite her verbal talents, Zara suffers from social anxiety, making her extremely reluctant to participate in group discussions or speak in front of her class. Her teachers and family support her by providing one-on-one interactions before introducing her to small groups, gradually helping her build confidence in social settings.

Case Study 4: “Marcus’ Hidden Talents”

Age: 14

Exceptionalities: Gifted in science, has Autism Spectrum Disorder (ASD)

Strengths: Deep knowledge of scientific facts, keen interest in biology, good at collecting data

Challenges: Communication difficulties, sensory sensitivities, rigid in routines

Setting Focus: School science classes, social interactions at school and home

Narrative: Marcus, 14, shows exceptional talent in science, especially in biology. He thrives on routines and has extensive knowledge of flora and fauna. However, Marcus struggles with ASD-related challenges such as sensory sensitivities and difficulty with verbal communication. His school has tailored his learning environment to minimize sensory overload and promote small group interactions that cater to his communication strengths.

Case Study 5: “Olivia’s World of Music”

Age: 16

Exceptionalities: Musical prodigy, struggles with anxiety and depression

Strengths: Plays multiple instruments with expertise, exceptional musical composition skills

Challenges: Overwhelmed by large crowds, performance anxiety, periods of low mood

affecting schoolwork

Setting Focus: School performances, personal practice sessions, home environment

Narrative: Olivia, a 16-year-old musical prodigy, can play multiple instruments and composes her own music. Despite her exceptional musical talents, Olivia faces challenges with anxiety and depression, which intensify before performances and impact her daily functioning. Her support network includes her music teacher and a counselor who work together to create a supportive performance environment and provide her with coping strategies for anxiety.

Title	What is giftedness?
Theme	Understanding characteristics and threats of gifted students
Duration	40 minutes
Learning Outcomes	<ul style="list-style-type: none"> - Explain the characteristics of gifted students - Predict the challenges that gifted students experience throughout their education process. - Recognize the significance of addressing the social-emotional needs of gifted students.
Method	SWOT analysis, suitable for group or individual work
Tools / Materials	sticky notes (four different colors), pens, whiteboard or flip-chart
Prep for Trainers	<p>The trainer prepares some questions regarding the giftedness to provoke a discussion. For example:</p> <ul style="list-style-type: none"> - What is giftedness? - What does it mean for a student to be gifted? - Have you ever had in your class/group a gifted student? - Do you think gifted students experience any kind of difficulties? <p>Participants can work individually, but in the case of bigger groups, it is recommended the trainer divide the participants into several groups.</p>

Learning-Teaching Process

1. Each group (participant if they will work individually) receives sticky notes (all four colors), and pens. The board (or flip-chart paper) is divided into four parts (with one vertical and one horizontal line). The trainer writes “S” in the upper left square (for “strengths”); “W” in the upper right square (for “weaknesses”); “O” in the bottom left square (for “opportunities”) and “T” in the bottom right square (for “threats”).
2. Groups work together and use sticky notes of different colors to write down the strengths of gifted children (e.g., excellent memory), their possible weaknesses (e.g. social skills); opportunities a teacher can provide to stimulate their development (e.g. participating in competitions), and possible threats (e.g. loss of motivation). The trainer should suggest which color to use for which component (e.g. green – for

strengths, red – for weaknesses, blue – for opportunities, and yellow – for threats). Groups have 10-15 min to discuss and write down.

3. Each group chooses one “speaker” to announce the results of their discussion and to stick their notes in the respective square on the board.
4. The trainer makes conclusions





Evaluation

After attending the session, participants are expected to have a better grasp of giftedness and recognize the typical traits of gifted children. They should also be aware that being gifted does not imply a life free of difficulties, as these children may still face certain challenges and require support to cope with them.

Suggest they write a short paragraph “Now I understand that gifted children...”



Twice
Exceptional

Title	Education of Gifted Students
Theme	Implementing different strategies
Duration	50 minutes
Learning Outcomes	- Explain different strategies for teaching gifted students.
Method	Discussion, practical work, individual or in small groups (max 2-3 people)
Tools / Materials	<p>Presentation (Multiple intelligence and learning styles); envelopes, at least four types of cards* (cards are placed in the envelopes – one card in each envelope), paper and pens, crayons, modelling clay, laptops, etc.</p> <p><i>*cards might look like this, but it is up to the trainer to choose more or other materials/tools</i></p> <div style="display: flex; justify-content: space-around; align-items: center;">     </div>
Prep for Trainers	<p>The trainer prepares:</p> <ul style="list-style-type: none"> - materials – usage of the chosen materials should require different skills. - Presentation - Some questions for a discussion on the topic “How do we learn?”.

Learning-Teaching Process

1. The session starts with a presentation (made by the trainer) – Gardner’s theory about multiple intelligence is presented and explained, and different learning styles.
2. The presentation is followed by a discussion: “All people are different and we learn differently. Each of us has his preferred way of learning.”

Sample Questions:

- What is your learning style?
- What do you need to learn effectively?
- Are you aware of the learning style(s) of your students?
- Do you think your students will have better achievement if they have an opportunity to use their preferred style of learning?
- How does it affect gifted students?

3. Participants can work individually or in small groups (max 2-3 people in the group).

The trainer presents the topic (e.g. "A summer day in the forest")

Each group gets one envelope with a card. They open the envelopes to find out which tool(s) they need to use to complete the task. And they can use ONLY this tool (to write an essay; draw a picture; model; or prepare a presentation). Groups get the respective tool and have 20 min to complete the task.

At the end, each group presents their work.

Evaluation

The evaluation can be done via a discussion.

Sample Questions:

- How did you feel working on the task?
- Were you comfortable with the tool(s) you had to use to complete the task?
- What did you discover about yourselves?
- Which tool would you choose if you were allowed to choose?
- Do you think the results would be better if you have used your preferred tool(s)?

Conclusion to be made

The use of different learning tools and techniques stimulates children's imagination, discovers and supports the development of their giftedness.

Title	Twice exceptionality as a paradox – Alex’s Story
Theme	Is it possible for a child with severe learning difficulties to be gifted at the same time?
Duration	40 minutes
Learning Outcomes	<ul style="list-style-type: none"> - Define the concept of twice-exceptionality. - Distinguish the differences between the concepts of twice-exceptionality and giftedness. - Identify both strengths and weaknesses of twice-exceptional students. - Recognize the unique educational needs of twice-exceptional students.
Method	Case Study, Real life scenario, Discussion
Tools / Materials	
Prep for Trainers	The trainer has to read the story (divided into parts) beforehand, and to be ready to tell the story to the participants (not to read it), to be ready to ask questions and to moderate the discussion.

Learning-Teaching Process

1- The trainer starts the session with a question: Have you ever been in a situation when you have felt helpless, not understood, and not supported? How was that feeling? Not good, right? – The trainer asks 2-3 of the participants to share their experience, and asks them How did you get out of this situation? What was the solution? What was the feeling?

2- Then the trainer says “I would like to tell you the story of a 7-year-old boy.”

Alex is about to start school.

This morning Alex’s mother went to yet another school and headed straight to the principal’s office. She has decided to speak out about her son. Every time she met with yet another principal at yet another school she openly shared the problem, she didn’t hide anything, but nowhere and from no one did she meet understanding. They told her directly that they could not enroll Alex, giving various reasons.

