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METHODOLOGICAL MATERIAL

Teachers Training Programme
to Support Gifted
and Talented Students (GATE)

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Preface

„Blessed are they who see beautiful things in humble places where other people see nothing.” Camille Pissarro

The result of billions of years of evolution is humanity. We are unique in our diversity, because of our intelligence, inventiveness, and ability for change. Yet, paradoxically, we often find ourselves apprehensive of the very diversity that has been a driving force of this evolution. We hesitate to step outside the boundaries of conventional thinking, to challenge the universally accepted truths, and to embrace our own sensitivity.

These hesitations and inflexibilities can be particularly impactful on gifted children. Gifted kids are the complex combination of diversity, unconventional thinking, and subtle sensitivity. They represent live examples of the tremendous potential that exists and stand as a reminder of what is possible when we have the courage to think beyond the box.

Every and each child is priceless, one of the few universally accepted truths that must never be challenged. As all children stand as a mirror of our society, reflecting not only our values and beliefs but also our hopes and aspirations for the future. They represent our inner potential and the promise of what we are capable of becoming. This is especially true for very talented kids, whose remarkable skills provide a window into the limits of human potential.

With their extraordinary cognitive capacities and intense curiosity, gifted kids mark a new frontier in human evolution. They are the defenders of human progress, always seeking to expand our understanding and knowledge. Their original viewpoints and creative concepts have the power to influence how our society develops in the future.

However, these exceptional children often find themselves misunderstood and marginalized, their unique abilities seen as differences, rather than being embraced. They challenge the status quo, question the accepted truths, confront both their peers and adults, and feel the world around them with a depth of sensitivity that can be overwhelming.

While gifted children may exhibit extraordinary intellectual capabilities, it is essential to remember that they are still children. Like all children, they possess a spectrum of strengths and weaknesses, dreams and fears, curiosities and disinterests.

Gifted children, too, engage in the universal activities of childhood - they play, they dream, they imagine. Their curiosity often knows no bounds, and they revel in the joy of exploration. They care deeply about the world around them.

They experience every emotion that a person can have, from happiness to sadness. They are not immune to loneliness and miscommunication. They too have times when they feel demotivated, bored, and discouraged.

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The reflection we see in these gifted children also reveals the challenges we face as a society. It shows us the gaps in our social and educational system, the need for more inclusive and personalized learning experiences, and the importance of nurturing every child's unique ability and individual potential.

While it is challenging to provide an exact number of gifted children who remain unnoticed, it is important to note that many gifted children around the world remain unrecognized and unsupported. This is due to a wide range of intricate elements and a complex variety of factors, including, but not limited to social misconceptions about giftedness, inadequate educational approaches, scarce resources.

Moreover, many gifted children may not fit into traditional educational frameworks, leading to their talents being overlooked or misunderstood. They may also face social and emotional challenges that can hinder their progress if not properly addressed.

In essence, every gifted child who is not recognized or supported represents a lost opportunity for societal advancement and human evolution. These children have the potential to drive innovation, solve complex problems, and contribute significantly to their communities and the world at large.

Therefore, it is crucial for societies to raise awareness and invest in identifying the gifted children. It is our responsibility to overcome stereotypes and to embrace the incredible potential of their minds. We must create an environment where their unique abilities are nurtured, where they are encouraged to question, explore, and innovate without fear of judgement or misunderstanding. We must also acknowledge their struggles, providing them with the guidance and support they need to navigate their unique journey. This involves not just advanced educational resources, but also emotional support and understanding.

Teachers play a key role and bear a tremendous responsibility. Teachers who are perceptive, empathic, and genuinely interested in their students play an irreplaceable role in guiding all children, especially those who are gifted. Their unique position allows them to foster the intellectual and emotional growth of these children. Therefore, it is crucial that we advocate for and invest in their professional development.

By equipping teachers with the knowledge and skills to understand and respond to the unique needs of gifted children, we can ensure that these children are not just academically challenged, but also emotionally supported. This holistic approach to education is key to helping gifted children reach their full potential.

Moreover, by fostering a culture of continuous learning and professional growth among teachers, we can ensure that our educational practices evolve alongside our understanding of giftedness. This not only benefits gifted children but enriches the learning environment for all students.

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In essence, by empowering teachers, we empower our children, shaping a future where every child has the opportunity to shine.

Project Manager, Vida Drąsutė

Introduction

In the vibrant landscape of European education, GATE – Teachers Training Programme to Support Gifted and Talented Students, a transformative project under the Erasmus+ KA2, KA220-SCH Cooperation partnership in school education, Project ref. No.: 2021-1-LT01-KA220-SCH-000027713, represents a collaborative endeavour involving 5 project partners from 4 countries and more than 40 associated partners who support us in testing, evaluating, using the results and material we developed, as well in dissemination and sustainability of the project.

Recognizing the importance of raising awareness among teachers, principals, policymakers, parents, and the broader community about the unique needs, challenges, and potential of gifted and talented students and thus aiming to enhance the competencies and skills of primary education teachers to help gifted and talented pupils (age 8-11 y.o.) develop their full potential and thrive and to address the issue of underachievement of talented and gifted pupils by tackling each of the risk factors while also empowering teachers with effective teaching strategies, the GATE project presents within the pages of the Methodological Material, one of its main intellectual outputs. A book that serves as a comprehensive guide for a diverse audience including teachers, principals, policymakers, parents, and the broader community. This book is structured into four distinct parts, each addressing a unique aspect of the project.

The first part serves as an introduction, a window into the world of the Gifted project. It elucidates the background, context, objectives, main components, and results of the project, thereby setting the foundation for the subsequent sections. It also outlines the core values of the programme and the anticipated impact it is expected to have.

The second part takes the reader into the gifted arena, exploring the world of the gifted child. It provides a nuanced understanding of giftedness, discussing definitions, characteristics, types, and how to identify a gifted child. It further explores the social infrastructure surrounding the gifted child and delineates what can be expected from a gifted child in terms of academic abilities, learning pace, and individual and social behaviours.

The third part paints a picture of the gifted children's teacher. It discusses their characteristics, background, education, professional and didactic abilities. It also covers the evolution from a traditional teacher to one equipped to address the unique needs of gifted children and presents models for identifying effective teachers.

The final part of the book presents teaching techniques and learning strategies. It discusses foundational mechanisms and approaches in gifted teaching and learning, including the holistic-

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cognitive approach, the socio-emotional approach, and the balance between class orientation and individual pupil orientation, and more. It also discusses the structure of a curriculum tailored (adequate) for gifted children.

The significance of bringing attention to the special requirements, difficulties, and potential of gifted and talented students is emphasised in this book. It seeks to augment (enhance) the competencies and skills of primary education teachers and mentors, enabling them to help gifted and talented pupils realize their full potential and thrive. It addresses the issue of underachievement among talented and gifted pupils by tackling each of the risk factors and equips teachers with effective teaching strategies. This book is a documentation of the project's dedication to providing gifted and talented students with an inclusive and supportive learning environment.



1.

WHERE *GATE* STARTED?

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The initial section functions as an introductory overview, providing insight into the Gifted project. It expounds upon the project’s historical context, objectives, key components, and outcomes, thereby establishing the groundwork for subsequent sections. Additionally, it delineates the programme’s fundamental values and the projected impact it aims to achieve.

1.1. Introducing *the Gifted* project

1.1.1. Background and context

The GATE (Teachers Training Programme for Supporting Gifted and Talented Students) project emerged as a response to the pressing need to address underachievement among gifted and talented students. Rooted in research and international collaboration, GATE began with the recognition that traditional educational systems often fail to address the unique needs of highly able learners. It originated from a collective acknowledgment of the importance of nurturing the potential of gifted students to drive societal progress and innovation.

In the last decades, there has been a consistent increase in the interest towards the phenomenon of underachievement among gifted and talented students, and it took a notable surge in recent years. This heightened attention is driven by several key factors, including shifts in the global economy and the rapid advancement of technology. The evolving nature of job markets, particularly in advanced countries, emphasizes the increasing importance of skills and knowledge in science, technology, engineering, and mathematics, with 75% of the fastest growing occupations requiring skills and knowledge in STEM ¹([White, E., & Shakibnia, A. F., 2019](#)). Forecasts projecting significant job losses to automation and development of artificial intelligence (AI) over the next two decades 40% of current occupations ([White, E., & Shakibnia, A. F., 2019](#)), coupled with concerns about Western countries lagging their Asian counterparts in critical innovation subjects, have fuelled competitive anxieties across Europe.

Ensuring that all students reach their full potential within the educational system is paramount for the sustainable evolution of every society. To maximize productivity and sustained innovation, establishing efficient educational practices is a top priority, according to the [EU policy framework \(ET 2020\) regarding education](#).

Future professionals must acquire skills and knowledge efficiently to drive Europe's evolution and expand advancements. Educating gifted and talented pupils is critical as they possess the potential to become the future innovators ([Subotnik & Rickoff, 2010](#)).

However, surveys like the one conducted by Ofsted in the UK (2013) reveal that over 40% of participating schools reported that their most able pupils were not achieving their potential. The National Association for Gifted Children (NAGC) highlights underachievement (a discrepancy between ability and achievement) among gifted and talented pupils as a common phenomenon at a global scale that needs to be addressed.

¹ STEAM is acronym of Science, Technology, Engineering, Art, Math

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According to the OECD's Programme for International Students Assessment (PISA), the performance of Lithuanian students in literacy and STEM subjects is from 10 to 5 points under the OECD's average ([PISA, 2018](#)). Similar results can be found for Bulgaria (where students' performances are between 67 and 55 points below average) and Latvia, where students obtain good results in mathematics, but poor performance in literacy and sciences (between 10 to 5 points under average). The increasing pressure of globalization, economic competitiveness and the unsatisfactory results of students' performance have led to increased focus on the academic achievement of gifted and talented students, who have the potential to become the innovators and leaders of the future.

Giftedness and talent are defined as “performance that is clearly at the upper end of the distribution in a specific talent domain even relative to other high-functioning individuals in that domain” ([Subotnik et al., 2011](#)). However, even when students are recognized to be capable of providing similar performances, they often fall short and fail to express their full potential. These cases are referred to as “gifted underachievement”.

Gifted underachievement, a pervasive issue within educational systems, is characterized by gifted students failing to reach their full potential. Researchers have identified three primary domains contributing to this phenomenon: motivation, emotion, and school perception. These children often exhibit lower levels of motivation, experiencing anxiety related to academic performance and lacking emotional engagement. Additionally, dissatisfaction with educational programmes in primary and secondary education and perceived lack of support from teachers further compound these challenges.

The main potential causes are:

- lack of interest in curriculum due to lack of challenging and engaging material.
- low teacher expectations.
- impossibility to be recognized due to disadvantaged background that leaves them out of the tested population.
- psychological/social issues as well as undiagnosed learning disabilities.

Another critical issue is the one of recognition, particularly among disadvantaged students or those with undiagnosed learning disabilities. Many teachers lack the necessary tools and training to identify giftedness effectively, exacerbating the underachievement problem.

Studies in this field have clearly shown that the “gifted” pupils' population has specific needs, requiring specific (special) teaching methods and a tailored challenging learning environment.

With limited time and increasing pressure to adapt to higher educational demands emphasizing critical thinking and problem-solving as opposed to rote-based learning, teachers take on the responsibility to accommodate the unique needs and demands of their exceptional

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students. To get the most out of their time—for both them and their students—teachers must feel that both their time is well and efficiently spent.

Research ([Khaliil & Accariya, 2016](#)), underscores the importance of teachers that are dealing with gifted and talented students, to possess qualities such as:

- Awareness of the cognitive and affective needs of gifted and talented students.
- Knowledge of instructional methods appropriate for highly able learners.
- Lack of appropriate tools, practical activities for gifted and talented students.
- Ability to impart intellectual curiosity and enthusiasm for learning to students.
- High level of energy, enthusiasm, confidence, and resourcefulness.
- Willingness to seek experts to supplement the program where additional expertise is needed.
- Ability to organize and manage instruction to provide for a balance of structure and flexibility.
- Openness to innovation and recognition of divergent, innovative thinking.
- Ability to facilitate students' independence and development of personal responsibility for their own learning (NaN, Academia.edu).
- Willingness to pursue education for desired expert know-how and competence.

In the GATE project, the partnership is seeking to respond to these needs through activities, training, the development of teaching and didactic materials, and the curriculum, as all these actions and research would lay the foundations for an understanding of the effective and meaningful qualities of teachers of gifted classes.

Furthermore, research will focus on tracing, selecting, and bridging the gap to bring those teachers to full effective performance in the classroom, especially considering the COVID-19 pandemic's context and its aftermath on education. The digitalization of education in multiple countries has had a great impact on the effectiveness and efficiency of traditional teaching methods (NaN, Neanias project).

Reimers, F. M., & Schleicher, A. (2020) assert that knowledge loss leads to skill/productivity loss which implicate negative economic consequences for future societies due to the effect of COVID19 on education.

GATE emphasizes the urgency to accelerate and effectively and efficiently enhance the abilities and skills of the most able students as being essential for mitigating the negative consequences of COVID-19 on future societies.

In conclusion, by addressing important elements such as curriculum engagement, teacher expectations, and support systems, the GATE project seeks to address underachievement among gifted students. Given the obstacles presented by the COVID-19 pandemic, GATE aims to close the achievement gap by providing teachers with specialized strategies and training. With targeted

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research and intervention, GATE aims to lay the foundations for the development (education) of gifted students who can lead social change and innovation, ensuring a better future for all.

1.1.2. The Aim and the specific objectives of the overall project

The project “**Teachers Training Programme for Supporting Gifted and Talented Students**” (**GATE**) developed under “Erasmus+” programme aims to enhance the competencies and skills of primary education teachers to help gifted and talented pupils (age 8-11 y.o.) develop their full potential and thrive and to address the issue of underachievement of talented and gifted pupils by tackling each of the risk factors while also empowering teachers with effective teaching strategies.

What is also important for the GATE project is to:

- Build adapted glocalised programmes suitable for tracing, selecting, teaching, and educating gifted children in partnership countries.
- Give children from all layers of society a fair and equal chance to bring forward their qualities and abilities.
- Develop a perception of personal excellence, moral and social responsibility aside involvement and personal commitment to the environment and to the other.

To achieve its general aim and the main objective objectives, in order to address the multifaceted challenges, the GATE project will reach the following specific objectives:

a. To design an innovative teaching methodology supporting gifted and talented pupils' cognitive and emotional needs; Since current teaching methodologies adopted in most schools are failing to address the needs of gifted and talented students, GATE project will aim to overcome this issue by redefining the correct practices that teachers should follow to maximize their students' potential. The methodology devised within this project will be designed according to a holistic approach, addressing both the cognitive and affective needs of gifted and talented students through the integration of the STEAM approach with Socio-Emotional Learning (SEL) to help pupils develop the following three sets of skills, i.e., Learning Skills, Literacy Skills, Life Skills, also called “The 21st Century Skills”.

b. To provide a training programme for teachers that will help them obtain relevant knowledge and skills on how to recognize and teach gifted and talented pupils. As most teachers are lacking the competencies and skills necessary to provide gifted and talented pupils with the adequate support to express their abilities and feel motivated, GATE will aim to tackle this shortage by designing and testing a specific training programme targeted to develop such skills in primary education teachers. The programme will be based on the most recent findings in the literature, and it will train teachers in the GATE methodology.

c. Increase the academic performance of gifted and talented underachievers in STEAM, as well as their socio-emotional competencies. The project will aim to increase the results of gifted

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and talented underachievers in STEAM and improve their socio-emotional competencies by training primary teachers and educators from both primary schools and education centers for gifted and talented students. "Trained teachers will test the methodology learned in their schools and centers, generating an immediate positive impact on the gifted and talented students in their classes" (NaN, Neanias project).

d. To increase the awareness of teachers, school staff, public authorities, and education experts about gifted and talented children. "The project will also aim to raise awareness among target groups (i.e. primary education teachers, educators, pupils) and stakeholders" (NaN, Neanias project) (i.e. school staff, public authorities, education experts) about the topic of gifted and talented students, to promote the spread and adoption of new strategies helping reduce the number of gifted and talented pupils underachieving.

By targeting these key areas, the GATE project seeks to foster an educational environment that empowers gifted students to realize their full potential, contributes to broader societal goals of innovation and competitiveness, and promotes equity and excellence in education for all students. By providing opportunities for gifted children to flourish academically, ethically, and socially, the programme aims to cultivate a generation of empowered individuals, with a sense of civic duty and with a personal commitment to the environment and social causes, who will thus contribute positively to society and the world.

1.1.3. Main components of the project

Within the implementation of the Project's three phases, several key components are designed to support both teachers, as well as gifted and talented students, to enhance their educational experiences and to address gifted underachievement.

- Promote nurturing programmes that answer cognitive, emotional, social and moral needs and aspects of the gifted throughout the years.
- Develop training and courses for teachers who will teach those gifted children allowing them to extract their higher potential.
- Develop research and assessment tools to evaluate the programme and its success while developing cooperation with other developed countries.
- Trace and select gifted and excellent pupils and refer them to the adequate programme suiting them and their needs.

Through the:

a. Development of innovative teaching methodologies: The programme emphasizes the importance of implementing research-based, student-centred teaching approaches tailored to the needs of gifted students. By integrating the STEAM approach and Socio-Emotional Learning (SEL), GATE encourages educators to design engaging and intellectually stimulating learning experiences that address the cognitive and emotional needs of gifted learners.

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A detailed overview of the GATE Methodology for Gifted and Talented students is provided within the current: „GATE Methodological Material”, which offers practical guidelines for implementation and integration of STEM and SEL, good teaching practices, strategies for recognizing giftedness and talent in pupils and use of digital tools for teaching to gifted and talented students.

b. Comprehensive teacher training programmes: being at the core of the GATE strategy, it provides teachers with the knowledge, skills, and resources necessary to recognize, support, and challenge gifted learners effectively. Through targeted training programmes, educators gain insights into identifying giftedness, implementing differentiated instruction, and fostering socio-emotional development in gifted students.

GATE Training Programme targets primary school teachers and educators of gifted centers, aiming to transmit the skills defined and train participants in the GATE Methodology. Divided into theoretical and practical sections, the programme will equip educators with the knowledge and tools to effectively engage gifted students in STEM and SEL activities.

21st Century Teacher Skill Set document will delineate the hard and soft skills necessary for teachers to effectively educate gifted and talented pupils. It aims to equip teachers with the cognitive and emotional competencies required to implement the holistic GATE Methodology successfully, fostering the development of 21st-century skills among students.

c. Talent Tracing and Selection: The systematic identification and selection of gifted and exceptional students from a variety of backgrounds. Through rigorous assessment processes and talent identification initiatives, the programme identifies students with exceptional abilities and potential in a variety of domains. Selected students will then be directed to specialized programmes and educational paths that are tailored to their unique abilities and developmental needs.

d. Research and Assessment Tools: The gifted programme emphasizes ongoing research and evaluation to determine programme effectiveness and student outcomes. The development of research methodologies and assessment tools enables teachers to track student progress, evaluate programme effectiveness, and identify areas for improvement. Furthermore, fostering collaboration with other countries' partners allows for the exchange of best practices, insights, and innovative approaches to gifted education, which improves the programme's effectiveness and global perspective.

e. Targeted interventions and support mechanisms: GATE implements interventions aimed at addressing the underlying causes of underachievement among gifted students. These interventions may include curriculum enrichment, personalized learning plans, and socio-emotional support initiatives to mitigate factors contributing to gifted underachievement and promote academic excellence.

f. Collaboration and stakeholder engagement: The programme fosters collaboration among educators, principals, parents, and community members to raise awareness and create a supportive

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ecosystem conducive to the holistic development of gifted students. By engaging stakeholders in discussions, decision-making processes, and educational initiatives, GATE promotes a shared commitment to nurturing the potential of gifted learners and maximizing their opportunities for success.

The GATE project encompasses a multifaceted approach to support gifted and talented students and enhance their educational experiences. GATE leverages primary research reports, the 21st Century Teacher Skill Set, GATE Methodological Material, GATE Training Programme, and Testing Reports to inform and guide its initiatives.

1.1.4. Results

GATE project team developed two main Results (R):

R1- GATE Methodological Material.

This result includes three main deliverables:

a. Five National reports and 1 Transnational Analysis.

A summary of the findings obtained during the primary research phase, in which partners investigated the opinions, perspective and expectations of primary school teachers, educators, staff, pupils (8-11 y.o.), researchers and education regarding gifted education and what defines a "good teacher".

b. Skill set of the 21st Century Teacher.

The second deliverable of this result is the definition of the „Skillset of the 21st Century Teacher”, which determines the hard and soft skills that teachers dealing with gifted and talented pupils need to possess in order to ensure the provision of a high-quality education.

c. Methodological Material.

The third and final deliverable it is an eBook comprising all the previous documents together with the results of the desk research: a) a systematic literature review on teaching methodologies suitable for gifted and talented students; b) a practical guideline to support the recognition of giftedness and talent in pupils; c) the presentation of national and international good practices; d) the description of GATE Teaching Methodology for gifted and talented students.

R2-GATE Training Programme.

A complete programme aiming to train primary education teachers on the GATE Methodology to teach gifted and talented students.

GATE Training Programme comprises a mixture of theory and practice to maximise its training potential.

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The theoretical part is mainly based on the results of R1, presenting the benefits the GATE Methodology can bring when teaching to gifted and talented students. During the theoretical part of the course, teachers learn considerably about the practices supporting the GATE Methodology (i.e. the STEAM approach and Socio-Emotional Learning [SEL]), while during the practical section they investigate real-life scenarios, in order to learn the correct behaviours, they should adopt when teaching in classes with gifted and not only gifted pupils or in classes with only gifted pupils.

This result also includes two separate testings, one in primary schools and the other in education centres for gifted students. The deliverable of these two testings are the two reports on the efficacy of the GATE Methodology and the GATE Training Programme, including instructions and tips on how to better adopt them.

Main deliverables:

1. GATE Training Programme;
2. Two Reports from the testing occurred in primary schools and gifted centres.

1.2. GATE Values and Anticipated/Expected Impact: A Comprehensive Overview

1.2.1. Main values of the programme

The aim and methodology of the GATE programme, which supports gifted and talented students, are guided by several essential values. These include:

Raising Awareness

GATE recognizes the importance of raising awareness among teachers, school administrators, policymakers, parents, and the broader community about the unique needs, challenges, and potential of gifted and talented students. By increasing awareness about gifted underachievement, the relevance of personalized teaching, and the benefits of supporting gifted learners, the programme aims for a culture of understanding, empathy, and advocacy for gifted education.

Equity and Inclusion

GATE is committed to promoting equity and inclusion in education by ensuring that gifted and talented students from diverse backgrounds and circumstances have access to appropriate support and opportunities. The programme acknowledges the need of addressing underachievement among gifted students, particularly those from disadvantaged or marginalized groups to offer equal chances and unlock their full potential.

Holistic Development

GATE adopts a holistic approach to education that recognizes the complex interactions between cognitive, emotional, and social factors in the development of gifted students. The programme seeks to nurture not only academic excellence but also socio-emotional well-being, resilience, and character development, enabling students to thrive in all aspects of their lives.

Excellence and Innovation

GATE is driven by a commitment to excellence and innovation in education. The programme strives to develop and implement innovative teaching methodology by integrating both STEM and SEL approaches and support interventions that challenge traditional paradigms and inspire creativity, critical thinking, and problem-solving skills among gifted students.

Evidence-Based Practice

GATE is built on evidence-based best practice and research, incorporating the most recent findings and insights from educational psychology, pedagogy, and gifted education research. The programme emphasizes the importance of data-driven decision-making, continuous improvement,

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and rigorous evaluation to ensure that interventions are effective, responsive, and tailored to gifted students' specific needs.

Collaboration and Partnership

GATE recognises the value of collaboration and partnership among education stakeholders, such as teachers, principals, parents, community members, and educators. The programme fosters a collaborative culture, leveraging collective expertise, resources, and insights to create a supportive ecosystem that maximizes gifted students' potential.

Empowerment

GATE seeks to empower gifted and talented students to take ownership of their learning journey, pursue their passions and interests, to embrace challenges, embrace diversity and become active promoters of change in their communities and beyond.

1.2.2. Expected Impact

The expected impact of the GATE project encompasses:

a. Establishment of a community of trained teachers proficient in GATE methodology:

Through comprehensive training programme and resources, teachers acquire the necessary knowledge and skills to effectively recognize, support, and teach gifted and talented students. By becoming proficient in GATE methodology, teachers can create inclusive and enriching learning environments that address the diverse needs of gifted learners.

b. Improvement in academic performance and satisfaction among gifted and talented students:

By providing tailored support, GATE addresses the factors contributing to underachievement and disengagement among gifted learners. As a result, students are expected to experience enhanced academic outcomes, increased motivation, and greater satisfaction with their scholastic activities.

c. Increased awareness among educational stakeholders about the unique needs and challenges faced by the gifted and talented students:

Through outreach efforts, dissemination of research findings, and collaborative initiatives, the project is set to raise awareness among teachers, school staff, public authorities, and education experts about the importance of recognizing and supporting gifted students. By fostering a deeper understanding of giftedness, stakeholders can better advocate for the implementation of effective strategies and interventions.

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d. Long-term benefits including dissemination of effective teaching practices, reduction in underachievement among gifted students, and enhanced collaboration between education centres for gifted students and primary schools:

The GATE project anticipates several long-term benefits for the education system and society. By disseminating effective teaching practices developed through the project, GATE aims to promote excellence in gifted education and reduce underachievement among gifted students. Furthermore, the establishment of a community of trained teachers proficient in GATE methodology is expected to foster enhanced collaboration between education centres for gifted students and primary schools. This collaboration can facilitate the seamless transition of gifted students between different educational settings and promote continuity in their learning experiences. Overall, these long-term benefits contribute to the creation of a more equitable and supportive educational landscape for gifted and talented children.

In conclusion, The GATE project aspires to achieve significant impact across various dimensions of education and society, both in the short and long term.

GATE's innovative teaching methodology, targeted interventions, and comprehensive teacher training programme aim to significantly improve the academic performance and achievement of gifted and talented students. By addressing the root causes of underachievement and providing tailored support, the programme aims to help gifted students reach their full potential, resulting in improved grades, motivation and increased interest and overall academic outcomes.

By integrating STEM and socio-emotional learning (SEL) components, the programme seeks to cultivate emotional intelligence, resilience, and well-being among gifted learners. Enhanced socio-emotional competencies can lead to improved self-awareness, self-regulation, and interpersonal skills, contributing to positive mental health outcomes and overall student well-being.

By addressing the underachievement of gifted students, particularly those from disadvantaged or marginalized backgrounds, GATE seeks to reduce disparities in access to educational opportunities and support.

By increasing awareness about gifted underachievement, the relevance of personalized teaching, and the benefits of supporting gifted learners, the programme aims for a culture of understanding, empathy, and advocacy for gifted education.

Beyond its immediate impact, GATE aims to promote long-term sustainability and evolution in the field of gifted education. The programme's goal is to create a long-lasting structure that can meet the needs of gifted and talented students by disseminating best practices, building capacity among teachers and educators, and fostering collaborative networks. GATE's emphasis on empowerment, collaboration, and evidence-based practice aims to lay the groundwork for a more inclusive, equitable, and innovative educational landscape.

1.3. The structure of GATE Methodological Material

1.3.1. Understanding teaching gifted children

Understanding teaching gifted children chapter or as we call the field - the Gifted Arena - focuses on a scholarly exploration into the intriguing realm of gifted children, those extraordinary individuals whose exceptional intellectual capabilities and unique abilities distinguish them within society.

The chapter seeks to elucidate the intricate facets that define the gifted child, from the foundational understanding of giftedness to the complexities of identification and social dynamics.

It provides an insightful examination of the gifted child and navigates through prominent theoretical frameworks proposed by notable researchers such as Howard Earl Gardner, Robert J. Sternberg, and Joseph S. Renzulli, each offering unique perspectives on the nature of gifted intelligence.

Giftedness, an enigmatic trait that has captivated researchers, educators, and parents alike, defies easy definition. It is more than just raw intelligence; it is a sophisticated blend of cognitive skill, inventive thinking, and the capacity to rapidly comprehend and master intricate concepts; it is a complex construct that is not static.

This chapter delves into the diverse methodologies, definitions, and measurements crafted to identify these extraordinary minds, examining the subtleties that differentiate them.

Beyond the evaluations and metrics, this chapter seeks to emphasize the impressive qualities, the fascinating range of behaviours and characteristics, the exceptional traits of the gifted child and their unique challenges. It investigates how their traits influence their learning processes, social interactions, and personal development. It analyses the support systems and educational strategies that can help these children thrive and reach their full potential.

Through comprehensive discussions on definitions of giftedness, types of gifted children, methods of measurement and identification of these extraordinary minds, and the social infrastructure surrounding giftedness, "Learning the Gifted Arena" presents a holistic view of the gifted child's journey. It delves into the nuances of their characteristics, behaviours, and sociability, shedding light on both their remarkable abilities and the challenges they may encounter.

Ultimately, "Learning the Gifted Arena" serves as a scholarly guide for educators, researchers, and parents alike, offering insights into understanding and supporting the multifaceted needs of gifted children as they navigate their academic and personal development journeys.

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1.3.2. The image and characteristics of the gifted children's teacher

The chapter seeks to explore the Image and Characteristics of the Gifted Children's Teacher, through an insightful journey into the realm of education, focusing specifically on the nuanced role of teachers who guide gifted students. It investigates the multifaceted aspects that define the ideal teacher for gifted children, from their background and educational preparation to the essential professional and didactic abilities they possess or should possess.

At its core, the chapter highlights the foundational elements that constitute an effective teacher for gifted children. These educators boast a unique blend of academic expertise, pedagogical acumen, and a deep understanding of the complexities of giftedness. They are equipped with advanced degrees in education or specialized training in gifted education, enabling them to tailor their instruction to meet the diverse needs of gifted learners effectively.

Central to the discourse is the exploration of the 21st Century Teacher skillset, which underscores the critical competencies necessary for educators of gifted students. From facilitating inquiry-based learning to integrating technology seamlessly into the classroom, these teachers are adept at fostering critical thinking, problem-solving, and creativity among their students. They recognize that gifted students often learn at a faster pace, have a deep curiosity about the world, and may have intense emotional sensitivities. These teachers are able to provide challenging and engaging learning experiences that match the students' abilities and interests. They also create a safe and supportive classroom environment where gifted students feel understood and valued.

Furthermore, the chapter highlights the transformative journey that teachers undergo as they transition from traditional pedagogical approaches to those tailored for gifted education. It emphasizes the importance of mindset shifts, ongoing professional development, and a commitment to continuous improvement in elevating the quality of instruction for gifted learners.

Drawing from established models such as the Differentiated Model of Giftedness and Talent (DMGT) and the Integrated Curriculum Model (ICM), the chapter offers insights into identifying effective teachers of gifted students. These educators exhibit a profound dedication to their students' holistic development, nurturing not only their intellectual abilities but also their social and emotional well-being.

In essence, "the Image and Characteristics of the Gifted Children's Teacher" underscores the pivotal role that educators play in unleashing the full potential of gifted students. It serves as a beacon of guidance for teachers, principals, and stakeholders alike, advocating for excellence in gifted education and the cultivation of environments where gifted learners can thrive and flourish.

1.3.3. Teaching techniques and learning strategies

The chapter examines the intricacies of educating gifted children, offering educators a comprehensive toolkit to enhance their pedagogical practices. It aims to serve as a guide for

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schools and teachers, revealing effective methods and approaches tailored to the unique needs of gifted students.

At its core, the chapter navigates through the foundational mechanisms and approaches integral to gifted teaching and learning. It explores the holistic-cognitive approach, emphasizing the development of cognitive abilities, and the socio-emotional approach, highlighting the importance of social and emotional growth in gifted children. The delicate balance between class orientation and individual pupil orientation is also explored, recognizing the diverse learning styles and preferences within the gifted classroom.