Questions for discussion:

- **What do you think might be the reason for this refusal?**
- **Is it possible in our time for a school to refuse to admit a child?**
- **Has it happened in your practice? Do you know of any similar cases?**
- **What do you think is the principals' explanation?**

The principal, a middle-aged man with a serene expression on his face, looked at her and invited her to sit down. The man seemed complacent and instilled confidence. For the first time, Alex's mother felt hope that maybe this time she could make it. And so she began the story:

Alex was diagnosed with autism. He attended kindergarten but most of the time he was sitting alone in the corner, not participating in the activities. He had no friends, he didn't talk except very few words, and he didn't know how to play or communicate with the others. Sometimes he is too emotional; the loud noise irritates him; he often feels confused and frustrated. It is not easy for him to learn, although he is a smart boy. I tried to have him enrolled in other schools that are closer to our house, but everywhere I got a refusal...

- *Why did the colleagues in the other schools refuse you? – the headmaster asked.*
- *Most of them said they don't have resources, or they don't have trained staff and they don't know how to deal with such a child.*

Questions for discussion:

- **What do you think now?**
- **How will the Headmaster act?**
- **If he does enroll the child in school how will they solve the problem?**

The first day of school. Alex was holding a bouquet of flowers in one hand, and with the other he had a firm grip on his mother. The schoolyard was teeming with children and parents, loud music playing. Alex looked confused, the noise annoyed him and he covered his ears with his hands, and when he couldn't muffle it he started making unpleasant noises himself. The children began to back away from him, pointing fingers at him, and making fun of him. The boy did not notice their reaction, but the mother's heart contracted anxiously.

A young and pretty teacher approached Alex, held out her hand to the mother, and

introduced herself. She handed the child a balloon, a green balloon as if she knew green was Alex's favorite color. The boy stopped making the strange sounds, relaxed his hands, took the balloon's string, then took the teacher's outstretched hand and obediently, if timidly, followed her into the classroom. "Maybe it'll work," the mother thought hopefully.

Questions for discussion:

- Do you think it will work?
- How do you think Alex feels among his classmates? What is the other children's attitude?
- Do you think he likes being at school?
- What do you suppose is his behavior during the lessons and on breaks?
- Do you think the boy manages academically?
- If Aleks was in your class what would you do so he can feel well at school? How could you help him to learn and to integrate into the class?

Alex had a hard time at school. He was doing relatively well in Math, but reading... and writing... No matter how much he practiced with his mother at home... At school, while the other kids were taking dictation, he was mostly scribbling in his notebook, or looking out the window; he refused to read... Even in sports class, he didn't feel comfortable, because no one wanted him on their team...

The teacher was kind and patient, but that didn't change the situation significantly.

With time Alex learned to patiently wait until the end of the lesson, even during the breaks he was sitting on his desk, not talking to the others or playing with them... Only when it became too noisy in the class did he get nervous and sometimes started crying or screaming.

Other children in the class have become used to Alex's strange behavior and almost stopped noticing him.

Questions for discussion:

- If it was you, what would you do to change the situation?
- What do you reckon needs to happen to change the situation for Alex?

One day in art class, the teacher brought in modeling clay and gave the students an assignment to model their favorite animal. While the other children discussed what to model, Alex began to work immediately. First, he modeled a puppy, then a kitten ... He

had seen an elephant in the Zoo, so he modeled one, and then a monkey, and a lion... He hadn't heard when the lesson ended, and hadn't noticed that all his classmates had made a circle around him watching in amazement what he was doing... When he lifted his head he saw a lot of smiling faces around...

- Wow, - said one boy – How did you do that? It is amazing!

- You are amazing! – a girl said. – Can you model a parrot for me? – she asked.

Alex nodded. Now he was smiling.

10 - The trainer makes conclusions – talking about diversity and twice exceptionality. And then tells the end of the story:

Alex remembered that day forever. But the story didn't end then. Years passed. Alex began to get serious about modeling. He graduated from the School of Applied Arts, and then the Academy of Art. He became a sculptor. He's still quiet and a little strange, but he has good friends who accept him for who he is and support him. Reading and writing are still not his favorite activities, but he is talented and successful. He has several solo exhibitions behind him, and awards from prestigious international forums. And when he recalls the day he first picked up clay, he jokes, "Maybe I should have this day as my birthday?"

Evaluation

Participants are asked to write down the moral of the story in one sentence.

Then they can share.

Title	What Motivates 2e Students to Learn?
Theme	Understanding the Needs of Twice-Exceptional Students
Duration	25-45 minutes
Learning Outcomes	- To understand motives for learning - Identify the educational goals of twice-exceptional students
Method	Brainstorming, Comparison of ideas in pairs/small groups, making a vision board
Tools / Materials	<i>Papers + pen & pencils for each student</i>
Prep for Trainers	To think about possible motives for learning in different situations, subjects (inner and external), prepare a few example stories about different students.

Learning-Teaching Process

1. The trainer asks students if they are aware of their motives for learning. If the trainer is a teacher of a subject, the activity aims at his subject. If the trainer is a psychologist/other school professional, the activity would aim at learning in general. If students are confused/not aware of what the motive means, give them little explanation & example. 5 minutes.
2. Ask students to write/draw their motives on a paper in max. 5 minutes (depending on the group and their handicaps).
3. Students in pairs or small groups of three discuss/present their motives. It should lead to inspiring each other, 10-20 minutes.
4. Let students reconsider their motives and make a small vision board of their motives. The trainer gives students papers and pens & pencils and asks them to make a small vision board of their motives. After they are done, they can put their vision boards on the wall so everyone can see each other's vision boards to get another inspiration and perspective, 5-15 minutes.

Evaluation

Participants are asked about the novelty they discovered in this field, what was surprising, new, and unexpected. They choose one vision board which is related to what they discovered and to stand next to this vision board.

Differentiation (Optional)

- Flashcards – the trainer can have prepared flashcards with possible motives so students can choose a limited number of motives from them.
- Pictures or magazines for making vision boards – vision boards can be done easily just with pen & pencils or on a higher level with pictures cut from magazines.
- Closing debate, reformulating motives – if there is more time in lesson, there can be a closing activity: After exposing the vision boards on the wall, everyone goes and views all the vision boards. Then choose one which is surprising, inspiring for them. The activity ends in groups/pairs (if possible different from the previous ones) about what novelty participants recognise for themselves in other people's vision boards.

EXCEPTIONAL

Title	Discovering the Potential of Students
Theme	Enhancing the potential and abilities of students
Duration	45-90 minutes
Learning Outcomes	<ul style="list-style-type: none"> - Provide examples of the challenges that twice-exceptional students face at school, family and social settings. - Recognize the unique educational needs of twice-exceptional students. - Acknowledge the importance of providing social-emotional support for the academic development of twice-exceptional students.
Method	Reading real stories, detective work to find strong abilities and arguments; discussion, presentation
Tools / Materials	<p>Printed stories of real people or stories reachable via QR codes (presenting QR code). The case studies are included below.</p> <p>Infographics on how to write a detective story.</p>
Prep for Trainers	<p>Read the stories and think about strengths and weaknesses of each presented person.</p> <p>Think about how potentially weak abilities change to an advantage or useful ability for life.</p> <p>Be prepared for moderating the discussion among students.</p>

Learning-Teaching Process

1. The trainer divides a class into smaller groups, each group gets one story of 2E person.
2. Groups read the story and try to find abilities, sort them to strengths and weaknesses. Sorting should lead to the discussion about how 2E people study and live, what should teachers look for, support and help discover. 15-20 minutes
3. Groups prepare a presentation like the beginning of a detective story – They prepare a rough story line according to an infographic (<https://www.tes.com/teaching-resource/writing-a-mystery-story-6095843>). One of the people in the

story will have the same abilities (weak and strong) as the person from the first story they've read. 15-30 minutes

4. Presentations of stories and story figures to other groups. While presenting descriptions of different abilities of story figures, others think about weakness or strength if any. Discussions about how to recognise strengths and weaknesses, about conditions of learning and teaching. 15-35 minutes.