It centres on the exploration of the gifted classroom as a natural development arena, providing a nurturing environment where gifted children can explore, learn, and interact with peers who share similar abilities and interests. And looks into the structure of a curriculum suitable for gifted children, emphasizing flexibility and adaptability to accommodate the diverse learning needs and paces of gifted learners.

The chapter encompasses a diverse array of topics, ranging from understanding and applying the concept of the gifted classroom to developing emotional resilience among gifted children. It explores teaching methods and strategies, illustrates the importance of collaboration with parents and families, and addresses the emotional needs of teachers in a gifted class.

With a focus on inspiring teachers to embrace creativity and innovation in their teaching practices, the section encourages educators to take the theoretical approaches presented and make them their own. It recognizes teaching as a dynamic language, empowering teachers to craft their own instructional narratives tailored to the needs of gifted learners.

Fundamentally, "Teaching Techniques and Learning Strategies" serves as a comprehensive guide for teachers dedicated to nurturing the abilities of gifted children. It promotes a culture of excellence, continuous learning, and adaptability, empowering teachers to design enriching learning experiences that unlock, and help gifted students reach their full potential.

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LEARNING THE GIFTED ARENA

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Introduction

This chapter embarks on a journey through the captivating realm of gifted children, those whose intellect and capabilities soar above the norm. As we delve into the depths of this extraordinary landscape, we will unravel the multifaceted aspects that define the gifted child: from understanding the very essence of giftedness and its diverse manifestations, to the intricate methods employed to measure and identify these exceptional minds.

The voyage through this chapter also takes us through the numerous characteristics, behaviors, and sociability patterns that distinguish these special kids, shedding light on the challenges and triumphs that accompany their distinctive journey.

Giftedness, an enigmatic trait that has fascinated researchers, educators, and parents alike, defies a singular definition. It is not merely about raw intelligence; rather, it is a complex interplay of cognitive prowess, creative thinking, and the ability to swiftly grasp and master complex concepts. But how do we ascertain such brilliance? What tools and techniques do we employ to discern the gifted among us? This chapter takes a closer look at the various methodologies, definitions and measurements designed to identify these exceptional minds, exploring the nuances that set them apart.

Beyond the assessments and metrics, the gifted child manifests an array of captivating characteristics and behaviors. From an insatiable curiosity that fuels their insatiable thirst for knowledge to a penchant for tackling challenges that would daunt their peers, the gifted child is a tapestry of extraordinary traits. Yet, alongside their remarkable qualities, these children often face unique struggles – navigating the chasm between their intellectual capacities and emotional development, grappling with expectations, and finding their place within the broader social fabric.

As we step into the heart of the unique trip to know better gifted kids and understand them, we invite you to journey alongside us.

2.1. The gifted child

We want to start this part of the chapter, which will talk about the gifted child and how it would be possible to explain this child's exceptionalities by definition, with a comparison:

In a world where each individual possesses a unique set of talents and abilities, some stand out like luminous stars in the night sky. These exceptional individuals are called gifted children, who possess an innate brilliance that sets them apart from their peers.

This chapter delves into the captivating realm of giftedness, exploring the facets that define, identify, and nurture these remarkable young personalities.

2.1.1. Definitions of giftedness and the gifted child

Giftedness is innate but not static; it evolves and develops qualitatively through practical activities. If innate abilities are not nurtured and developed, they cannot manifest. Giftedness is the basis of all abilities acquired through learning and work (Jovaiša, 1993).

The most common and widely used theories of giftedness around the world, including in the GATE project partner countries, are as follows:

- American psychologist, author, professor **Howard Earl Gardner's theory**, which argues that abilities extend beyond intellectual capacity alone and that using IQ as a measure of intellect is inadequate to fully describe human abilities. According to his Theory of Multiple Intelligences, human intelligence is multifaceted, with different types of intelligence manifesting in different areas of activity. Building on this, H. E. Gardner (1983) identified several distinct and independent types of intelligence:
 - Linguistic Intelligence: well-developed verbal skills and sensitivity to the sounds, rhythms, and meanings of words;
 - Logical-Mathematical Intelligence: the ability to think abstractly and to discern logical or numerical patterns;
 - Musical Intelligence: the ability to produce and appreciate rhythm, pitch, and timber;
 - Spatial Intelligence: the ability to accurately perceive the visual world and its spatial properties;
 - Bodily-Kinesthetic Intelligence: the ability to control one's body movements and to handle objects skillfully;
 - Interpersonal Intelligence: the capacity to detect and respond appropriately to the moods, temperaments, motivations, and desires of others;
 - Intrapersonal Intelligence: the ability to be self-aware and in tune with one's feelings and abilities, to discriminate between them, and to use them to control one's

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behavior, as well as the ability to recognize one's own strengths, weaknesses, and desires.

- American psychologist and psychometrician **Robert J. Sternberg's** theory, which supports Gardner's concept of multiple intelligences, but distinguishes only three types of intelligence:
 - analytical (or Academic Problem-Solving) Intelligence, usually assessed by traditional intelligence tests;
 - creative Intelligence, demonstrated through successful responses to new situations and the creation of new ideas;
 - practical Intelligence, demonstrated by the ability to understand everyday practical situations and overcome difficulties. This intelligence is often needed in everyday life and is typically challenging to define precisely.
- American educational psychologist **Joseph S. Renzulli's** theory, which focuses more on achievements, where one's abilities lead to results. The author identifies three clusters of traits that gifted individuals should possess:
 - above average ability;
 - task commitment;
 - creativity and the ability to formulate new ideas and apply them in solving problems.

In summary, it can be concluded that:

- Giftedness is a complex construct that is not static. It is influenced by various factors, both internal and external. The development of giftedness is shaped not only by cognitive characteristics but also by motivation, interests, and other factors.
- The multifaceted and complex nature of the phenomenon of giftedness has led to a number of theories attempting to explain it, but there is still no consensus on either giftedness or the practical definition of a gifted child.
- Despite all disagreements, "most experts in education of those with special gifts and talents suggest that giftedness refers to superior abilities in specific areas of performance, which may be exhibited under some circumstances but not others" (Gallagher and Gallagher, 1994 as in Hallahan and Kauffman, 2003, p. 459).

"Regardless of the consensual definition used, we may assume that a person may exhibit giftedness if the conditions are right for gifted performance - that is, if besides possessing above-average ability and creativity, the person is given opportunities and incentives to perform at an extraordinarily high level" (Hallahan and Kauffman, 2003, p. 459).

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Countries that have been working with the identification and education of gifted children for years, in this specific case Israel and its experts, define gifted children as follows:

Gifted are the ones whose assessment of intelligence (IQ) is more than 130 and they represent about 3 pct. of the population. Excellent are the ones who hold IQ more than 145 and they represent 0,18 pct. of population.

IQ = Heritage (40%) + Environment (40%) + Heritage/environment (20%).

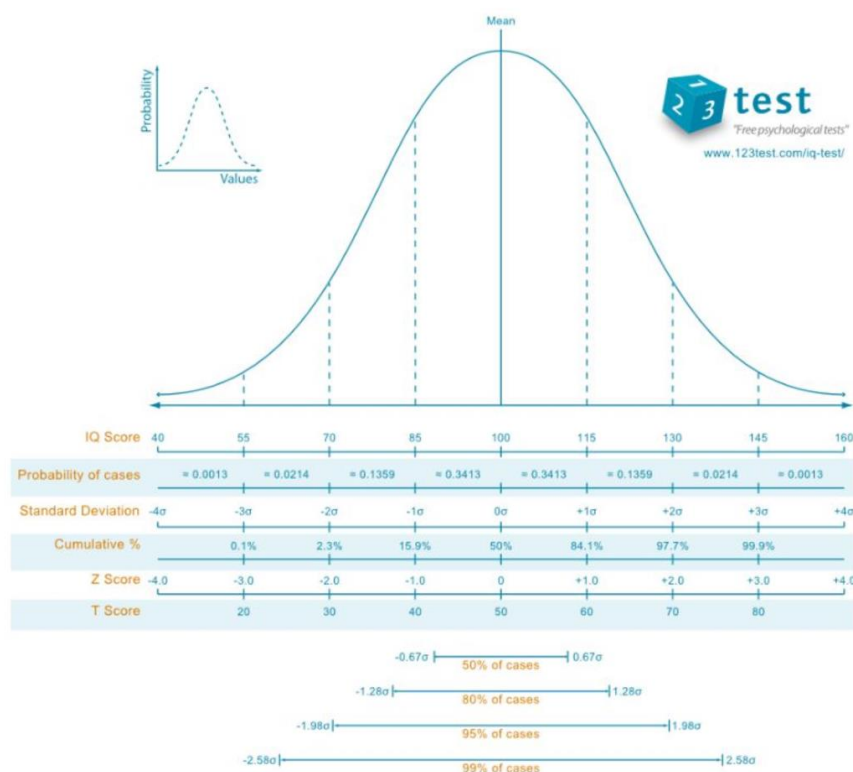


Image 1. Normal IQ distribution (source: www.123test.com/iq-test/)

Gifted population, sources, social values:

1. Potentially the gifted children are spread equally among the general population.
2. We find equality of giftedness in kids only at the point of birth.
3. More educated parents and at the same time having stronger socioeconomic status have more gifted children.
4. There is extreme impact to the environment where a child grows and the potential to become gifted.
5. A child coming from a nurturing environment will have a significantly higher chance to develop its potential.

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6. The social value of equal chance and equal approach to quality education forces us to trace the potential gifted children and as soon as it is possible and supply them with the accessibility to processes that will allow them to nurture.

Where would we find the gifted?

1. The gifted children grow in all layers of society.
2. What makes the difference is accessibility to the evaluation process that defines a child as gifted.
3. They can be spotted/recognized in the family, in the educational institution, by pointing out their behavior, curiosity, interest in the environment, knowledge, which is different from their peers.

Summarizing, 'giftedness' and 'gifted child' are still controversial concepts that are difficult to define unambiguously, as the distinctive characteristic of gifted children is not just a matter of IQ, but encompasses much more than that, including other uniquely expressed creative, artistic and even social skills and characteristics. Thus, it has been a challenge for researchers and educators to develop a comprehensive definition that fully captures the essence of giftedness.

2.1.2. Types of gifted children

Gifted children stand out not only from their peers, but often also from each other. For this reason, even gifted children can be grouped into specific types based on their behavioral and personal characteristics. Knowing and identifying these types is valuable because, when faced with different children and their challenges, it becomes easier to notice their needs more quickly and to find the most appropriate solutions in complex situations. Recognizing children's needs and making efforts to meet them is the best contribution we can make to our "growing future". Dr Aida Šimelionienė, a Lithuanian educational psychologist and researcher specializing in cognitive abilities, learning difficulties and dynamic learning assessment, identifies 6 types of gifted children:

1. The "success-oriented" or "successful" type of gifted child (Type 1)
2. The "difficult" or "challenging" gifted child type (Type 2)
3. The "Hiding his/her talents" or "underground" type of gifted child (Type 3)
4. "The "drop-out" type of gifted child (Type 4)
5. "The "independent" or "autonomous" type of gifted child (Type 5)
6. "The 'twice-exceptional' type of gifted child (Type 6)

The "successful" type of gifted child

More than 90% of identified school-age gifted children fall under this category. This type of gifted child stands out from their peers with good grades and high scores on IQ and achievement tests. They listen to their teachers and parents, behave and do what is asked and expected of them.

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Identification. These children are the easiest to identify. They excel academically, score high on IQ or achievement tests, and are noticed by their teachers quite early on.

Behavior. Typically, students of this type are knowledgeable and competent, although not necessarily creative. They are often bored during classes and try to learn with as little effort and work as possible. Usually, this type of child is perfectionistic and strives for high results, often following the goals or interests of others (teachers or parents) rather than their own. They exhibit extrinsic motivation for learning. Their behavior and learning efforts are directed toward gaining recognition or praise from teachers and parents. They tend to be risk-averse, generally conform to accepted rules, and accept and follow instructions. They are dependent on the opinions of adults and often lack independence. These children rarely have behavioral problems.

Relationships with peers, teachers, and parents. They are liked by their peers and tend to belong to certain social groups. They are also admired and accepted by teachers and parents.

Emotions, feelings, and needs. They tend to have a positive self-image because of their good academic performance. They are responsible, anxious, and feel guilty if they fail. They are also well-adjusted in society but may struggle to adapt to changing life conditions. Although they perform well academically, they often lack independence and creativity. They need changes and engaging activities to overcome boredom at school.

Support at school. Early entry and enriched or accelerated education, self-directed learning, and the opportunity to try different forms of learning are the most effective approaches to education for children of this type. The opportunity to interact and learn with similarly gifted children is also very important.

The "difficult" type of gifted child

This is an exceptional type of gifted child. These children display remarkable creativity. They question authority, frequently oppose teachers, and may exhibit tactlessness, sarcasm, and stubbornness. They tend to be confrontational in their interactions with others and receive few rewards or positive evaluations.

Identification. Teachers believe that these children are prone to misbehavior and often overlook their exceptional abilities. They are more likely to be noticed by their peers or others outside the classroom than by teachers. These children are highly creative. Their exceptional abilities are demonstrated by creativity tests or their performance.

Behavior. They are often bored during lessons, enjoy "correcting" the teacher, doubting, questioning, and challenging established rules and truths. They are spontaneous (sometimes their spontaneity can be destructive).

They are also honest and defend their beliefs. This type of child feels as if the school system does not value their talents and abilities. They often feel tense and tend to compete. Their work skills are erratic, their self-control is poor, and they exhibit impatience.

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Relationships with peers, teachers, and parents. They are seen by their peers as class entertainers, admired by some and rejected by others. They are usually charming and attractive to their peers because of their creativity and sense of humor. From the perspective of adults, these children deliberately annoy them, are lazy, and often engage in "power struggles".

Emotions, feelings, and needs. They are sensitive and often experience mood swings. They belong to a high-risk category of students who skip school or, later in life, turn to alcohol or drugs and criminal activities if they do not receive adequate help and support. They seek social interaction but should strive for more tactfulness, flexibility, and self-control in their interactions.

It's important to support them, recognize them, acknowledge their creativity, and try to get along with them.

Support at school. The most effective help and support for these children at school is a suitable teacher who understands their needs and behavior, allows them to express their feelings, guides their learning process in a clear and purposeful way, provides opportunities for enriched learning, and develops their cognitive and social skills. Various behavior contracts can be employed for behavior modification.

The "hiding their talents" type of gifted child

Typically, this type includes children who lose motivation and interest in what once interested them and who deny and hide their talents in an attempt to fit in with their less-gifted peers. This type of gifted child is typically found among middle school-aged girls.

Identification. Teachers see them as more than just average-ability students or successful learners. They are identified by their high scores on achievement and IQ tests. Despite their efforts to hide their abilities and not stand out, their talents are still noticed by teachers, peers, and parents.

Behavior. They often engage in conflicts with parents and teachers, which only serves to increase the children's defiance, and tend to oppose being involved in various projects.

Emotions, feelings, and needs. They often feel pressured, confused, guilty, and insecure, downplaying their emotions and abilities, and doubting their own righteousness. They may also feel guilty for hiding their feelings.

Relationships with peers, teachers, and parents. They are eager to belong to a peer group and often change friends. Some are perceived as leaders, while others go unnoticed. Other peers might view them as complainers and shy, while adults see them as risk-averse and resistant.

Support at school. The best way to help and support these children at school is to identify them as early as possible. It is important to provide an appropriate behavioral model of a gifted child of the same gender and offer guidance on career and profession-related matters.

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The "drop-out" type of gifted child

Typically, the interests of this type of child lie outside of school, as they lack support and do not fulfill themselves in a traditional school setting. They often attend school inconsistently, and when they do, they struggle to participate in classroom and school activities.

Identification. Teachers see them as average or even below-average students. The giftedness of these children is only recognized through a general and comprehensive assessment, revealing the discrepancy between their IQ and academic performance. Sometimes, the identification is aided by recommendations from other gifted children and by the high level of creativity they display, more often manifested in extra-curricular activities.

Behavior. At school, these children are characterized by absenteeism and behavioral problems. Their participation in classes and school activities is inconsistent; they learn and work sporadically, often failing to complete assigned tasks. They quickly become tired and exhausted.

Emotions, feelings, and needs. They often feel offended, angry, sad, and depressed. They are often angry when they interact with adults. They are angry because the school does not meet their needs; they feel misunderstood and rejected. They often express their anger by being sad or withdrawn, or by responding "defensively". They may be easily angered, short-tempered, and disruptive. They may also be prone to self-harm.

Relationships with peers, teachers, and parents. Adults usually feel anger toward such children, perceiving them as dangerous and rebellious. Peers tend to judge them, blame them for misbehavior, and view them as loners, withdrawn, or a laughing stock.

The best way to assist and support these children at school is through proper pedagogical psychological assessment, combined with non-traditional and alternative teaching methods. Individualized programmes, intensive courses, and diverse teaching methods (such as individual teaching, separation from other classmates, etc.) best cater to the needs of this type of child.

The "independent" type of gifted child

This type includes gifted children who are independent and academically successful. They are similar to the "successful" type of gifted child, but these children try to create their own learning opportunities. They themselves "take" what the educational system cannot provide for them.

Identification. They are easily identifiable, standing out among their peers with excellent academic performance and high IQ or achievement test scores; teachers typically notice their abilities early on.

Behavior. They excel academically, demonstrating persistence and determination. They are independent, competent, creative, and enthusiastic. These children possess a strong intrinsic

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motivation for learning and work diligently even without praise. Moreover, they exhibit appropriate social skills, value independence, pursue their goals, and are willing to take risks.

Emotions, feelings, and needs. They can articulate their emotions and needs. Typically, these children have a positive self-image. They have a thirst for knowledge, acknowledge and respond constructively to their failures, exhibit responsibility, and demonstrate inner strength. It is important that they receive appropriate feedback and education that meets their needs.

Relationships with peers, teachers, and parents. They are accepted and respected by adults and peers, and they, too, accept and respect others.

Support at school. They need feedback, proper guidance, and suitable learning alternatives. It is important to enrich and complement their curriculum, accelerate their learning, avoid restricting their learning time, and plan their study and career opportunities.

The "twice-exceptional" type of gifted child

This type includes children with dual exceptionalities - they are both gifted and have one or more disabilities, such as sensory impairments, learning disabilities, etc. The presence of the disability prevents the manifestation of their giftedness. As a result, the giftedness of these children is difficult to identify and they often do not receive appropriate education and support.

Identification. Teachers see these children as average or below-average students. Specialists identify them through testing and evaluating their activities or task performance.

Despite their apparent disability, these children are not recognized as gifted.

Behavior. Their behavior in class may be destructive and disruptive to themselves and others. These children may resort to humor or belittling others to protect their self-esteem and avoid failure. Furthermore, their study and work efforts are inconsistent.

Emotions, feelings, and needs. They may have exceptional intellectual abilities but are unable to manage their feelings and negativity. In addition, they may be impatient and critical, responding to criticism from others with anger and stubbornness.

Relationships with peers, teachers, and parents. They may act clueless and helpless around their peers, emphasizing their disabilities and avoiding other children. Others may perceive them as strange, a bit "foolish", helpless, and avoiding their peers.

The most effective way to support these children at school is by allowing them to participate in programmes designed for gifted students, providing alternative learning opportunities, and enhancing their existing skills. It is important to emphasize their strengths and teach them appropriate social skills.

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2.1.3. Measuring, testing and identifying the gifted child

Unraveling the intricacies of giftedness requires the development of accurate and reliable methods for identification. Various tools and assessments have been devised to gauge a child's potential, often involving a combination of cognitive tests, creative assessments, and observations of their performance across different domains. However, the process is not without challenges, as the multidimensional nature of giftedness can elude easy categorization.

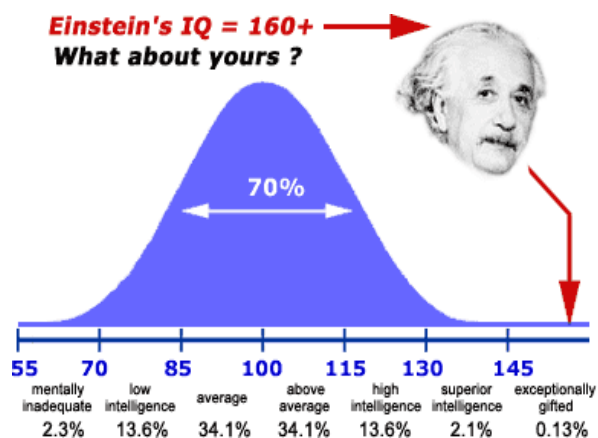


Image 2. The comparison between the IQ of A. Einstein and the average IQ,
(source: <https://www.slideshare.net/SunilSharma53/forensic-psychiatry>)

In order to work with gifted children, they must first be identified and assessed. This is done through intelligence tests and a range of gifted tests. Each country chooses the tools and scope for testing children. Some countries assess all children of a certain age, while others focus only on those who show exceptional academic performance. It all depends on the country's approach to gifted education and the financial resources allocated for it.

Understanding assessment:

1. Assessment is a way of testing performance against a set of criteria.
2. There are different tools and approaches to assess people, all designed to give answers to a certain characteristic of a given person.
3. As much as a more accurate result is desired the test is more detailed.
4. Accurate assessment is achieved using various and different means of testing.
5. Assessment can be informal to check progress or formal to confirm achievement.

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Background on assessment and testing:

1. Hippocrates (460-377 BC) divided people into four temperaments: the Sanguine (extroverted and social), the Choleric (ambitious and energetic), the Melancholic (considerate and creative) and Phlegmatic (stable, relaxed and perceptive).
2. The Greek-Roman physician Claudius Galenus (130-216 AD) combined these with the four natural elements and seasons.
 - a. Autumn - Melancholic - Earth.
 - b. Winter - Phlegmatic - Water.
 - c. Spring - Sanguine - Air.
 - d. Summer - Choleric - Fire.
3. Swiss psychiatrist, psychologist, founder of analytical psychology Carl Jung (1876-1961) suggested four archetypes of personalities
 - a. Introvert vs. Extrovert
 - b. Sensitive vs. Intuitive
 - c. Thinking vs. Feeling
 - d. Judging vs. Perceiving
4. Pioneer of differential psychology, eugenics, one of the founders of scientific forensics. Fellow of the Royal Society of London (1856) Francis Galton (1822-1911) was the first attempt at creating a standardized test for rating a person's intelligence. "A pioneer of psychometrics and the application of statistical methods to the study of human diversity and the study of inheritance of human traits, he believed that intelligence was largely a product of heredity and that there should exist a correlation between intelligence and other observable traits such as reflexes, muscle grip, and head size."

IQ – Intelligence quotient:

XIXa. French psychologist, one of the founders of experimental psychology Alfred Binet (1857-1911) invented the term IQ. He focused on verbal abilities. It identifies mental retardation in school children, but in specific contradistinction to claims made by psychiatrists that these children were "sick" (not "slow") and should therefore be removed from school. The score on the Binet-Simon scale would reveal the child's mental age in comparison to chronological age.

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The rationale of testing people:

1. Testing people aims to know the person tested. To give us the opportunity to assess the compatibility between one's qualities and abilities and the requirements and characteristics of a specific profile.
2. A good test should be constructed to demonstrate a specific quality or ability.
 - a. Standard – all people tested did so in equal format, time and environment.
 - b. Valid - proven to be able to test the segment it is supposed to test.
 - c. Reliable - if used once more will give similar results.
 - d. Objective – results would not be submitted to bias like culture, assessor etc.
3. A well-constructed assessment is the gathering of multiple angles of evaluation made by various tests and various assessors.

The image of the evaluator of gifted persons and evaluator's approach:

1. The evaluator is a tool aimed to bridge the desire to know and knowing.
2. The evaluator uses the right tools in assessing a specific desire to know.
3. The evaluator represents the mission he was sent to and his personal preferences should not play a role in the assessment
4. The evaluator should have the wider picture of the whole process and the specific role he plays within.
5. Running the tests should be reliable and objective. The personality of the assessor plays a role in the analysis of the results. Tests that are well constructed hold a manual for grading performance in the attempt to disconnect the assessor from the results.
6. Modern approaches, mostly holistic, tend to relate to the subjectivity of the assessor as a fact and suggest using multiple assessors and sources of information to deal with this issue.

Creating and practicing differential diagnosis:

1. The term "differential diagnosis" was suggested by German psychiatrist Emil Kräpelin (1856-1926), and it is mainly used in medicine and pharmacology.
2. Differential diagnosis is the art of observation, the ability to observe situations, behaviors, symptoms and information and come with a firm conclusion that can become a significant step toward dealing with the specific subject of the observation and its desired goals.

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3. Differential diagnosis calls for higher sensitivity to details, higher analytic abilities, extensive wide knowledge in related areas, free mind and internal freedom to dare.
4. It is used to differentiate unique children with the potential of being gifted from the rest of the age group.
5. As such, differential diagnosis is a skill that can be studied, but making it an expertise demands thorough guided experience gaining.
6. In the case of gifted children, it is a tool used by kindergarten teachers to observe the whole team and come with firm conclusions as for who is who.

General assessment tools, known and modern:

1. In general, two groups of tests are used
 - a. Personality tests – aimed to assess behaviors, feelings and perceptions.
 - b. Intelligence tests – aimed to quantify segments of human intelligence

In testing personality, we identify three groups of tests:

- c. Projection tests (like TAT, Ink Blots, evaluation cards).
- d. Self-reporting inventory (Big 5 personality traits – NEO240, MMPI).
- e. Group dynamics – the person tested given a mission as part of a group and being observed.

In testing intelligence, we identify 2 major parts

- f. Verbal intelligence (parts of Wechsler, parts of Stanford-Binet)
- g. Operational intelligence (like, parts of Wechsler, Raven).

2. Modern testing tool consist of two revolutionary approaches
 - a. Using newly designed assessment cards for projection of personality
 - b. Using known box games to test intelligence (like Tangram)

Assessing children from age 3 to 7 Psychological approach:

1. Children are yet susceptible, dependent and easy to be influenced.
2. Are not able yet to plan their future.
3. Are biased by parental desire and easy to manipulate.
4. Frustration threshold is very low.
5. Consent to cooperate varies due to internal and external disruptions.

Tools used + practice:

1. For precise results you might use WIPSSI (Wechsler Preschool and Primary Scale of Intelligence) or Binet battery of tests.

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2. Kindergarten teachers and teachers' testimonials after being trained to practice differential diagnosis.
3. Games based on understanding instructions, speed and motivation.
4. Evaluative cards aimed to reflect desired characteristics.

Assessing children from age 7 to 12 Psychological and social approach:

1. The pupil is ready to be tested after being preliminary observed.
2. The pupil has mastered the language it is tested with.
3. The pupil understands the reason it is tested, the consequences of failure as well as those of success.
4. His family of origin support him being tested and knowledgeable to the consequences and the sacrifice they will have to give and the support they will have to receive and give.

Main tools used + practice:

1. Precise tools – WAIS
 - a. Verbal comprehension – the ability to learn a language, organize information through language, to draw, to define, to deduct, to conclude and create terms.
 - b. Working memory – attention function, the ability to preserve newly learned information in the STM (Short term memory) through the verbal channel and be able to manipulate it.
 - c. Perceptual organization – visual perception, spatial organization, analysis, synthesis, learning with minimum verbal arbitration.
 - d. Processing speed – attention, speed of learning in real-time, how fast the subject internalizes a new rule and activates it.
2. Evaluative, non-direct tests:
 - a. TANGRAM
 - b. Evaluative cards

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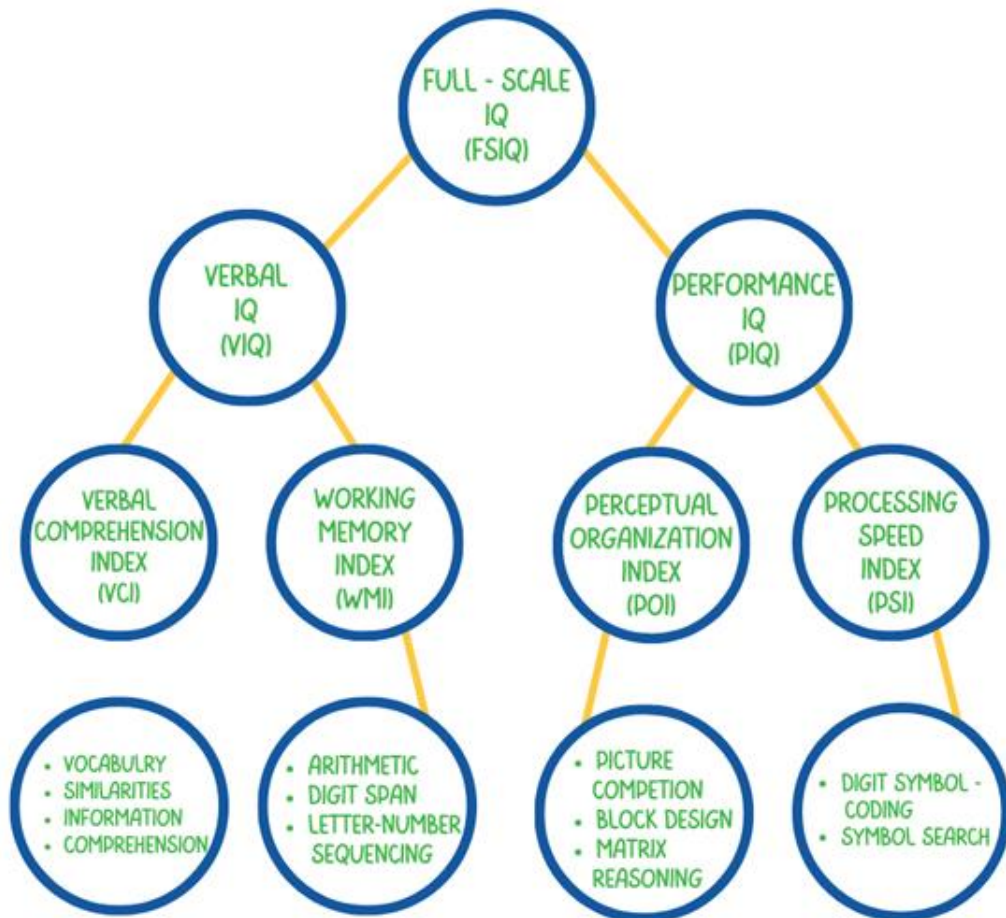


Image 3 The Wechsler Intelligence Scale for Children-Revised (WISC-R), a revised and updated version of the original Wechsler Intelligence Scale for Children (WISC)

Assessing children above 12 years old Psychological and social approach:

1. The pupil is mature enough to be able to cope with frustration while going through longer processes and evaluation.
2. The pupil is in the process of shaping its future, therefore very attentive to processes that might brighten this future.
3. The pupil has relatedly significant life experience and should already develop an autonomous judgment system and internal values.

Main tools + practice:

1. Precise – WAIS, Raven
2. Evaluative – MMPI, NEO240, cards

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2.1.4. The characteristics, behaviors, and sociability of the gifted child

Gifted children manifest a captivating array of characteristics that distinguish them from their peers. Their insatiable curiosity, insatiable hunger for learning, and uncanny ability to connect disparate ideas set them on a distinctive trajectory of growth. This chapter delves into the world of gifted children's complex cognitive processes, including their propensity for thinking deeply, critically, and divergently. Their insatiable thirst for knowledge often leads them to explore topics beyond their years, forging paths of intellectual exploration that leave an indelible mark on their personal development.

Developmental features of gifted children

First approach: the development of gifted children is universal, i.e., the same as that of all other children, and differs from that of their average-ability peers only to the extent that each child's development varies.