Evaluation

The discussion and the final wrap up in small groups should lead to evaluation of the activity, recognising the idea that everyone needs to find such an environment and field where they can succeed and can use their abilities in a positive way. It should also show we need to think about everyone's needs because there can be unseen potential due to special needs which are more visible than the strengths.

Differentiation (Optional)

- Flashcards – the trainer can have prepared flashcards with different abilities of people from the stories so students can use them while thinking and discussing. The trainer can also show students the list of adjectives we use to describe people abilities and character (e.g. <https://cz.pinterest.com/pin/100-positive-personality-adjectives-and-character-traits-in-english--356628864254520382/>)
- Prepared several environments, work/study/life places, students need to choose where their story would fit most (in terms life is not always ideal and we need to adapt).
- Groups can finalize their detective stories and write it down. There should be another presentation then. You could also put all the stories together into a little book. Students then should have access to read also the stories of the other groups.

The detective story – an example

This is just a sample of a detective story. The course participants may invent a similar one, or they can only write basic facts and present the whole story only orally in front of the group. The aim of the story should be to uncover various strengths of all presented characters.

Our class is quite fun. We are 25 kids here, but only 6 of us are really close friends. Who knows why we match together so well. Is it because we all live in the same street? Is it because we all have both parents living together? Is it because we all always see funny things anywhere we go? One or the other, we are a good band.

And who are we? I'll start with Emily, who lives at the beginning of the street. She is a great observer. She has two little sisters, twins. Emily always knows about all the stuff kids in our street plan to do. She also has a perfect memory.

Next one, living just next door, is Jason. He is funny, can draw so pretty and easily that no one can understand how he does it. Even himself. He just thinks in pictures. Bob is an inventor. His parents allowed him to have his "exploratory", how he calls his laboratory, in the garage, so he is all the time there making one of his new discoveries, machines, chemical reactions, physical experiments, ... What is fascinating for me, is that he hates sitting with books and reading. He simply knows how the things work.

Alison is moving a lot, all the time. She just can't stop her body for a second. We often make jokes that she keeps dancing or playing at least a toe game even at night when she is asleep. Do you know the toe game? This is our favourite one, but I'll explain it later. Ali is most of the time outside, she doesn't care if it's sunny or rainy. She does any sports you can think about and even more, she invents her own. Which greatly corresponds to Bob's inventions. They are living across the street, so we call this part of the street "inventors".

Rod lives two doors from Ali. His parents come from Austria, but Rod was born here and has never been there. He is good at organising and he is our leader, even though we don't talk about it. He is just so calm and so clever. He loves learning new things, he always watches Discovery Channel, National Geographic, reads tons of encyclopaedias,

listens to every podcast talking about how things work. We all just don't understand how he can remember all these facts and information.

And there is me, Sussie, at the second end of our street. I can tell stories. So, I'll try to tell you about what mysteriously happened in our class.

One day, our classmate Pat, went missing. No one talked about her, teachers behaved as if she had never been a part of the class. I felt that something was happening, so I asked my friends what we were going to do about it? That's how our investigation began...

NINA - The artist

Primary school

Her teacher in the first grade wanted her to repeat the same year. She failed to learn to read and write, she couldn't remember important words in math, she did not understand that words and symbols such as "+, and, add" are all related to one mathematical procedure. Other tasks were also difficult. Eventually, she was assessed by a psychologist and a speech therapist.

Learning at elementary school and junior high school

From the second grade onwards, she attended remedial classes with a school special education teacher and even more support classes in an external counselling centre. She needed support and learning tools to help her learn; she needed reading and writing practice all the time over and over again; she needed time to understand some of the math procedures; she often struggled to master different concepts.

Senior high school

She continued her education at art school, her subject was toy design. She enjoyed it a lot. Her grades were much better than she had at the elementary school.

Her Interests

She has enjoyed painting since preschool age. Apart from lessons at Art School she spent hours painting at home. She learned to play the flute. She is keen on dog dancing - she trains with her sister and mother, together they go to classes and dog dancing camps. She has won many awards with her dogs.

What helped

She studied every day and prepared intensively for school. She had to practise every new word well so that she could remember it and pronounce it correctly. She connected the words with colours. She painted various concepts whenever it was possible or at least underlined words, colour-coded them, wrote lists of words on different coloured papers. She had to prepare all the tasks which required work with long texts in advance. She did not have to learn German as the second foreign language at primary school, she only practised English.

What she is like

She is rather quiet, calm, with a lot of resilience. She knows that she has to study to pass school duties. She loves her family and her dogs very much. She likes talking about what she has done, what she has experienced, she likes showing pictures of her art and pictures from trips with her family or competitions with her dogs. She is a “fighter” - when something goes wrong, she accepts it and keeps trying and looking for ways to improve the task.

JONAS - The robotic engineer

Elementary school

He was not good at reading and writing right from the beginning of school. He was smart and could discuss complex topics with his teachers, but his spelling tests were always full of mistakes. Reading aloud in front of the class meant tremendous stress. All his troubles were justified by his difficulty to speak. He spent a great deal of time practising reading and writing at home. He did better in higher classes when the teachers allowed him not to write down the material, just listen to the explanation. The Czech language continued to be difficult. However, he found a unique way to learn English, but he didn't like vocabulary tests.

Learning

He learns best through listening, composing, sketching, and manipulating with objects. He needs to understand things in depth. If he has to read something, he prefers to read silently or uses a TTS programme.

High school

He enjoyed playing and constructing Lego and was interested in robotics and

cybernetics, so he chose the same subject in his high school. Only after he started senior secondary school his English teacher suggested that his language difficulties could be caused by a specific learning disability and that an assessment could make things easier for him. He passed his final exams in vocational subjects on an excellent level, but he found the Czech language exam demanding.

His interests

He has always had a great passion in electrical engineering, taking apart and building various devices. His interest turned into his profession. He invents and builds Lego robots, and drones. He participated in a big American competition with his drone-illuminator project where he achieved a very good placement. He regularly participates in various robotic competitions. He enjoys making objects to move.

What helped

He studied at home with his parents, sometimes using the help of classmates, which he exchanged for math and physics tutoring. He preferred to listen to the lessons rather than read them. He tried to listen to teachers' explanations at school. He always tried to solve independently what he could. He did not take failures too personally, he always thought first of what he was good at.

What he is like

Helpful, kind, good to talk to. He likes to talk about his experiences. He has got lots of ideas, he likes solving problems and he is enthusiastic about everything. He is a reliable friend.