The major theories of child development, such as those proposed by Piaget, Ericson, Maslow, and Kohlberg, which examine cognitive, identity, personality, and moral development, are also applicable for explaining the development of gifted children because they are consistent with the universal development approach. According to this approach, gifted children generally go through the same stages of cognitive and moral development as all other children, but because of their exceptional abilities, they progress through these stages faster and earlier than their average-ability peers (Karnes and Brown, 1981; Tan-Willman and Gutteridge, 1981; as in Pagnin and Andreani, 2000).

Second approach: the development of gifted children is universal but displays certain specific characteristics. It is argued that, although the stages of development are similar to those of all children, the unique traits of gifted children, such as high intellectual ability, asynchrony in various aspects of development, and heightened overexcitability or increased responsiveness to different stimuli, all contribute to a pattern of development that somewhat differs from that of all other children (Dabrowski, 1972; Piechowski, 1991; as in Coleman & Cross, 2000). Consequently, the development of gifted children encompasses more specific features than that of their non-gifted peers (Silverman, Morelock, 1996; as in Coleman & Cross, 2000).

It is therefore important to examine the characteristics that distinguish gifted children from the majority of their peers.

Accelerated cognitive development in gifted children is one of the key characteristics of giftedness. Regardless of whether they excel in science or the arts, they commonly demonstrate:

- cognitive development that outpaces that of their peers with average abilities;
- the ability to learn faster and more efficiently, often with minimal adult assistance (Milbrath, 1998; as in Winner and Martino, 2000).

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The accelerated cognitive development of gifted children is emphasized by many researchers. Fine and gross motor skills, as well as speech, are the areas where the accelerated development of gifted children is most evident. Early acquisition of reading skills is another of the more common signs of accelerated cognitive development in gifted children. Gifted children tend to prefer books that provide substantial knowledge, such as atlases, encyclopedias, and science books over fiction and fairy tales. What 11-12-year-old children read, gifted children read at the age of 8-9. Although reading is one of the hallmarks of giftedness, the development of a gifted child is highly individual: although their cognitive development may be faster, they may not differ from their peers in terms of physical or social development, or, in some cases, may even lag behind in some aspects of development. Some authors have even suggested that developmental asynchrony should be considered a defining characteristic of giftedness (Morelock, 1999).

Specific characteristics of gifted children:

The specific characteristic of gifted children most often noted by researchers is **heightened overexcitability (not sensitivity!)**, which can manifest in one or more areas - intellectual, psychomotor, sensual, imaginal, and emotional (Dabrowski, 1980; as in Sword, 2003).

- Heightened overexcitability in the intellectual area manifests in the following ways: gifted children are very curious, often interested in various subjects, observant, possess rapid information processing skills, and learn easily and quickly.
 - The psychomotor overexcitability of gifted children is characterized by high levels of energy, leading them to be frequently active and enjoy engaging in multiple activities at once.
 - Gifted children display a heightened sensual experience, i.e., they are sensitive to beauty and are attracted to aesthetic values.
 - In the literature on gifted children, the imaginal overexcitement described by Dabrowski is referred to as creativity. It is characterized by the ability to perform tasks in unconventional ways, a vivid imagination, and the capacity to fantasize and find multiple solutions to a single problem.
 - Heightened emotional overexcitability is characterized by greater sensitivity, very intense emotions, and rapid emotional fluctuations. These children often react strongly to comments, taking them to heart and feeling like failures, which is why it is important to appropriately express criticism and mistakes to these children.
- Another common specific characteristic of gifted children is their tendency towards perfectionism. Research shows that the pursuit of perfection in their activities serves as a constant driving force for gifted individuals. Excessive self-criticism in gifted children is often linked with this inclination towards perfectionism. It is important to recognize that avoidance is a common feature of perfectionism. Perfectionists, fearing they might not attain perfection, may avoid tasks altogether or may not

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dedicate enough time and effort in order to avoid failure and feelings of incompetence. Many of the difficulties experienced by gifted children, such as stress, incomplete projects, and reluctance to take risks, are linked to perfectionism.

Emotions and emotional development:

If your child is gifted, you might notice that they have very strong emotions, interests and opinions compared with other children their age. Sometimes gifted children have trouble managing these strong feelings.

E.g. a young gifted child could get very upset if they consider that their drawing is not at par with the original in the book they are looking at. They might worry far more intensely than others about friendship troubles or not always understanding everything perfectly in class.

Older students, e.g. highschoolers, might get extremely anxious about not being able to positively influence climate change or other global problems. Or they might be extremely excited about a work of art and not understand why others do not feel the same way.

When assessing the development of each child, it is always advisable to take into account all aspects - physical, cognitive, and social - and their asynchrony, especially when choosing educational options for gifted children, such as early entry, grade skipping, etc.

Strategies for handling strong feelings in gifted and talented children:

Good communication is one of the keys to supporting your gifted child's emotional development.

It is all about talking, listening and responding in a sensitive way, even when your child's feelings seem out of proportion to what has happened. Talking and listening gives your child time to think through their feelings and gives you the chance to really understand those feelings.

It is good to help children learn to understand and manage their emotions by naming feelings and suggesting ways to manage them. For example, 'It sounds like you feel frustrated about your drawing. Why don't you have some quiet time with your favorite book? You could work on your drawing again later.'

Going through the ups and downs of adolescence can be greatly aided if the adults have managed to develop active listening and problem-solving and are applying these in their communication with the child / young person.

Social development and skills: gifted children:

1. Gifted children can think faster and/or more deeply than other children their age. So, they are often good at imagining what it is like to be in somebody else's situation.

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2. Sometimes these qualities mean your gifted and talented child gets along well with others. Other times, it might seem like your child does not quite fit in with children their own age.
3. Also, you might have noticed that your gifted child prefers to play or be with older children. This is because your child is thinking and feeling at a similar level to older children.

Strategies for helping gifted children get along with others:

1. Like any child, your gifted child will sometimes need your help to learn about getting along well with others.
2. A great starting point for getting along with people is understanding that different people have different strengths. You can help your child learn this as part of your everyday family life. For example, if your child has siblings, they will learn that other people have different talents and interests.
3. You can also give your child opportunities to build and practice social skills through:
 - a. playgroups – for younger children;
 - b. interest-based groups for older children and teenagers – for example, youth band, drama class, chess club, Scouts or Girl Guides groups;
 - c. groups and programmes for gifted and talented children.

Behavior: gifted children:

Behaving in challenging ways also happens to gifted and talented children, just like with everybody else. Some of the reasons for this challenging behavior could be the following:

- a. are quick to question family rules and routines;
- b. are easily frustrated;
- c. need challenging learning opportunities.

Strategies for managing family rules and routines:

1. Your gifted child probably has an excellent memory, so they are likely to remember rules and routines well.
2. But it might be hard to get your child to follow your family rules and routines. For example, your child might not want to turn out the light if they are reading a book, they are really interested in. Or your child might come up with some very good reasons why reading is more important than going to sleep!
3. It can help to be firm about your general expectations – for example, turning the light out by 9 pm on weeknights. But being ready to negotiate about little things is a good idea.

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4. If your child has siblings, rules that say how your family looks after and treat its members can help them get along – for example, ‘Knock and get permission before going into each other’s rooms.’

Strategies for handling frustration:

1. Gifted children often set very high standards for themselves and get frustrated when they can’t meet them. This can sometimes result in tantrums and other difficult behavior.
2. It is great for your child to work towards high standards. But your child needs to understand that they cannot have high standards for everything. It is OK to make mistakes because mistakes help us learn what to do differently next time. Self-compassion is all about treating yourself kindly when things do not go well. If interested, you can go deeper into the concepts of self-compassion for children and teenagers.

Strategies for finding the right learning opportunities:

When gifted and talented children are not given enough opportunities to learn outside home, they might:

1. not engage with activities or other children at childcare or school
2. seem fine at childcare or school, but have tantrums or seem upset and withdrawn after coming home
3. distract classmates at school or stare out the window instead of doing the classwork.

2.2. The social infrastructure of the gifted child

The social dynamics of gifted children are equally intriguing. These young minds often grapple with the delicate balance of integrating their advanced abilities with their social interactions. Some gifted children exhibit introverted tendencies, seeking solace in their thoughts, while others embrace extroversion, using their gifts to foster connections and bridge gaps among their peers. Understanding the intricate interplay between giftedness and sociability sheds light on the challenges and opportunities that await these extraordinary individuals.

2.2.1. Characteristics of families the gifted child grows in

The social infrastructure of a gifted child refers to the support network and environment that surrounds and nurtures the child's exceptional abilities and unique needs. This infrastructure is crucial for the child's overall development, well-being, and successful realization of their potential. It encompasses various aspects, including family support, educational opportunities, peer interactions, and access to mental health resources. The importance of a robust social infrastructure for gifted children cannot be overstated, and here are some key reasons why:

1. **Fosters Intellectual and Emotional Growth:** Gifted children often have advanced cognitive abilities and learning needs. A supportive social infrastructure provides them with intellectually stimulating environments and challenges that help maximize their potential. It also addresses their emotional needs, allowing them to develop a healthy sense of self-esteem and well-being.
2. **Prevents Underachievement and Boredom:** Without appropriate support and engagement, gifted children may become disinterested and disengaged in the traditional educational setting. This can lead to underachievement and may result in the child not reaching their full potential.
3. **Provides a Sense of Belonging:** Gifted children may feel isolated or different from their peers due to their unique abilities and interests. A strong social infrastructure connects them with like-minded peers, mentors, and teachers who understand and appreciate their strengths, fostering a sense of belonging and reducing feelings of isolation.
4. **Encourages Positive Socialization:** Social interaction is essential for all children's development, including the gifted. The social infrastructure helps gifted children build healthy relationships, develop social skills, and learn to work collaboratively with others.
5. **Tailored Education and Enrichment Opportunities:** An effective social infrastructure allows for personalized educational plans that cater to the child's individual learning pace and interests. It opens doors to enrichment programmes, advanced courses, and extracurricular activities that challenge and engage the gifted child further.

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6. **Support for Emotional and Psychological Needs:** Gifted children may face unique emotional challenges, such as perfectionism, heightened sensitivity, and intense emotions. A strong social infrastructure includes access to mental health professionals who understand the complexities of giftedness and can provide appropriate support and guidance.
7. **Preparation for Adulthood:** A well-established social infrastructure helps gifted children develop critical life skills, such as resilience, adaptability, and effective communication. These skills are invaluable as they transition into adulthood and pursue their aspirations.
8. **Enhances Creativity and Innovation:** Gifted children often have a natural propensity for creativity and innovation. A nurturing social infrastructure provides them with the freedom and encouragement to explore their ideas, fostering the next generation of inventors, artists, scientists, and thinkers.

Overall, the social infrastructure of a gifted child plays a vital role in shaping their future and optimizing their contributions to society. It is the responsibility of parents, educators, schools, and communities to work together to create an environment where gifted children can thrive, develop their talents, and make a positive impact on the world.

2.3. What can we expect from a gifted child?

Many gifted children exhibit unique characteristics that make it possible for us to spot them as such. From a young age, a child with extended vocabularies or great curiosity about how things work may show early signs of giftedness. Other characteristics are not so obvious however, making it difficult to identify gifted children in many settings, including school. Being familiar with and being able to recognize characteristics that mark giftedness can be really helpful to the classroom teacher. Here are some general characteristics of gifted children. Obviously, no child is outstanding in all characteristics.

2.3.1. Academic abilities, learning pace, learning difficulties

Academic abilities:

1. Shows superior reasoning powers and marked ability to handle ideas; can generalize readily from specific facts and can see subtle relationships; has outstanding problem-solving ability.
2. Shows persistent intellectual curiosity; asks searching questions; shows exceptional interest in the nature of man and the universe.
3. Has a wide range of interests, often of an intellectual kind; develops one or more interests to considerable depth.
4. Is markedly superior in quality and quantity of written and/or spoken vocabulary; is interested in the subtleties of words and their uses.
5. Reads avidly and absorbs books well beyond his or her years.
6. Learns quickly and easily and retains what is learned; recalls important details, concepts and principles; comprehends readily.
7. Shows insight into arithmetical problems that require careful reasoning and grasps mathematical concepts readily.
8. Shows creative ability or imaginative expression in such things as music, art, dance, drama; shows sensitivity and finesse in rhythm, movement, and bodily control.
9. Sustains concentration for lengthy periods and shows outstanding responsibility and independence in classroom work.
10. Sets realistically high standards for self; is self-critical in evaluating and correcting his or her own efforts.
11. Shows initiative and originality in intellectual work; shows flexibility in thinking and considers problems from a number of viewpoints.
12. Observes keenly and is responsive to new ideas.
13. Shows social poise and an ability to communicate with adults in a mature way.
14. Gets excitement and pleasure from intellectual challenge; shows an alert and subtle sense of humor.

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Learning disabilities among Gifted children:

Students who are gifted and have learning disabilities are those who possess an outstanding gift or talent and are capable of high performance, but who also have a learning disability that makes some aspect of academic achievement difficult. Some of these students are identified and their needs are met. In order for this to happen though, the school specifically must have decided to identify and then to provide support for these students. Many students who are gifted with learning disabilities “fall through the cracks” in the system.

There are at least three subgroups of children whose dual exceptionality remains unrecognized:

1. The first group includes students who have been identified as gifted yet exhibit difficulties in school. “These students are often considered underachievers, and their underachievement may be attributed to poor self- concept, lack of motivation, or even some fewer flattering characteristics, such as laziness (Silverman,1989; Waldron, Saphire, & Rosenblum,1987; Whitmore, 1980). Their learning disabilities usually remain unrecognized for most of their educational lives. As school becomes more challenging, their academic difficulties may increase to the point where they are falling sufficiently behind peers that someone finally suspects a disability.”
[\(Brody & Mills, 1997\)](#)
2. A second group includes students whose learning disabilities are severe enough that they have been identified as having learning disabilities but whose exceptional abilities have never been recognized or addressed. It has been suggested that this may be a larger group of students than many people realize. In one study, as many as 33% of students identified with learning disabilities had superior intellectual ability. (Baum, 1985) Wrong assessments and/or IQ scores often lead to an underestimation of the intellectual abilities of these students. If their potential remains unrecognized, it never becomes a cause for concern or the focus of their instructional programme. Due to this underestimation or too inflexible identification and/or instructional expectations in the “gifted programme,” they are rarely referred for gifted services.
3. Perhaps the largest group of unserved students are those whose abilities and disabilities mask each other; these children sit in general classrooms, ineligible for services provided for students who are gifted or have learning disabilities and are considered to have average abilities. Because these students typically function at grade level, they are not seen as having problems or special needs, nor are they a priority for schools on tight budgets (Brody & Mills, 1997). Although these students appear to be functioning reasonably well, they are, unfortunately, performing well below their potential. As the work in the grades becomes more and more demanding with each consecutive year, and without the help, which such kids

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require in order to accommodate their limitations, their academic difficulties usually grow to the point where a learning disability may be suspected, but their true potential is rarely recognized if at all.

2.3.2. Individual and social behaviors

The challenges that gifted students can face can be surprising to those who believe the myth that they do not need help, and that they will do fine on their own. Gifted children have differently wired brains that make them unique compared to their neurotypical age-mates. While many consider giftedness only in terms of academics, giftedness does apply to a child's social and emotional development in general. Despite the fact that all children are called to navigate the uneven road of forming their identity and social belonging, gifted ones may experience these problems differently and with greater intensity as they mature. To help family members and educators navigate some of the emotional problems accompanying gifted behavior, here is a list of some of the most common challenges for gifted students as well as advice on how to help students through these challenges.

Among the most common problem areas for children who exhibit giftedness characteristics are:

- Sensitivities and Overexcitabilities
- Social Skills
- Perfectionism
- Self-Concept

Sensitivities and Overexcitabilities:

According to research data, gifted children experience heightened sensitivity and advanced emotional processing. These features are often placed within the framework of Dabrowski's concept of overexcitabilities, which describes the heightened sensitivity and intensity for gifted children in the areas of psychomotor (surplus energy and movement), sensual (keen sense of smell, touch etc.), emotional (rich inner experience), intellectual (curiosity and search for knowledge), and imaginal (vivid imagination) (N/A, 2021). Due to these unique characteristics, gifted children sometimes react adversely to intense stimuli, which can manifest themselves as problematic behavior on the surface. E.g. if a perceptive child watches something on the news that frightens them, it might refuse to sleep alone at night over a certain period of time. Children who are over-excitable in the intellectual and kinesthetic areas may find it impossible to sit still at their desk and frequently interrupt their teachers with questions or requests.

Sensory or emotional sensitivity may trigger an array of feelings, such as frustration or sorrow, and a variety of behavioral problems attributed to giftedness, like distancing or closing

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oneself for the outer world. Understanding how overexcitabilities or sensitivities manifest in your child may help parents find suitable solutions for problem behaviors.

Social Skills:

Many people make the mistake of believing that gifted children are inherently clumsy and poor communicators, which is simply not true. The problem of social integration of gifted children often arises from the incompatibility of their educational environment. Asynchrony, or uneven development, is often considered a core characteristic of giftedness.

These students may be college age intellectually but are still only 12 years old in social skills. As a result, it can be difficult to make friends with similar interests or know how to express yourself appropriately in a group. Depending on the educational environment, these children may be labeled with problematic behaviors such as bossy, snobbish, antisocial, etc. Difficulty making friends in class may have nothing to do with their ability or desire to socialize but is a problem. the result of not having like-minded people with whom they can connect. When it comes to gifted friendships, there is a noticeable gap between classmates or peers and who they consider true friends.

Perfectionism:

Perfectionism can look like normal high-functioning behavior until it begins to harm a child's health. Perfectionist children may exhibit a variety of challenging behaviors, such as competing with others, achieving optimal results at the expense of social interaction, or avoiding activities, which according to them, they may fail in. Perfectionism is often associated with self-esteem when a gifted child or those around them expect them to be gifted at all times, in every subject.

Although there is much debate about whether perfectionism exists in both a good and bad sense, the problem for many gifted students is that this pressure to be perfect comes from their inability to see beyond the role of "smart student" in class. Gifted children should be constantly reminded that their worth is not based solely on their grades or achievements.

Self-concept:

Self-concept is another common challenge of being gifted. Gifted children may achieve numerous adolescence milestones earlier than the rest of their average peers, however they frequently struggle developing a healthy self-concept during crucial periods for the formation of their identity. Despite the leading role, which parents have in assisting children to learn about themselves, they are also quite vulnerable to the negative experiences at school and with peers and those may harm the way a gifted child perceives themselves. Low self-esteem may spring from feeling unsupported and unaccepted at school. They might consider that their giftedness is separating them from the others. Anxiety and depression may stem from this low self-esteem and even if gifted children cannot be considered more susceptible to anxiety and depression compared

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to their age-peers, according to research by Tracy Cross and others, their unique intellectual traits may contribute to a more acute and intense experience of anxiety/depression. It is important for parents to know that they should turn to specialists, e.g. gifted therapists, if they suspect deepening depression or acute anxiety in their children.

Luckily, the strategies that support a gifted child's intellectual development may also help prevent some of the emotional and behavioral challenges. Finding someone to test your child for giftedness, especially with an individual assessment tool, may help reveal sensory processing issues for the accommodation of which parents and educators can collaborate. Gifted identification may also help families access special programmes to support their development or advocate for acceleration. Using acceleration techniques, such as ability grouping or grade hopping, can give students intellectual peers who understand them and want to interact the way they do. It can also be a relief to not feel like you have to be the smartest kid in the class.

The emotional and social benefits of acceleration are supported by the findings of A Nation Empowered. Supporting the intellectual and social needs of gifted children promotes a healthier self-esteem and a growth mindset that enables them to appreciate both their strengths and weaknesses.

2.3.3. The gifted child after graduation

What is the image of the graduate?

1. Becomes excellent in science, technology, art, literature, law, business, philosophy and entrepreneurship.
2. Demonstrates perseverance and persistence, creativity and originality, curiosity, intellectual and/or artistic honesty, ability and desire to constantly learn and develop the ability to think and act under conditions of uncertainty.
3. Demonstrate multidirectional thinking, interdisciplinary vision, analytical ability, efficient information consumption, broad vision and awareness of value implications.
4. A graduate of the unique programmes must be a person with a social commitment and a high level of morality and humanity.

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THE IMAGE AND CHARACTERISTICS OF THE GIFTED CHILDREN'S TEACHER

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3.

Introduction

The image and characteristics of a teacher for gifted children can vary, but there are certain qualities and attributes that are often associated with effective educators in this field. Gifted children often have unique needs and abilities that require a specialized approach to teaching and support, therefore a teacher for gifted children also should possess a unique set of qualities and characteristics to effectively nurture and challenge the intellectual and creative abilities of these students.

This chapter talks about characteristics that a gifted children's teacher might possess, models identifying the effective teacher and about characteristics of gifted children. Therefore, it is important to remember that each gifted child is unique, so an effective teacher will be attuned to the individual needs and strengths of each student while fostering an inclusive and intellectually stimulating classroom environment.

3.1. Characteristics of the gifted children's teacher: background and education

Every school and district handle gifted education a little differently, but most educators agree that teaching students who are advanced learners, or learn more quickly, at a higher level, or in a more abstract and creative way than their peers, can be as challenging as it is exciting.

Gifted students or especially talented and quick thinking in one or more areas, require a teacher who knows how to meet them where they are and recognize their strengths and capacities.

Therefore, it is important to analyze and present the broad picture of the teacher who educates gifted students.

- A teacher who is not afraid of a mission to educate gifted children knowing their particularities.
- Not afraid of change, open and flexible.
- Involved in the child's life.
- Educated, knows his/her way around different situations.
- Able to admit ignorance.
- Experienced, self-confident.
- Maintains a high level of intelligence.
- Not only an expert in his/her own subject but also lives in the context of the world (arts, sports, other areas).
- Favorable attitude towards gifted children.
- Systematic.
- Has a sense of humor.
- Not afraid to put oneself in the shoes of a child.
- Not losing balance (to organize work in such a way as to cope with problems).
- Tendency to innovate.

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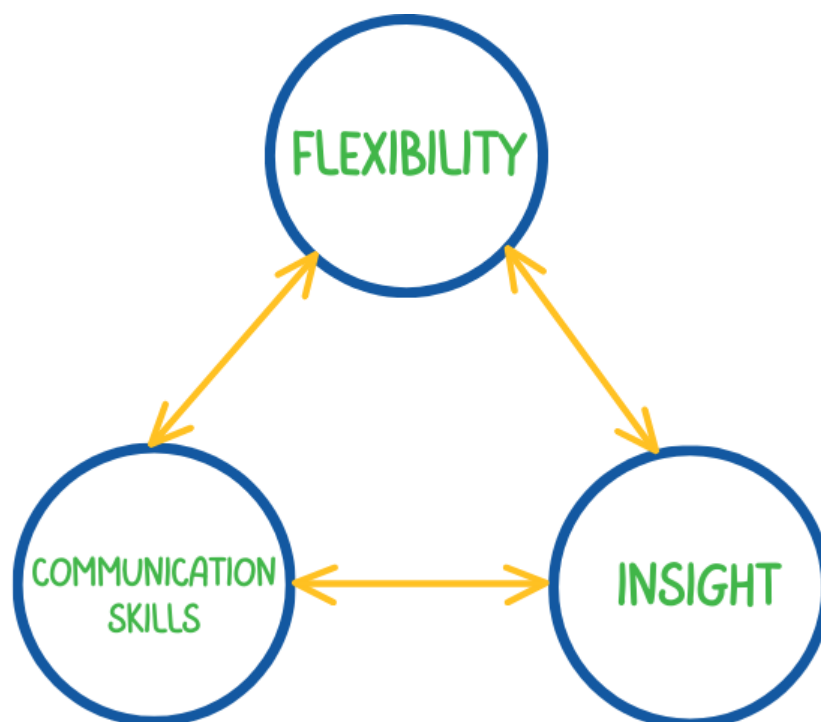


Image 4. The most relevant skills working with gifted students

Teacher's **flexibility** or willingness to think and work and share information in new and unusual ways is especially important when working with gifted children. Flexibility is necessary in selecting the task, anticipating the challenge it poses, determining the time and method of completing the task. A flexible teacher will give gifted children more space for creative work to get the best results.

It is important for a gifted children's teacher to have **insight** when working with gifted children. Insight refers to deep knowledge or understanding of someone. Each gifted child is different, so a gifted children's teacher must make sure to take the time to get to know gifted students as whole people.

Insight is important for all teachers working with all kinds of pupils, but when it comes to gifted children, it is a necessity.

And at last, gifted children require teachers with **excellent skills in communication**. A teacher of gifted children must be able to identify gifted children, to give them higher ability tasks, to spot boredom or apathy, to be able to understand and work with their strengths. Teachers of gifted children must use active listening in their classrooms every day, and so must parents of gifted children. It is necessary to listen to the information provided by gifted children, parents, and teachers, and constantly reflect it to everyone in order to achieve the best results in the child's education.



*Image 5. The main characteristics of **effective teacher of gifted students***

Teachers of gifted children are more achievement-oriented and intellectual than teachers in the normative group.

Following characteristics were necessary in teachers of gifted students:

- advanced competency in academic specialization,
- the ability to apply knowledge to solve real-life problems,
- flexibility,
- openness,
- high energy,
- a commitment to excellence
- the ability to convey a passion for the subject matter.

It is important to understand that teachers of gifted children's:

- will be seen more as partners of students rather than teachers,
- are enthusiastic to learn, able to admit not knowing,
- are strong, assertive, humble, tactful, having a stable personality
- can see the big picture, future orientation.

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The gifted class teacher's emotional needs

Teachers in gifted classes often experience emotional flooding and sometimes even distress. It is not easy to be a teacher in those classes. The same as the gifted need constant emotional support, teachers in those classes need it as well. It is the responsibility of the schooling system to ensure they get it. Mutual support groups at school are very useful for the short run. Coping with the emotional side of teaching in gifted classes should be an imminent part of the training such teachers get.

3.1.1 Foundation of the adequate teacher for gifted children

The foundation of suitable teachers for gifted children is built upon a combination of knowledge, skills, attitudes, and approaches that are tailored to meet the unique needs of gifted learners. Here are eleven essential foundations summarized for a teacher working with gifted children:

1. **Expertise in Gifted Education:** A teacher for gifted children should have a deep understanding of gifted education principles, theories, and practices. They should be familiar with the various models of giftedness and the strategies that work best for challenging and engaging these students.
2. **Differentiation Skills:** Gifted children often learn at a faster pace and have different learning styles. A skilled teacher can differentiate their instruction to meet the individual needs of each student, providing more advanced materials and opportunities for exploration.
3. **Flexibility and Adaptability:** A gifted children's teacher should be flexible in their teaching methods and willing to adapt to the changing needs of their students. They might need to adjust the curriculum, pacing, or assignments to keep up with the rapid learning pace of gifted children.
4. **Passion for Learning:** An enthusiastic teacher who is genuinely passionate about their subject can inspire gifted students to delve deeper into their interests. A teacher who embodies a love for learning can create an environment where curiosity and exploration are encouraged.
5. **Problem-Solving Skills:** Gifted children often enjoy tackling complex problems and thinking critically. A teacher who can pose challenging questions and guide students through the process of solving them can foster intellectual growth.
6. **Strong Communication Skills:** Effective communication is crucial in any teaching role. A gifted children's teacher should be able to explain complex concepts clearly, listen actively to students, and foster open dialogue within the classroom.
7. **Emotional Intelligence:** Understanding the emotional and social needs of gifted children is important. A teacher who can provide appropriate support and guidance

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in areas such as perfectionism, asynchronous development, and social interactions can create a nurturing environment.

8. **Creativity and Innovation:** Gifted students thrive when given opportunities to think creatively and explore unconventional ideas. A teacher who encourages experimentation and innovation can help these students reach their full potential.
9. **Collaborative Mindset:** Collaboration with parents, other educators, and specialists is often essential in the education of gifted children. A teacher who can work effectively within a team and involve various stakeholders can provide a holistic and supportive learning experience.
10. **Patience and Empathy:** While gifted children have unique abilities, they can also face challenges. A patient and empathetic teacher can provide the emotional support needed during times of frustration or struggle.
11. **Continuous Learning:** Gifted education is a constantly evolving field. A dedicated teacher should be committed to their own professional development, staying updated on the latest research, teaching methods, and resources in the realm of gifted education

Students identified as gifted and talented perform academically, intellectually, or creatively above grade level. Teachers who work with gifted and talented children should be proficient in teaching complex material and know how “to push” students according to each one's needs. A teacher working with gifted children must possess definite skills such as effective communication abilities and substantial understanding in the subject matter they have selected for their area of education.

When working with gifted kids, **teachers must employ strategies that promote productivity, creativity, self-discipline, and leadership in their charges.** Teachers in this field must be ready to adapt instruction to the specific needs of gifted students and to individualize it as needed. When teaching high achievers, a teacher must be aware of the possibility that a student may be intellectually mature beyond their years but develop at a similar rate to their peers. The teacher must be able to relate to the student on that intellectual level without losing sight of the child's actual age. Additionally, a part of the gifted students may be twice exceptional, which means that they have both the outstanding abilities that make them brilliant and the behavioral, emotional or physical difficulties that classify them as special needs pupils.

Gifted students are aware of the qualities that “good” teachers should have, both regarding character and personality traits, and teaching skills. The literature and education system recognize that teachers of gifted students must possess unique professional qualities and attitudes. Given that student responses indicate a need for diverse and unconventional teaching, expanding the teacher's 'toolbox' seems essential. First, it educates about the character of talented students, and second, it educates teachers by training them using advanced teaching methods, peer learning, and technology.

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In some ways, the needs of gifted students are no different than those of their peers. Like any other student, they will need detailed instruction and evaluation. However, the needs of gifted learners are entirely different in a lot of other ways. Teachers in gifted education must be aware of the similarities and differences among their students.

Gifted learners have unique skills, but many of them have special needs as well. Actually, these individuals frequently experience emotional and social difficulties as a result of the same factors that enable them to thrive academically and creatively. Sometimes when a designation of excellence is assigned to a child early in life, it creates a level of pressure that other kids do not face.

To meet the complete needs of these students, not just the educational needs, teachers need to be vigilant and empathetic. Teachers must also recognize the complex demands of gifted learners by organizing their lesson plans, classrooms, and attitudes. Although specific tactics will differ greatly depending on the classroom, gifted education teachers generally agree on the excellent practices presented below.

a. Professional and didactic abilities of the teacher (the 21st Century Teacher skillset)

To be a good teacher, a teacher needs a number of professional development skills in addition to subject-matter expertise and experience. Teaching is a hard job that calls for a deep dedication as well as a wide range of sophisticated knowledge and abilities.

Similar to how they affect our daily lives, rapid technological advancements also have an impact on how students learn, and teachers impart knowledge. Modern educators must possess new skill sets in addition to fundamental abilities.