Title	Reinforcing Exceptionality: Addressing Giftedness and Twice Exceptionality in Education
Theme	The workshop focuses on educational strategies for gifted and twice-exceptional students, emphasizing tailored teaching techniques, understanding unique challenges, and fostering an inclusive and supportive learning environment.
Duration	2 x 45 min.
Learning Outcomes	<p>The participant recognizes the unique educational needs of twice-exceptional students. (see: Prep for Trainers)</p> <p>The participant has knowledge of various teaching strategies for twice-exceptional students. (Appendix 3)</p> <p>The participant understands the importance of addressing the social-emotional needs of twice-exceptional students. (Appendix 1,2)</p>
Method	Video, worksheets, multimedia presentation, projector
Tools / Materials	Brainstorming, discussion, case work, group exercises, video
Prep for Trainers	<p>Interactive lectures with a multimedia presentation: short lectures followed by questions and answers to clarify concepts and encourage interaction. The lectures cover topics such as the definition of a gifted student, the current state of research, diagnostic possibilities, the place of gifted students in the Polish education system, legal foundations for working with gifted students, forms of work, and issues related to the functioning of 2E individuals.</p> <p>Case study of a twice-exceptional individual: using an excerpt from the film “Sonata” (2021) (other suggestions depending on the group’s familiarity with the film include “Stars on Earth,” “Spinning Out,” “Gifted”).</p> <p>Practical exercises and group discussions: facilitate discussions among participants to exchange experiences and ideas on teaching practices.</p> <p>Case studies of 2E students with language abilities and dyslexia and dysgraphia/cerebral palsy (after Łodej et al. 2018).</p>

Learning-Teaching Process

Theoretical introduction

Practical exercises: appendix 1,2,3.

Evaluation

Discussion and final summary in small groups should lead to the evaluation of the exercise, recognizing the idea that everyone must find an environment and field where they can succeed and use their skills positively. This should also highlight the need to consider everyone's needs, as there may be unnoticed potential due to special needs that are more visible than strengths.



Twice
Exceptional

APPENDIX 1:

How teachers can develop the abilities of twice- exceptional students within lessons

The exercise is a written version of brainstorming. It consists of each participant writing down the ideas that come to mind for about one minutes on a card they receive (I restrict them to work in class only, as I think it is essential for them to be aware that in school, the development of abilities starts in regular classes).

After one minute, they exchange cards and add more ideas to the directional abilities they have received. There are approx. 5.

We then proceed to group the ideas. We do this together. But they can be suggested to work in teams.

The second part aims to find general guidelines for capacity building, generalising the suggestions collected.

Development of Musical Talent: e.g. listen to a variety of music.

Talent in foreign languages: e.g. watching films in English.

Development in the Arts Talent

Talent Development in Sport:

Talent development in natural science:

Develop and Improve Your Social Skill

APPENDIX 2:

ELEMENTS OF THE SCHOOL

The exercise aims to simulate a simulation that will enable you to reflect on what elements of the school are crucial to the functioning of the doubly exceptional students and how relationships are built between the educator, the twice-exceptional students, and the other actors of the school.

You will first draw/sketch an outline of the key elements of the school. Then, establish the order in which the pawn will represent the gifted/student and you (the teacher).

Divide the roles: One person will read the instructions, one will be the observer, and one will place the elements on the board.

Read the instructions:

- take the pawn representing you and place it on the board. Consider whether it is a comfortable place for you. If not, move the pawn to another, better position. You can comment on your actions.
- 2 Take a pawn that represents a gifted/student. Place it on the board, trying to find the best position for it.
- 3 Take any other blocks you have available. You can give them a specific meaning, e.g. head teacher, school teacher, school psychologist, other teachers, male and female students, parents, etc. Arrange these blocks on the board, trying to place them so that they reflect your intuitive understanding of the relationships between the school and the different actors.
- 4 Feel free to move the blocks around until you get a state you are happy with.

Discuss this setting in the group. Think about what surprised you about it. Swap the roles so that each of you plays each role.

APPENDIX 2:

INSTRUCTIONS FOR THE TRAINER

1. Distribute a handout to each participant. This handout should list two qualities. Participants are given 25 minutes to complete this task.
2. Instruct participants to write down five competencies on small pieces of paper.
3. Print out a list of competencies and attach it to a board where everyone can see it.
4. Once every group has finished writing their competencies on the small pieces of paper, ask them to come forward and place their papers under the corresponding competencies listed on the board.
5. Initiate a discussion about the competencies, encouraging each group to explain their choices and engage in a group dialogue.

INSTRUCTION FOR PARTICIPANTS

To effectively teach twice-exceptional students—those who are gifted it's essential to have a comprehensive understanding of several key areas:

Significance of Educational Success: Recognise that the educational success of twice-exceptional students is closely tied to their overall well-being. Their unique skills and challenges mean that traditional success markers may only partially capture their potential or needs. Educators must, therefore, cultivate a learning environment that acknowledges and nurtures their exceptional talents while addressing their learning disabilities.

Stability in Educational Environment: Stability and consistency in the school environment are critical for twice-exceptional students. Such stability supports their complex needs by providing a predictable and secure space to explore their abilities and address their challenges. This entails considering how changes in the school setting, teaching staff, or curriculum might disproportionately affect them and taking steps to minimise disruptions.

Navigating the Education System for Support: A thorough understanding of the education system, especially regarding acquiring support and services for twice-exceptional students, is crucial. Teachers must be adept at navigating the complex processes of securing accommodations, modifications, and specialised services. This knowledge enables educators to advocate effectively for their students' needs, ensuring they receive the necessary resources to thrive.

Importance of Educational Records and Diagnosis: Maintaining detailed educational records and ensuring twice-exceptional students are accurately diagnosed are fundamental to identifying and meeting their special educational needs. Precise diagnosis and comprehensive record-keeping help craft tailored educational strategies that address their high abilities and learning disabilities. These records are invaluable for ongoing assessment and when adjustments to their learning plan are needed.

You have been given two features of educational work.

Learning in a safe space

Paying attention to basic needs

Friendly atmosphere

Learning in a natural environment (natural space)

Acceptance of emotions

Relationships are important

Free expression

Importance of relationships

Respecting one's own and others' privacy

Feeling that everyone is included

Answer the questions:

- How do you understand and characterise the characteristics indicated?
- What is the role of the person working with the twice-exceptional pupil (students) in creating a supportive environment and paying attention to the basis of needs?
- What are the 5 competences of an educator that are necessary to create a working environment based on these qualities? Write these competences on separate sheets of paper.
- Which of these competences do you have, and which can be developed as part of an educator programme?

Title	This is a Paradox
Theme	The intersection of giftedness and learning difficulty
Duration	45 minutes
Learning Outcomes	- Distinguish the differences between the concepts of twice-exceptionality and giftedness.
Method	Interactive group activity, discussion, Q&A
Tools / Materials	- Paper and marker
Prep for Trainers	- Before the trainer starts this session, he should prepare papers with “agree,” “disagree,” and “undecided” written on them. These papers should be placed at certain points in the hall before starting the activity.

Learning-Teaching Process

When participants come in, they are informed about the papers with “agree,” “disagree,” and “undecided” written on them. To capture attention, the teacher first asks the following question to the participants: “How do you obtain ‘knowledge’ on any subject?”

The answers are written on the board or a piece of paper. The common and different answers are compiled. The important thing here is to recognize our sources of information. It is emphasized that the “knowledge” we hear second-hand often forms biases. After recalling our sources of information, the concept of “bias” is emphasized. It is stressed that most of our knowledge consists of biases and that these biases should not turn into baseless judgments. Then, the main activity begins.

The trainer mentions that he will read different statements. Based on them, each participant is asked to move to the part of the room with the papers (“agree,” “disagree,” “undecided”) that reflect their opinion. For example, after reading the first statement, participant 1 goes to the “undecided” paper, and participant 3 goes to the “agree” paper. Once all participants have distributed themselves according to their thoughts, the second phase of the activity begins. Participants gathered next to each of the three papers (“undecided,” “agree,” “disagree”) are asked to justify their opinions. For example,

participants gathered next to the “undecided” paper for the first statement justify why they are undecided. The prepared justifications are shared with the large group. After the sharing is complete, the trainer asks if anyone wants to change their mind. A short (2-minute) thinking period is given for the answer to this question. Then, if there are participants who want to change their decision, they are allowed to move. In the second phase of the activity, participants who change their place are asked for their reasons, and a general evaluation is made. During the evaluation, common misconceptions about giftedness are emphasized.

Statements:

1. Gifted children are successful in all areas.
2. Gifted children may fail in some areas.
3. Gifted children are more mature than their peers.
4. The academic achievements of gifted children are always high.
5. The parents of gifted children never need to struggle.

The second phase of the activity will be structured around a movie. Suggested movies: “Taare Zameen Par,” “Temple Grandin.” Before starting the activity, the trainer prepares relevant sections from the chosen film. These prepared clips are shared with the large group and analyzed based on the information note. During the film analysis, the paradox arising from the nature of being twice exceptional is emphasized, and the following questions are shared. These questions can be developed by the trainer.

Questions:

1. Do you think a gifted child can also have different disorders/disabilities? How?
2. Do you think a gifted child can read /write later than his peers? How?
3. Do you think it is possible for gifted students to have difficulties/disabilities in learning some basic things? How?
 - Do you think that is there any intersection or relation between giftedness and special education need? How?

Evaluation

- When you think of giftedness, what concepts/characteristics/attitudes come to your mind? Write at least three.
- When you think of twice exceptional, what concepts/characteristics/attitudes come to mind? Write at least three.
- If we asked you to express the answers to the first two questions in a “set,” how would you classify them?

8. ASSESSMENT OF THE PROGRAM

8.1. TWICE EXCEPTIONAL (2E) AWARENESS SCALE

Dear participants,

The Twice-Exceptional Awareness Scale has been developed to measure the awareness of teachers/teacher candidates/education professionals regarding “twice-exceptional” students who have both giftedness and learning difficulties in any domain. The scale consists of 15 items, and you are required to select the option that best applies to you. Before starting the scale, we need your demographic information. No personal information is requested. Thank you for your participation.

Project Team



DEMOGRAPHICS

Gender	Female	
	Male	
Age	20-30	
	31-40	
	41-50	
	51+	
Type of school/institution that you work	Pre-Primary School	
	Primary School	
	Middle School	
	General Secondary School	
	Vocational School	
	University	
	Special Education School	
	Gifted Education School	
	If other, please specify	
Department	School Counsellor	
	Special Education	
	General education/classroom teacher	
	Literature	
	Maths	
	Science (Physics-Chemistry-Biology)	
	Social Studies (History-Geography-Philosophy, etc.)	
	Art	
	Music	
	Physical Education	
	IT	
	Religion	
	Foreign Languages	
	Pre-primary	
	Vocational	
If other, please specify		
Your education level	Bachelor's Degree	
	Master's Degree	
	Doctorate (PhD)	
Please mark the topics of education/courses/training, etc., that you have previously taken.	Giftedness	
	Specific Learning Disability	
	Autism Spectrum Disorder	
	Twice-Exceptional	
	None	

Item	I Strongly Disagree	I Disagree	I am undecided	I Agree	I Strongly Agree
1- Being the teacher of a twice exceptional student requires different skills or competencies.					
2- I believe that twice exceptional students may be exposed to peer bullying in school due to their difficulties/disabilities.					
3- I am aware that gifted/talented students may also experience learning difficulties/disabilities from different perspectives.					
4- I do not believe that a student can be both gifted/talented and in need of special education.					
5- I am aware that a student can be both gifted/talented and in need of special education.					
6- I am aware that twice exceptional students may experience social and emotional problems.					
7- I have difficulty in understanding the phenomenon of being twice exceptional.					
8- I believe that the phenomenon of being twice exceptional does not actually exist.					
9- I have sufficient knowledge about how to proceed when I consider a student is twice exceptional.					
10- I am aware of the legal regulations regarding twice exceptional students.					
11- I am aware of the instructional strategies for twice exceptional students.					
12- A gifted/talented student who is also in need of special education makes him twice exceptional.					
13- I am aware that twice exceptional students may cause trouble in the classroom environment due to their difficulties/disabilities.					
14- I struggle to understand when a student is very successful in some subjects but behind his peers in others.					
15- I believe that twice exceptional students need to be supported in the areas they excel.					

8.2. PROGRAM ASSESSMENT

Twice Exceptional Awareness Training Assessment Form

Personal Information

Gender	Female	Male	Other	
Occupation				
Age				
Question			YES	NO
1	Is there anyone in your family identified as gifted?			
2	Have you ever attended any training about gifted individuals?			
3	Have you previously attended a training about Twice-Exceptional (2e) individuals?			
4	Have you heard about the concept of Twice-Exceptional (2e) before?			
5	Do you think you may have encountered a twice-exceptional one before?			

Overall Assessment

1. Do you believe the training has enhanced your understanding and awareness of twice-exceptional students to a degree? If so, how?

2. Do you think the knowledge and skills acquired in the training will contribute to your profession? How?

3. Can you briefly share your positive and negative opinions about this training?

4. Do you have any suggestions for improving the training?

REFERENCES

- Acar, S., Sen, S., & Cayirdag, N. (2016). Consistency of the performance and non-performance methods in gifted identification: A multilevel meta-analytic review. *Gifted Child Quarterly*, 60(2).
- Afat, N. (2017). Üstün zekalı ve özel yetenekli bireylerin eğitiminde destek eğitim odalarının incelenmesi. *Researcher*.
- Aiello, P., & Pace, E. M. (2020). Inclusive educational principles, policies, and practices in Italy. *Oxford research encyclopedia of education*. <https://oxfordre.com/education/display/10.1093/acrefore/9780190264093.001.0001/acrefore-9780190264093-e-1282>
- Akçamete, G., & Kaner, S. (1999). Cumhuriyetin 75 yılında çocuğa yönelik özel eğitim çalışmaları, 2. ulusal çocuk kültürü kongresi: Cumhuriyet ve çocuk. *Ankara Üniversitesi Çocuk Kültürü Araştırma ve Uygulama Merkezi Yayınları*, 2, 395-405.
- Akkaş, E. & Tortop H.S. (2015). Üstün yetenekliler eğitiminde farklılaştırma: Temel kavramlar, modellerin karşılaştırılması ve öneriler. *Üstün Zekâlılar Eğitimi ve Yaratıcılık Dergisi*, 2(2), 31-44.
- Alevli, O. (2019). Özel yetenekli öğrencilere bilim ve sanat merkezlerinde uygulanan türkçe eğitimi: Bir durum çalışması. [Yayınlanmamış Doktora Tezi]. Sakarya Üniversitesi.
- Al-Hroub A. (2021). Utility of Psychometric and Dynamic Assessments for Identifying Cognitive Characteristics of Twice-Exceptional Students. *Frontiers in psychology*, 12, 747872. <https://doi.org/10.3389/fpsyg.2021.747872>
- Al-Hroub, A., & El Khoury, S. (2018). Definitions and Conceptions of Giftedness Around the World. In: *Gifted Education in Lebanese Schools*. Springer Briefs in Psychology. Springer, Cham. https://doi.org/10.1007/978-3-319-78592-9_2
- American Psychological Association, Center for Psychology in Schools and Education. (2017). Top 20 principles from psychology for preK–12 creative, talented, and gifted students' teaching and learning. Retrieved from <http://www.apa.org/ed/schools/teaching-learning/top-twenty-principles.aspx>
- Amiri, M. (2020). At a glance of twice-exceptional children on psychological perspective. *Journal of Gifted Education and Creativity*, 7(3), 105-114. <https://dergipark.org.tr/en/download/article-file/1420389>
- Anastasiou, D., & Kauffman, J. M. (2015). Inclusive education in Italy: description and reflections on full inclusion. *European Journal of Special Needs Education*. <https://www.tandfonline.com/doi/abs/10.1080/08856257.2015.1060075>