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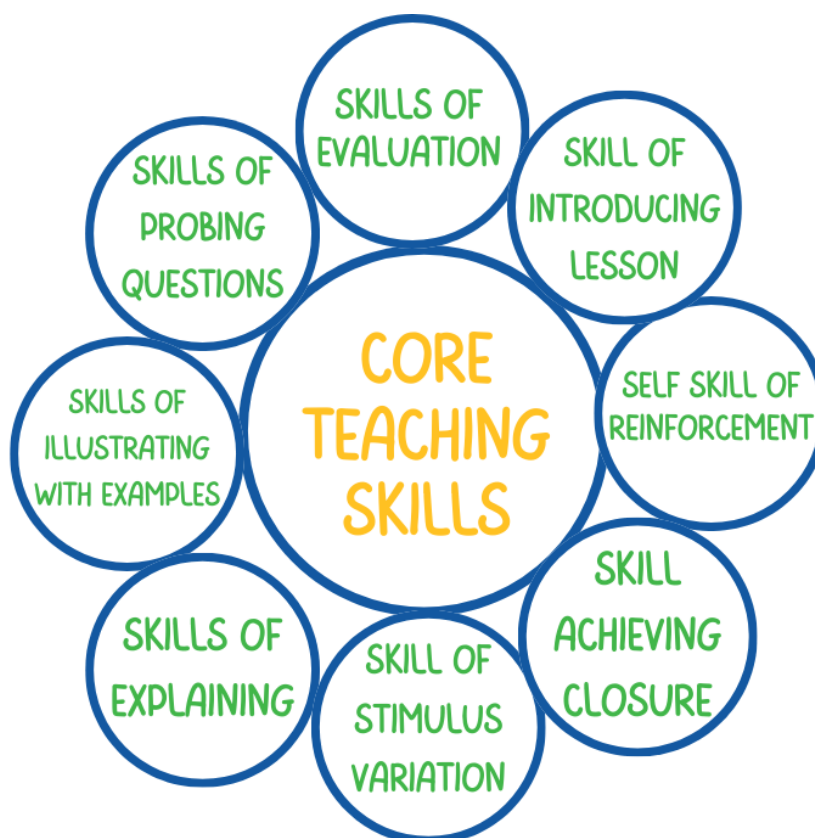


Image 6. Core teaching skills.

In the field of education, there are numerous roles that call for various skill sets. There are some fundamental skills that every teacher should possess – communication, patience, creativity, enthusiasm, confidence, dedication, conflict resolution, organization, leadership, adaptability. The following are examples of professional skills—or, as we like to refer to them, "modern skills"—that teachers in the modern era should possess:

Adaptability

Teachers need to be adaptable and versatile in today's modern, digital environment so they can manage everything that comes their way. Similarly, administrators are revising and updating learning standards and expectations. Every modern teacher needs to be able to adapt to the way their pupils learn, his/he reconstruct in their classroom, or their lesson ideas.

Confidence

Every teacher needs to have self-confidence as well as confidence in their students and fellow teachers. A self-assured person encourages others to be self-assured, and a teacher's self-assurance can influence students to be better people.

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Communication

A crucial talent is the ability to interact not just with pupils but also with parents and other staff members. It is important to be able to speak clearly and concisely because a teacher spends all of their day talking with kids and other staff members.

Team Player

Working well in a team or group is a skill that teachers must possess. When students work as a team, they are more likely to learn and have fun. Success can only result from networking with other educators (even electronically) and working through issues as a team. By doing this, teachers help to create a sense of community not only in own classroom but also across the entire school.

Continuous Learner

Teaching is a lifelong learning process. The world is constantly changing, along with curricula and educational technology. It is up to every teacher to keep up with the changes. A teacher who always strives to learn is always an effective and successful teacher.

Imaginative

The foremost successful tool an educator can utilize is their creative ability. Instructors got to be inventive and think of special ways to keep their understudies locked in in learning, particularly presently. Numerous instructors are of the supposition that any benchmarks introduced into study programs are taking all the creativity and fun out of learning, so instructors are finding creative ways to form learning fun once more.

Leadership

Effective teachers are mentors and know how to steer students in the right direction. You lead by example and are a good role model. They motivate students and lead them to success.

Organization

Teachers today are able to plan ahead and be ready for anything. They never lack preparation for whatever that a new day may bring. Research indicates that well-organized educators create more productive learning environments. Therefore, if you want kids who achieve at a higher level, being structured is much more important.

Innovative

An innovative educator is willing to undertake modern things, from modern instructive apps to educating aptitudes and electronic gadgets. Being inventive implies not as it were attempting modern things, but addressing the understudies, making real-world associations, and developing an imaginative mentality. It is getting the understudies to require risk taking and learn to collaborate with others.

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Commitment

Dedication to work is a traditional educational skill, but it is also a modern skill. A modern teacher must always be engaged in his profession. Students should make sure their teachers are present and dedicated to serving them.

Ability to Manage Online Reputation

This modern 21st century educational skill is new. In this digital age, most if not all teachers are online. So, they have an "online reputation". Teachers today need to know how to manage their online reputation and which social networks are right for them.

Ability to Engage

Modern teachers know how to find engaging resources. These days, it is important to find materials and resources that students are interested in. This includes using the most recent versions of educational tools and technology, visiting websites, and interacting with other educators. Either way, being able to engage students and keep things interesting is necessary.

Understanding of Technology

Technology is growing rapidly. In the last five years alone, we have made tremendous progress and will continue to grow. Keeping up with these developments can be difficult, but this is what all modern teachers must do. Besides understanding the latest technology, knowing which digital tools are right for the students is needed. This process can be time consuming, but it has a significant impact on student success.

Ability to Empower

Teachers should inspire. That is just one of the qualities that come with a title. Students can be empowered to think critically, to be inventive, creative, flexible, enthusiastic, and adaptive by

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modern instructors. They allow to solve problems, reflect, and guide themselves. They give the tools to succeed in school as well as in life.

21 st Century Skills & Attributes		
 <p>Oral & written communication</p> <ul style="list-style-type: none"> ✓ Do you provide learners with lots of opportunities to speak and write using their own unique and genuine voices? ✓ Do you help learners create focus, energy, passion around the oral & written communications they want to make? 	 <p>Critical thinking problem-solving</p> <ul style="list-style-type: none"> ✓ Do you promote and reinforce doing things that haven't been done before, where you and your learners have to rethink or think anew? ✓ Do you ask learners to generate & ask their own unique essential questions? 	 <p>Collaboration across networks</p> <ul style="list-style-type: none"> ✓ Do you facilitate global communication and collaboration with your learners? ✓ Do you give learners opportunities to collaborate face-to-face and virtually? ✓ Do you assist your learners in developing their own personal learning networks?
 <p>Curiosity and imagination</p> <ul style="list-style-type: none"> ✓ Do you promote, encourage, and reinforce inquisitiveness? ✓ Do you encourage your learners to add their own "personal touches" to their learning experiences? 	 <p>Initiative & entrepreneurialism</p> <ul style="list-style-type: none"> ✓ Do you assist learners in becoming involved in meaningful work? ✓ Do you provide opportunities for learners to take risks; take their own initiative to do things? 	 <p>Agility & adaptability</p> <ul style="list-style-type: none"> ✓ Do you accept change as normal & natural; and assist your learners in doing so, too? ✓ Are you and your learners flexible? ✓ Do you and your learners use a variety of tools to solve new problems?
 <p>Hope & Optimism</p> <ul style="list-style-type: none"> ✓ Do you model, teach, reinforce positive self talk? A Can Do attitude? ✓ Do you assist learners in enhancing their personal agency thinking? ✓ Do you expose learners to stories that portray how others have succeeded or overcome adversity? 	 <p>Self-Regulation</p> <ul style="list-style-type: none"> ✓ Do you model and assist learners in developing and understanding their own metacognitive processes? ✓ Do you help learners develop their own ability to self-motivate? ✓ Do you assist learners in reflecting on and evaluating their learning experiences? 	 <p>Empathy & Global Stewardship</p> <ul style="list-style-type: none"> ✓ Do you provide learners with opportunities for perspective taking? ✓ Do you assist learners in understanding the interdependence of all living systems? ✓ Do create opportunities for learners to put empathy into action; engage in pro-social behavior intended to benefit others?
 <p>Resilience</p> <ul style="list-style-type: none"> ✓ Do you help learners see failures as opportunities for growth? ✓ Do encourage and reinforce learners' own innate resiliency? ✓ Do you insure that each and every learner knows "You Matter?" 	 <p>Grit</p> <ul style="list-style-type: none"> ✓ Do you give learners opportunities to work on long-term, complex projects? ✓ Do assist learners in identifying and acknowledging the rewards of persevering through tough times? 	 <p>Vision for the Future</p> <ul style="list-style-type: none"> ✓ Do you give learners the time, resources, opportunity to identify and pursue their dreams? ✓ Do you assist learners in developing the steps and strategies needed to achieve their dreams?

Image 7. 21st century skills of an educator,

<https://usergeneratededucation.wordpress.com/2015/01/16/the-other-21st-century-skills-educator-self-assessment/>

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The teacher should keep asking him/herself the following questions: How to plan a teaching activity, how to conduct or manage the teaching process? From this aspect, didactics makes its vision as a discipline that allows the interpretation of teacher training. In this way, the teacher must acquire and put into practice a series of skills and competencies that accredit him/her as being able to unify what by training has been achieved or obtained with what really needs to be exercised at a given moment of teaching. These skills could be referred to as didactical skills. Didactical skills concentrate its attention on mediating, directing, guiding, and training. In this way, the students/participants are providing with a pragmatic training, admitting their free expression but based on theoretical knowledge. This knowledge can be put into practice with responsibility and a certain degree of ease, depending on the skills and abilities of each individual.

Didactic skills are supposed to focus on the teacher and the knowledge they impart. From the perspective of the student, didactic skills involve listening, reading, and accepting instructions. This approach utilizes planning, organization, and structure. It is a methodical and academic approach to education. Typical skills include structured lessons, defining specific learning objectives, development of periodic performance evaluations, lecturing, group discussions. Didactics are oriented towards the practical approach: how to educate pupils. These skills assume using the following tools: demonstration, explanation, observation, problems, exercises, classroom collaborations, hands-on learning, use of technology in the classroom, visualization, and modeling. Anyway, didactics and pedagogy are complementary teaching methods.

The most important factor that affects the academic success of a gifted student is the teacher because teachers usually have a great influence on their students. Colangelo and Davis (2003) point out that some qualities required of teachers of gifted students are requirements of good teachers in general. So, it is worth understanding what is necessary to evolve from a classical teacher to a teacher of gifted and talented children.

c. Closing gaps: evolving from a classic teacher to a gifted one

The previous era had required an education for stability, the coming era requires an education for instability. Teaching is an exceptionally challenging task but teaching gifted/talented/creative learners presents even more challenges. It is critical that all teachers are able to recognize a high-ability student who may need more depth and complexity in instruction or be referred for further assessment and services (Shaughnessy & Senior, 2022).

What qualities "excellent" teachers, in the eyes of gifted pupils, should possess to instruct them in a classroom? The "gifted" and "outstanding" student group has unique demands that call for specialized instruction and a specially designed, mentally demanding learning environment, according to studies in this area.

In addition to the qualities that the general student population perceives as being necessary in a "good" teacher, specific qualities and abilities for teaching gifted students should be identified.

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Landvøgt (2001) and Delisle (2006) state that the ideal teacher for gifted children has extensive knowledge of the subject, loves the chosen subject, and is passionate about teaching.

Becoming a teacher of the gifted and talented involves first obtaining a corresponding degree in a specific field of instruction or in elementary or secondary education. Qualifying to teach the gifted and talented also frequently requires a master's degree specific to teaching advanced learners. Gifted and talented teachers are trained to identify and select advanced students for gifted and talented programs through conducting parent and student interviews and administering assessments. When working with gifted students, teachers need the skills necessary to plan and implement a challenging curriculum and must also be able to test, assess, and grade students at their performance level. (N/A, 2024) In a secondary school setting, mentoring, and advising students on career and post-secondary education choices is a common duty. All teachers should be able to:

- recognize the learning differences, developmental milestones, and cognitive/emotional characteristics of gifted students, including students from diverse cultural and linguistic backgrounds, and identify their relevant academic and societal-emotional needs.
- design appropriate learning and performance modifications that enhance creativity, acceleration, depth and complexity in their academic and professional fields.
- select, adapt, and apply a repertoire of evidence-based educational strategies to facilitate learning in gifted students.

The qualities and skills of a good teacher for gifted children can be divided into two distinct categories: professional-pedagogical and personal-emotional. According to students, the ideal teachers possess broad knowledge in their area of expertise, passion for their chosen field, and a great enjoyment of teaching. They will be able to adjust the curriculum and instructional methods to meet the unique needs of their students' diverse learning and thinking styles because of having a deep "understanding of the cognitive, social, and emotional psychology and development of their students" (Khalil & Accariya (2016)). The literature suggests that "good" teachers are familiar with different approaches to defining what it means to be gifted and are able to understand and connect the effects of environment on the development of giftedness in their students. Develop a special framework for gifted and regulatory frameworks in schools and communities. Additionally, "good" teachers are willing to take risks and experiment with ways to share the learning process with their students. Mevarech & Blass (1999) pointed out that teachers of gifted students must view teaching as a science, art, and moral calling. They also listed the abilities and divided them into four components: a) to properly identify what the child knows or does not know at this point; b) to explain presented concepts in ways that trigger interest, challenge and fascinate the students; c) to give constructive feedback, allowing the student the possibility to adjust their learning methods to allow full control of the material; and d) to cultivate motivation and self-esteem in the student. Teachers

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of gifted students must have personal skills - love for the subject, his students, and education in general. Intelligence, intellectual resourcefulness, originality, creativity, organization, flexibility, openness, emotional stability, maturity, compassion, tolerance, empathy, attention to students. Honesty, optimism and joy, energy, and motivation to seek out new materials and learning channels. Confidence, independence, responsibility, trust. Teaching knowledge is of great importance, including pedagogical knowledge—to teach in a way that is best for student learning; content knowledge-up-to-date knowledge in the discipline being taught; pedagogical content knowledge- interpreting the information through the rich range of materials available for presenting information (analog, visualization, demonstrations, explanations, imaging and examples); and curricular knowledge-being familiar with alternatives to the curriculum and the educational materials and programs available for teaching the specific subjects. Curriculum construction and setting achievement goals, which help in selecting information sources, developing the product, and making evaluations – this is another skill necessary for teacher of gifted.

Teachers of gifted students must have special abilities alongside a variety of administrative skills that enable them to adapt normal classroom activities for their students so that bright students can work at a pace and level suitable to their abilities, but still not deviate from the timetable, content, and other requirements in the educational system (Khalil & Accariya (2016)).

Thus, gifted and talented children should learn from teachers who are prepared to deliver the appropriate curriculum, using the most effective strategies, to ensure this learning occurs. School should also be a place where gifted and talented children's social and emotional needs are understood and met. Gifted and talented children thrive when they are taught by teachers who understand the ways that their learning and their social and emotional needs differ from their peers of the same age and who know how to address those needs (World Council for Gifted and Talented Children, 2021).

3.2. Models identifying the effective teacher

3.2.1 Unpacking Effective Teaching: Characteristics and Impact on Student Performance

Researchers and educators are unanimous that teachers do play a significant role in the lives of students and that students' performance may differ significantly depending on what type of teacher they are assigned to work with. However, the experts above are far from the same unanimity on the issue of which characteristics set the more effective teachers apart from all the rest and what is it about these specific characteristics that lead to increased effectiveness.

There have been attempts at models for assessing teachers' effectiveness that step on models for evaluation of the effectiveness of any other type of profession. The comparisons between teacher and non-teacher literatures are guided by three central terms: **effectiveness**, which is the degree to which a certain professional produces outcomes, related to objectives set by the organization; **worker characteristics**, such as personality, cognitive ability and educational background; and **models of effectiveness**, which establish the relationship between effectiveness and worker characteristics (Harris & Rutledge, 2007).

The term effectiveness helps us avoid implied biases, compared with terms like "productivity", which are closely related to economists' perspectives. Measuring effectiveness can take place objectively – via students' test score results – or subjectively – via peers' or supervisors' evaluations. Considering the larger shift towards student achievement as the central focus and aim of education, it is to no surprise that the objective options for measuring effectiveness are the preferred ones.

The models illustrate the hypothesized relationships between worker characteristics and effectiveness. Empiric tests demonstrate whether hypothesized "predictors" work for predicting effectiveness. This is used for validating proposed models (Harris & Rutledge, 2007).

Teaching, despite its uniqueness, is yet an occupation and the people engaged in it are subjects of assessments, having their "hard skills" measured and evaluated by economists and psychologists and their "soft skills" (related to communication and relationships) measured and evaluated by sociologists and organizational behaviorists. The classic model of worker effectiveness is dominant in non-teaching occupations. According to it, worker effectiveness is determined based on job knowledge, which is a function of cognitive ability and job experience. In other words, higher cognitive abilities allow the worker to learn the job more quickly and accurately and the job experience allows time for the hands-on part of the learning to take place (Harris & Rutledge, 2007).