- Assouline, S. G., Foley Nicpon, M., & Whiteman, C. (2010). Cognitive and psychosocial characteristics of gifted students with written language disability. *Gifted Child Quarterly*, 54(2), 102–115. <https://doi.org/10.1177/0016986209355974>
- Bakiođlu A. & Levent F. (2013). Üstün yeteneklilerin eğitiminde türkiye için öneriler, *Üstün Yetenekliler Eğitimi Araştırmaları Dergisi*, 1(1), 31-44.
- Baldwin, L., Baum, S., Pereles, D., & Hughes, C. (2015a). Twice-exceptional learners: The journey toward a shared vision. *Gifted Child Today*, 38(4), 206–214. <https://doi.org/10.1177/1076217515597277>
- Baldwin, L., Omdal, S. N., & Pereles, D. (2015b). Beyond stereotypes: understanding, recognizing, and working with twice-exceptional learners. *Teaching Exceptional Children*, 47(4), 216–225. <https://doi.org/10.1177/0040059915569361>
- Bartnikowska, U., & Antoszevska, B. (2017). Children with special educational needs (SEN) in the Polish education system. *International Journal of Psycho-Educational Sciences*, 6(3). [in Polish].
- Baum, S. M. (1990). Gifted but learning disabled: A puzzling paradox. *ERIC Digest #E479*. <https://doi.org/10.1080/1045988X.1989.9944546>
- Beckmann, E., & Minnaert, A. (2018). Non-cognitive characteristics of gifted students with learning disabilities: An in-depth systematic review. *Frontiers in Psychology*, 9, 1-20. <https://doi.org/10.3389/fpsyg.2018.00504>
- Bryant, D. P., Smith, D.D. & Bryant, B. R. (2008). *Teaching students with special needs in inclusive classrooms*. Pearson Education Inc.
- Candler, M. M. (2017). The influence of perfectionism on mental health in gifted and twice-exceptional students. <https://doi.org/10.17077/etd.pr6zbxz>
- Cavkaytar, A. (2013). Ailelerle işbirliđi. Eripek, S. (Ed.), *Özel Eğitim içinde* (s.53-65). Anadolu Üniversitesi Yayınları.
- Centro Leonardo. (n.d.). *Studenti con doppia eccezionalità*. (<https://www.centroleonardo-psicologia.net>)
- Çitil, M. (2009). Cumhuriyetin ilanından günümüze Türkiye’de özel eğitim. [Yayınlanmamış Yüksek Lisans Tezi]. Gazi Üniversitesi.
- Çitil, M. (2012). *Yasalar ve özel eğitim*. Vize Yayıncılık.
- Crepeau-Hobson, F. and Bianco, M. (2010). Identification of gifted students with learning disabilities in a response-to-intervention era. *Psychology in the Schools*, 48(2), 102-109. <https://doi.org/10.1002/pits.20528>
- Cybis, N., Drop, E., Rowinski, T., & Ciecuch, J. (2013). *Talented student - analysis of available diagnostic tools: Report prepared within the project Development and*

- implementation of a comprehensive working system with a gifted student. Warsaw: Educational Research Institute. [in Polish].
- Cybis, N., Drop, E., Rowinski, T., & Ciecuch, J. (2013). Talented student - analysis of available diagnostic tools: Report prepared within the project Development and implementation of a comprehensive working system with a gifted student. Warsaw: Educational Research Institute. [in Polish].
- D'Alessio, S. (2011). Inclusive education in Italy: A critical analysis of the policy of integrazione scolastica. *Inclusive Education in Italy*. <https://brill.com/display/title/37124>
- D'Alessio, S. (2013). Inclusive education in Italy: A reply to Giangreco, Doyle, and Suter (2012). Life span and disability. Disponibile online: https://lifespansjournal.oasi.en.it/client/abstract/ENG270_6%20D'alessio.pdf
- Davidson Institute, <https://www.davidsongifted.org/>
- Dyrda, B. (2012). Educational support for the development of talented students. A socio-pedagogical study. Katowice: Żak Publishing. [in Polish].
- Enç, M, Çağlar, D & Özsoy, Y. (1987). Özel Eğitime Giriş. Ankara Üniversitesi Eğitim Bilimleri Fakültesi Yayınları.
- Foley-Nicpon, M. and Assouline, S. G. (2015). Counselling considerations for the twice-exceptional client. *Journal of Counselling & Development*, 93(2), 202-211. <https://doi.org/10.1002/j.1556-6676.2015.00196.x>
- Foley-Nicpon, M., Allmon, A. L., Sieck, B. C., & Stinson, R. D. (2010). Empirical investigation of twice-exceptionality: where have we been and where are we going?. *Gifted Child Quarterly*, 55(1), 3-17. <https://doi.org/10.1177/0016986210382575>
- Foley-Nicpon, M., Assouline, S. G., & Colangelo, N. (2013). Twice-exceptional learners: Who needs to know what? *Gifted Child Quarterly*, 57(3), 169–180. <https://doi.org/10.1177/0016986213490021>
- Foley-Nicpon, M., Assouline, S. G., & Fosenburg, S. (2015). The relationship between self-concept, ability, and academic programming among twice-exceptional youth. *Journal of Advanced Academics*, 26(4), 256–273. <https://doi.org/1932202/10.1177X1560336>
- Freeman, J. (2005). Permission to be gifted: how conceptions of giftedness can change lives. In Sternberg, R., & Davidson, J. (Eds.), *Conceptions of Giftedness*. Cambridge University Press, Cambridge.
- Gierczyk, M. K. (2019). Talented student in Polish and English school space: A comparative study (No. 3882). University of Silesia Press. [In Polish].

- Gierczyk, M. K., & Hornby, G. (2021). Twice-Exceptional Students: Review of Implications for Special and Inclusive Education. *Education Sciences*, 11(1), 1-10. <https://doi.org/10.3390/educsci11020085>
- Gierczyk, M. K., & Hornby, G. (2021). Twice-Exceptional Students: Review of Implications for Special and Inclusive Education. *Education Sciences*, 11(1), 1-10. <https://doi.org/10.3390/educsci11020085>
- Gifted Education Italia. (n.d.). Twice exceptional. (<https://giftededucation.it>)
- Giulia, M., Olmos, A., Aleotti, F., & Ortiz, M. (2020). Inclusive education in Spain and Italy: evolution and current debate. *Journal of Inclusive Education Research and Practice*. <https://dergipark.org.tr/en/download/article-file/1262289>
- Giunti Scuola. (n.d.). La doppia eccezionalità. (<https://www.giuntiscuola.it>)
- Grygier, U., Jancarz-Łanczkowska, B., & Piotrowski, K. (2013). How to discover and develop natural science talents in primary, middle, and high school students. Warsaw: Centre for Education Development. [in Polish].
- Grygier, U., Jancarz-Łanczkowska, B., & Piotrowski, K. (2013). How to discover and develop natural science talents in primary, middle, and high school students. Warsaw: Centre for Education Development. [in Polish].
- Günay, R. & Güngör, H.İ. (2013). Osmanlı Devleti'nde sağır, dilsiz ve a'mâ mektebi. *Tarih Araştırmaları Dergisi*. 32 (53), 55-76.
- Hany, E.A. (1993). How teachers identify gifted students: feature processing or concept-based classification. *European Journal for High Ability*, 4. <https://dariknews.bg/novini/bylgariia/nad-27-000-deca-v-bylgariia-imat-specialni-obrazovatelni-potrebnosti-2368427>
- lanes, D., Demo, H., & Dell'Anna, S. (2020). Inclusive education in Italy: Historical steps, positive developments, and challenges. *Prospects*, 49, 249–263. <https://doi.org/10.1007/s11125-020-09509-7>
- IC Darfo1. (2020). Normativa Plusdotazione e BES. (<https://vecchioso.icdarfo1.edu.it>)
- İlhan Emecan, B. (2023). İki kere özel öğrencilerle ilgili farkındalık eğitim programının etkililiği. [Yayınlanmamış Yüksek Lisans Tezi]. Ondokuz Mayıs Üniversitesi.
- Individuals with Disabilities Education Improvement Act (IDEA). (2004). P.L. 108-446. <https://sites.ed.gov/idea/about-idea/>
- INVALSI. (2024). La guida alle Prove INVALSI della Scuola primaria. Retrieved from [INVALSI website](<https://www.invalsiopen.it>)
- Italian Ministry of Education. (2012). Ministerial Directive of 27 December 2012.

Retrieved from [MIUR](https://www.miur.gov.it)

- Jakubek, H. (n.d.). Building a school system that works with talented students in cooperation with parents and the local community. Retrieved from <https://www.ore.edu.pl/wp-content/plugins/download-attachments/includes/download.php?id=4859>
- Kaufman, S. B. (Ed.). (2018). *Twice-exceptional: Supporting and educating bright and creative students with learning difficulties*. Oxford University Press.
- Kaya, N. (2013). Üstün yetenekli öğrencilerin eğitimi ve BİLSEM'ler. *Erzincan Üniversitesi Eğitim Fakültesi Dergisi*, 15(1), 115-122.
- Kefeli, İ. (2019). Türkiye'de özel yeteneklilerin eğitimi. Ş. Şentürk ve Y. Barut (Eds.), *Öğrenme güçlüğü ve özel yetenek*. (ss. 234-245). Nobel Yayıncılık.
- Kılıç, V.C. (2015). Türkiye'de üstün ve özel yetenekli çocuklara yönelik bir eğitim politikası oluşturulamaması sorunu üzerine bir değerlendirme. *21. Yüzyılda Eğitim ve Toplum*, 4 (12).
- Klingner, R. (2022). Twice-exceptional children and their challenges in dealing with normality. *Education Sciences*, 12(4), 268. <http://dx.doi.org/10.3390/educsci12040268>
- Kurnaz A. (2014). Yirminci yılında bilim ve sanat merkezlerinin raporlar ve yönetici görüşlerine dayalı olarak değerlendirilmesi. *Üstün Yetenekliler Eğitimi Araştırmaları Dergisi*, 2(1), 1-22.
- Ledzinska, M. (1996). *Information processing by students of varied ability levels and their academic progress*. Warsaw: Faculty of Psychology, University of Warsaw. [in Polish].
- Levent, F. (2011). *Üstün yetenekli çocukların hakları el kitabı (anne-baba ve öğretmenler için)*, 1. Türkiye çocuk hakları kongresi. Çocuk Vakfı Yayınları.
- Limont, W. (2010). *Talented student. How to recognize and work with them*. Gdańsk: Gdańsk Psychological Publishing. [in Polish].
- Limont, W. (2012). *Educating talented students in the Polish education system - selected examples*. Warsaw: Educational Research Institute. [in Polish].
- Łukasiewicz-Wieleba, J. (2018). *Recognizing the potential as well as strengths and limitations in developing children's abilities in parents' narratives*. Academy of Special Education Publishing. [in Polish].
- McCallum, R. S., Bell, S. M., Coles, J. T., Miller, K. C., Hopkins, M. B., & Hilton-Prillhart, A. (2013). A model for screening twice-exceptional students (gifted with learning disabilities) within a response to intervention paradigm. *Gifted Child Quarterly*,

- 57(4), 209-222. <https://doi.org/10.1177/0016986213500070>
- Milli Eğitim Bakanlığı (2007). Bilim ve sanat merkezleri yönergesi.
- Milli Eğitim Bakanlığı (2014). Ecnebi memleketlere gönderilecek talebe hakkında kanun http://ogm.meb.gov.tr/yogm/mevzuat/kanun_1416_sayi.pdf
- Milli Eğitim Bakanlığı (2015). Destek eğitim odası açılması.
- Milli Eğitim Bakanlığı (2016). Üstün yetenekli bireyler strateji ve uygulama planı 2013-2017.
- Milli Eğitim Bakanlığı (2018). Özel Eğitim Hizmetleri Yönetmeliği <https://www.mevzuat.gov.tr/mevzuat?MevzuatNo=24736&MevzuatTur=7&MevzuatTertip=5>
- Milli Eğitim Bakanlığı (2023). Milli Eğitim İstatistikleri (2022-2023) https://sgb.meb.gov.tr/www/icerik_goruntule.php?KNO=508
- Ministero dell'Istruzione. (2019). Nota Ministeriale n. 562 of 3 April 2019. Retrieved from [MIUR](<https://www.miur.gov.it>)
- Moon, S. M. (2006). Developing a definition of giftedness. In Purcell, J., & Eckhart, R. (Eds.). *Designing services and programs for high-ability learners: A guide-book for gifted education* (pp. 23–31). Thousand Oaks, CA: Corwin Press
- National Center for Education Statistics (2023). <https://nces.ed.gov/programs/coe/indicator/cgg/students-with-disabilities>
- Neihart, M. (1999). The Impact of giftedness on psychological well-being: What does the empirical literature say?. *Roeper Review: A Journal on Gifted Education*, 22(1), 10-17. <https://doi.org/10.1080/02783199909553991>
- Neihart, M. (2002). "Gifted children and depression". M. Neihart, S. M. Reis, N. M. Robinson, & S. M. Moon (eds.) in: *The social and emotional development of gifted children: What do we know?* (s. 93-102). Waco, TX: Prufrock Press, Inc.
- Neihart, M. (2008). Identifying and providing services to twice-exceptional children. In S. I. Pfeiffer (Ed.), *Handbook of giftedness in children: Psychoeducational theory, research, and best practices* (pp. 115-137). Springer.
- Němcová, D. (2019). Identifikace souběhu intelektového nadání a dyslexie z pohledu učitelů. *Svět nadání: časopis o nadání a nadaných*, 8(1), 11-42.
- Nielsen, M. E. (2002). Gifted students with learning disabilities: Recommendations for identification and programming. *Exceptionality*, 10 (2), 93 – 111. Doi: 10.1207/S15327035EX1002_4
- Özsoy, Y. (1990). Türkiye'de Özel Eğitim. Eğitim Bilimleri I. Ulusal Kongresi. Ankara, 24-28 Eylül. Ankara Üniversitesi Eğitim Bilimleri Fakültesi Yayınları.
- Pavlas, T., Mokra, L., Andrys, O., Suchomel, P., Zatloukal, T., Tomek, K., Pražakova, D.,

- & Folwarczny, R. (2022). Podpora vzdělávání nadaných a mimořádně nadaných žáků v základních a středních školách: tematická zpráva. Česká školní inspekce.
- Pereles, D. A., Omdal, S., & Baldwin, L. (2009). Response to intervention and twice-exceptional learners: A promising fit. *Gifted Child Today*, 32(3), 40-51. <https://doi.org/10.1177/107621750903200310>
- Pfeiffer, S. (2015). Gifted students with a coexisting disability: the twice-exceptional. *Estudos De Psicologia (Campinas)*, 32(4), 717-727. <https://doi.org/10.1590/0103-166x2015000400015>
- Piffer, S. (2023). Effective practices in Italian gifted education. *Gifted Education International*, 39(2), 142-156.
- Platon. (2008). Devlet. S. Eyüboğlu (Çev.). İş Bankası Yayınları.
- Polenghi, S. (2021). The history of educational inclusion of the disabled in Italy. *Oxford Research Encyclopedia of Education*. <https://oxfordre.com/education/display/10.1093/acrefore/9780190264093.001.0001/acrefore-9780190264093-e-1608>
- Popek, S. (2001). The person is a creative unit. Lublin: Maria Curie-Skłodowska University Press. [in Polish].
- Portešová, Š. (2011). Rozumově nadané děti s dyslexií. Portál.
- Portešová, Š. (2018). Dvacet principů pro vzdělávání tvořivých, talentovaných a nadaných žáků. *Svět nadání: časopis o nadání a nadaných*, 7(2), 31-50.
- Portešová, Š. et al. (2014). Rozumově nadaní studenti s poruchou učení. Masarykova univerzita.
- Porzucek-Miśkiewicz, M. (2018). The place of a gifted student in teaching practice. *Culture - Society - Education*, 2(14).
- Qiido, patron nadaných žáků. (2016). Závěrečná zpráva z výsledků průzkumu. Retrieved from https://www.qiido.cz/wp-content/uploads/2020/09/Qiido-zprava_z_vyzkumu_FINAL.pdf
- Reis, S. M., Baum, S. M. & Burke, E. (2014). An operational definition of twice-exceptional learners: Implications and applications. *Gifted Child Quarterly*. 58(3), 217-230. <https://doi.org/10.1177/0016986214534976>
- Reis, S. M., McGuire, J. M., & Neu, T. W. (2000). Compensation strategies used by high-ability students with learning disabilities who succeed in college. *Gifted Child Quarterly*, 44(2), 123-134. <https://doi.org/10.1177/001698620004400205>
- Ricci, R. (2024). Competenze non cognitive: Riflessioni. Retrieved from [INVALSI Open](<https://www.invalsiopen.it>)

- Rossa, C. (2017). The history of special education. *Journal for Perspectives of Economic Political and Social Integration*. <https://ojs.tnku.pl/index.php/jpepsi/article/download/739/465>
- Sak U., Ayas M.B., Sezerel B.B., Ercan Öpengin E., Nazlı Özdemir N.N. & Gürbüz Ş.D. (2015). Türkiye’de üstün yeteneklilerin eğitiminin eleştirel bir değerlendirmesi. *Türk Üstün Zekâ ve Eğitim Dergisi*, 5(2), 110-132.
- Şentürk, S., Kefeli, I., & İlhan Emecan, B. (2022a). Conceptual analysis of twice-exceptionality. *Education Quarterly Reviews*, 5(2), 644-655. <https://ssrn.com/abstract=4301105>
- Şentürk, Ş., Kefeli, İ., & İlhan Emecan, B. (2022b). Türkiye’de iki kere özel (2Ö) öğrencilere yönelik eğitim politikası önerisi. *Ondokuz Mayıs Üniversitesi Eğitim Fakültesi Dergisi*, 41(2), 677-696. <https://doi.org/10.7822/omuefd.1202248>
- Smítková, I. (2017). Psychologická identifikace dětí s dvojí výjimečností. *Svět nadání: časopis o nadání a nadaných*, 6(2), 9-30.
- South-West University Neofit Rilski – Blagoevgrad: <https://www.swu.bg/en>
- Tognolini, R., & Davidson, G. (2020). Gifted education in Italy: Challenges and strategies. *Journal of Advanced Academics*, 31(3), 195-218.
- Tortop H.S. & Ersoy B. (2015). Üstün yetenekliler üniversite köprüsü eğitim programına (ÜYÜKEP) katılan üstün yetenekli öğrencilerin sınıf öğretmenlerinin ÜYÜKEP hakkındaki görüşleri. *Üstün Zekalılar Eğitimi ve Yaratıcılık Dergisi*, 2(1), 17-24.
- Tortop S. H. & Dinçer S. (2016). Destek eğitim odalarında üstün/özel yetenekli öğrencilerle çalışan sınıf öğretmenlerinin uygulama hakkındaki görüşleri. *Üstün Yetenekliler Eğitimi Araştırmaları Dergisi*, 2016, 4(2), 11-28.
- Università Cattolica del Sacro Cuore. (2021). Twice exceptional - Avere un disturbo di apprendimento ed essere plusdotato (<https://progetti.unicatt.it>)
- Ünlü, E. (2018). Osmanlı döneminde zihin yetersizliği olan bireyler. *Electronic Turkish Studies*, 13(27).
- Uszyńska-Jarmoc, J., Kunat, B., & Mazur, J. (2015). Talented but how? (Self-) diagnosis of students’ abilities and talents. Białystok: Centre for Lifelong Learning in Białystok. [in Polish].
- Vecchiato, T. (2021). Support systems for gifted students in Italy. *European Journal of Gifted Education*.
- World Health Organization (2023). <https://www.who.int/news-room/fact-sheets/detail/disability-and-health#:~:text=An%20estimated%201.3%20billion%20people%20%E2%80%93%20or%2016%25%20of%20the%20global,experience%20a%20>

significant%20disability%20today

Yılmaz-Yenioğlu, B. & Melekoğlu, M. A. (2021). Öğrenme güçlüğü ve özel yeteneği olan iki kere farklı bireylere yönelik yapılan çalışmaların gözden geçirilmesi. Ankara Üniversitesi Eğitim Bilimleri Fakültesi Özel Eğitim Dergisi, 22(4), 999-1024. <https://doi.org/10.21565/ozelegitimdergisi.696065>.

Zanazzi, S., & Claudio, P. (2017). Inclusive education in Italy. A case study. International Conference on Psychology, Teaching and Learning. <https://iris.uniroma1.it/handle/11573/1092068>

(n.d.). Talented student. Retrieved from <https://www.gov.pl/web/edukacja/uczen-zdolny> [in Polish].

(n.d.). Talented student. Retrieved from <https://www.gov.pl/web/edukacja/uczen-zdolny> [in Polish].

Закон за предучилищното и училищно образование, 2016; <https://lex.bg/bg/laws/ldoc/2136641509>

Наредба за условията и реда за осъществяване на закрила на деца с изявени дарби, 2003; https://mc.government.bg/images/naredba_darbi.pdf

Наредбата за приобщаващо образование, 2017; <https://lex.bg/en/laws/ldoc/2137177670>

План за действие до 2024 към Стратегическа рамка за развитие на образованието, обучението и ученето в Република България (2021 – 2030) https://www.mon.bg/nfs/2023/03/plan_kam_strategicheska-ramka_obrobuuchene_za2024_29032023.pdf

Програма “Ловци на таланти” – фондация „Хестия“: <https://hestiabg.com/bg/programi/lovtsi-na-talanti/>

Тодорина, Д. Стратегия за развитие на надарените ученици: Характеристика, методики за диагностициране, технологии за развитие, 2001.



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