Two other models focus on how fit a person is for a certain job (person-job fit) or a certain organization (person-organization fit). According to the person-job fit model what is important are characteristics that match the job, meaning that certain workers with remarkably high cognitive

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skills, may still not be a good fit for a certain job. The person-organization fit model state that a worker's success and likelihood of staying on the job are in direct relations to the organizational cultures and values.

3.2.1 Predictors of effectiveness

The three predictors we will quickly go through are personality, cognitive ability, and educational background.

Personality is one of the common predictors of job effectiveness, posing serious challenges due to “the vast array of available personality measures” (Day, Bedeian & Conte, 1998). The so called “Big Five” form a framework that is widely accepted now. It measures conscientiousness, emotional stability, extroversion, agreeableness, and openness (Goldberg, 1990), conscientiousness being the best predictor from the five, according to researchers.

Socially attractive teachers do receive higher ratings, however the only straightforward link between extroversion and students' learning is how comfortable students feel to approach and discuss several topics or problems with their educators, what atmosphere such communication could set within the classroom and what collaboration between the students it might generate. We cannot overlook the fact that effectiveness ratings may be contaminated by how evaluators perceive teachers' personalities.

Conscientiousness, which in some research is also represented as grit or strength of character, stands for perseverance and passion for long term goals. The link between effectiveness and conscientiousness is much more straightforward as such individuals stay committed to their chosen targets regardless of the circumstances and tend to work harder than less conscientious but equally able individuals.

Cognitive ability is the most crucial factor affecting effectiveness. While it is sometimes assumed to be inherent, there is convincing evidence that it can change over time and that it is also influenced by environmental factors (Petrill et al., 1998).

Unlike personality and cognitive ability, **education** can be readily used for worker selection as well as for improving the effectiveness of workers that have already been hired.

All three predictors will be considered from the perspective of the teaching occupation, which requires this dual allegiance to both school and students, requiring from the professional to function both within their classroom, as well as a member of the larger school organization. The models of teaching evaluation consider the types of decisions that teachers make in their classrooms, the nature and level of their knowledge and finally, the degree of control imposed by the administration, turning the organizational factor into an important one. Considering also that different academic levels, different student ages and different student needs call for different teaching techniques (combinations of skills and knowledge applied in practice) in the various contexts, effective teaching can be considered neither simple nor fixed.

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Having said that, one more predictor needs to be added to the mix we have created so far and that is **life satisfaction** – subjective well-being that reflects how content one person considers his/her life situation. We are discussing life satisfaction separately from extroversion, because the two are not necessarily linked together.

Lyubomirsky and colleagues (2005) explain how well-being affects success and effectiveness in the following way: 'First, because happy people experience frequent positive moods, they have a greater likelihood of working actively toward new goals while experiencing those moods. Second, happy people are in possession of past skills and resources, which they have built over time during previous pleasant moods' (p. 804). Now in the case of the teaching occupation, and in parallel with what has been said about extroversion, we can also add that life satisfaction can be linked to improved performance because children are drawn to and engaged by teachers who allow their life satisfaction, energy and positive attitude to affect the mood of the entire classroom.

Life satisfaction can lead to optimism or be the result of one and optimism is the opposite of habitually attributing unpleasant events to stable and global causes and good events to temporary and specific causes (pessimism) (Abramson, Metalsky, & Alloy, 1989). People who are pessimistic are at greater risk of experiencing the so-called learned helplessness (i.e., the belief that outcomes are unrelated to one's actions) (Maier & Seligman, 1976).

Hence the connection between optimism and grit or greater conscientiousness - when confronted with hardships, optimists are less likely to reduce effort, because they strongly believe that the final outcomes are dependent on their efforts to a great extent and are more likely to maintain their subjective sense of higher life satisfaction (Duckworth et al., 2009).

3.2.2 Effectiveness measures in the teaching profession

Indisputably, the most frequently used measure for teacher effectiveness are the *students' test results*, closely followed by evaluations by the principal, by the faculty, the other peers, the students themselves and students' parents. Considering that achievement is an important outcome of the educational process, academic results are embraced as easily accessible measures.

The *principal evaluation* is another effectiveness measure. The direct knowledge, which the principal has about each teacher's practice, gives this measure an advantage over the statistical "value added" method of student testing scores.

The *teacher personality measure* has been researched, however, from the point of view of the types of people who enter the profession and not that much on their effectiveness. The two main types of approaches used for studying teacher personalities are the 16 Personality Factors Inventory and the Meyers-Briggs Type Indicator. According to the results from different studies, teacher effectiveness is positively related to conscientiousness, to being outgoing (an extrovert), to being experiment-minded (venturesome) as well as to having self-control. Some more recent studies, such as the one by Sparks & Lipka (1992), trying to distinguish teachers from the so-called

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master teachers, state that the latter are more cordial and outgoing, respectful, generous, motivated, attentive, able to maintain contacts and hard to fool.

According to Wayne and Youngs (2003), who based their research of 21 “value-added” studies of the relationship between student test score gains and teacher characteristics: (1) “some relationship exists between college ratings and student achievement gains” (p.97); (2) there is a relationship between teachers’ mathematics coursework and student mathematics score gains in high school, but no such effects are apparent in elementary grades or in any of the other subjects.

According to Rice (2003), who focuses on the same group of teacher characteristics, the conclusions are similar with minor differences related to the fact that Rice is more confident in the positive effects of job experience on increasing effectiveness and also that she considers that teacher coursework in pedagogy and a respective subject area is positively related to education outcomes, especially when the two are combined together (content-based pedagogy).

It is particularly curious that teachers’ cognitive abilities have not really been a part of effectiveness studies, due to the understanding that you do not become a teacher but are born as such. As with all other occupations, not considering cognitive abilities is an omission, because they are not innate and, as we said previously, can be modified by environmental factors (attitude, decision making freedom, training opportunities, etc.) and can therefore change over time.

3.2.3 Models for teacher effectiveness evaluation

Valuable modes help the management and visionary decision-makers in educational establishments, be it schools or gifted students’ education centers, make the right decisions concerning staff. Such models can also be used for giving constructive feedback to teachers to help them grow in the profession and undertake tasks related to teaching students with specific requirements.

Before we commence with presenting some of the existing models, first we need to list some elements, which need to be taken into consideration when deciding whether a certain model is effective or not.

First you need to make sure that the model is consistent, which means that without significant changes in the teaching methods, the same teacher should be receiving scores that do not vary substantially.

The model is valuable if the teachers themselves trust it. Otherwise, they will not take the feedback into consideration.

Another indicator whether a model is valuable or not is the presence of bias or prejudice. As we mentioned above, the most frequent trend when principals make evaluations, is for the latter to be inflated. Negative or friendly relations within a team of peer assessors or between a teacher and

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the management, might lead to inaccurate biased assessments. When relations of this type are a part of the organizational biome, subjective evaluation models should not be used.

Value-added model

The **Value-Added Model (VAM)** measures how a teacher contributes to the students' progress by taking test scores from previous years, together with some information about the students' background and projects what the test score should be in the year to follow. The value, which a teacher is adding, is measured by finding the average difference between actual and projected student scores. Obviously, if the students' results are equal or below the projections, this would mean that the teacher needs to change his/her teaching methods, get some further qualification, or evaluate his/her skills with students from a different age group for example. If the students' results are better than the projection, then the responsible teacher is indeed adding value and using teaching methods that yield positive results. This model is simple, too simplified. The comparisons between teachers' effectiveness based on their results from one testing period to another, seems a bit artificial and there are numbers of questions that remain not tackled.

The advantages of the VAM model are not too many. The greatest of them all is that it is a simple calculation – once you set it off, it will not take a lot of resources and effort to keep track of students' results and draw automatic conclusions on teachers' effectiveness. Comparisons between teachers would also be easier to make.

The model has disadvantages, which cannot be overlooked. First of all, as proven by Schochet & Chiang (2010) there is an up to 35% chance for erroneous misclassification of teacher performance when this model is employed – the shorter the monitoring period the greater the chance of error, the thing is that even with 10 years of monitoring, the error chance does not go below 12%. Furthermore, VAM teacher ratings could be the result of the qualities of the students assigned to the teacher and not so much to the effectiveness of his/her teaching methods. Following the same path of thinking, what happens with the VAM ratings, when the student group scores are already high and are maintained at that level for years on?

The average increase from predicted to actual test results would be minimalistic. What we could be observing is that due to some unchecked background traits, a particular teacher that has been assessed as exceptionally effective, has simply been lucky to be assigned a group of high achievers (Kane et. al., 2013). To go another step deeper, if VAM is implemented with a group of students that are being handed random assignments – e.g. 1/3 of a class gets a special task to do – and the results from those assignments are taken as measurement of the teacher effectiveness, we cannot exclude the effect of other students in the class, even if they are not a part of the assignment. They could influence the performance of the participants in the assignment, thus reintroducing bias and yielding results, which might be the outcome not of the work of a more effective teacher, but of a more positive peer influence and the other way around.

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Undoubtedly, teachers are the most important school provided educational input and their effectiveness varies both within and between schools. This is a statement, commonly proven by all and every teacher effectiveness measuring models. Usually, VAM is ineffectual if left unchecked or when used without any additional models for teacher effectiveness evaluation. However, in the case of math and languages, it does, together with other models, confirm that effective teachers do improve students' performances and test scores on standardized end of year tests. However, this is not the only metric, which should be used for measuring teachers' effectiveness, because there are teachers who "teach in order to achieve high scores", they only teach what is going to appear in the test. There are other principal elements of teaching, which VAM leaves unchecked, and it only works, to the extent to which it could work, with teachers who have been teaching over multiple years, thus excluding the primary level teachers and many secondary teachers.

The fact that number of teachers who have improved students' test results have not necessarily improved their non-academic results, their attendance habits, non-cognitive skills, and their attitudes, reinforces the idea that effective teaching is multidimensional (Gershenson, 2021).

Teacher or classroom observations

The next model we are about to discuss here are **teacher or classroom observations**. Seeing how a teacher manages a classroom, the atmosphere they create, the content they bring forward and offer to the students, etc. seems like a reliable instrument for evaluation. Yet, an observation is only as dependable as the person doing it.

The advantages of this model consist in it giving administrators the possibility to register details that would otherwise remain unchecked, such as the teacher's attitude towards and relation with the students. Also, if the observer is following a well-designed rubric, the results have a high probability of being dependable. Another advantage is related to the fact that this model can be applied to all teachers and that its results can be immediately provided back to the teachers that are being observed, leading to corrective measures during the process and not at the end of it.

There are of course disadvantages to this model and those are related to bias (the observer being somehow influenced, positively or negatively, professionally, or non-professionally by the person being observed, and having that perpetuate itself in long term evaluations). Principals have been found to be prone to giving inflated evaluations to their teaching colleagues, making the results of the model unrealistic. The same is valid in cases when the observer and the one being observed have similar personalities (Sprague, 1997). Observation does take a lot of time and effort, which the administrator, the faculty member is whoever else is assigned this task, need to take out of their mainstream activities. In accordance with the so-called Hawthorne effect, an important drawback to this model is related to the fact that having a third-party present in the classroom could seriously influence the behavior of both teacher and students, making them extra nervous or adopting an attitude, which is far from the regular one. Curiously enough, the observation could have no such influence (nervousness, curbed or perfected reactions, behavior that is not

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representative of the respective person and should therefore not be considered as the one to be assessed) on certain students in the class composition, who are rebellious and outside of the teacher's control.

Observations of classroom dynamics however give administrators an insight, which no other model can provide. Therefore, overcoming the disadvantages and using it is more than recommended. For example, in most classrooms there are video cameras the footage of which can be used at times, which are convenient for the observer. Such cameras are usually installed for the purpose of monitoring the dynamics in the classrooms and encouraging students to be on their best behavior during their classes and abstain from bullying. School monitoring has proven successful in improving everyday operations and unless a specific educational establishment has explicit policy against it, both teachers, administrators and parents feel that it is better to have it. Using camera recordings for teacher effectiveness purposes, at random intervals and classes, would have both teachers and students be themselves during their regular class activities or, which is even better, strive to be their best versions always, due to the possibility of being randomly picked for observation. Involving more than one observer and shortening the observation periods (for example to 15 minutes out of one lesson), with clear rubrics about what needs to be checked and how the information needs to be interpreted, could reduce bias, lessen the individual burden for the observers and increase the accuracy of the results.

The TRU Framework

Initially the TRU framework was created as a model for assessing instruction in mathematics. Still however it also has a general subject interpretation, which can be used in any classroom. The originality of this model lies in the fact that it asks the evaluator to step into the students' shoes and consider how they are experiencing their classes. The TRU framework is using the students' point of view in order to fix qualitative features of successful instruction (James, 2020).

What this framework evaluates is:

- Content
- Cognitive demand
- Equitable access to content
- Agency, ownership, identity
- Formative assessment

Observers approach each category as if they were the students learning the material. The questions, which observers need to answer, are variations of the following:

- Why am I learning this? What is the point?

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- Do I have enough time to consider the material? (i.e. running through the lessons does not help comprehension and if we are running, do I have enough background information to link this content faster to?)
- Am I meaningfully engaged? (e.g. if I am a visual learner, am I provided enough visualizations to easily take the content in or if I need to do practical experiments, am I provided with such opportunities?)
- Am I allowed to successfully explain my beliefs and ideas? (i.e. am I provided adequate expression options, in order to demonstrate what I have learned and to share my opinions?)
- Does the classroom atmosphere make me feel as a valuable member, whose opinion is welcomed during the discussions?

Going through these questions from a student's perspective, gives great insight on overall teacher effectiveness, without the bias of the students themselves.

Marzano Focused Teacher Evaluation Model

The next model, which is going to be discussed here is the **Marzano Focused Teacher Evaluation Model**, developed by Dr. Robert Marzano and Dr. Beverly Carbaugh. This model uses twenty-three essential competences, part of the art of teaching, organized into four different categories (Raudys, 2018):

- Standard-Based Planning
- Standard-Based Instruction
- Conditions for Learning
- Professional Responsibilities

The Marzano model includes a 5 step teacher evaluation, which goes through “determining the elements of the teaching strategy, which is being observed”, “observing whether the teachers are monitoring the outcome of their teaching by means of certain techniques”, “identifying the share of students that demonstrate that they are successfully achieving the desired effects”, “observing whether the teacher is doing any adaptations to their methods for observing students’ results” and finally “assigning the final scores on the basis of student results”.

Similarly to the FFT model, which is presented next, this one also looks at more aspects of the teachers’ work that the actual instruction. It checks the classroom atmosphere and the preparatory work, which needs to be carried out before a lesson is delivered. This model helps teachers grow professionally, learn how to better engage their students, and plan and create the learning goals. This is due to the detailed evidence-based feedback, which is provided to them via more focused discussions with administrators. For example, according to the outcomes of the application of the model, it might become obvious that a certain teacher is spending a

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disproportionate amount of time lecturing and reviewing and not enough time on engaging students in critical thinking activities.

The Marzano model has a few suggestions as far as students' engagement is concerned, which are worth mentioning and which are not explicitly listed in the FFT model. For example, according to the Marzano model, maintaining a high level of engagement can be supported by "using academic games", "using physical movement", "maintaining a lively pace", "using friendly controversy", "presenting intriguing or unusual information" and "providing opportunities for students to talk about themselves" (Learning Sciences Marzano Center, 2013).

Picking one model and sticking to it for years on end has not proven beneficial for proper teacher effectiveness evaluation. Experience teaches that a combination of methods, requiring some extra efforts, time and resources, is a much better option. For example, combining the value-added method (because students' academic results need to be monitored and reported on) with students' opinions of their teachers and teacher observations based on either the Marzano model or the FFT, can lead to a clear understanding of the dynamics and professionalism in the school and how these dynamics are affecting students.

Framework for Teaching (FFT) model

This last model, very much worth reviewing here, is the so-called **Framework for Teaching (FFT) model**, originally developed by Charlotte Danielson back in 1996. The FFT covers four different domains, which, according to the model developer, encompass the essential teacher responsibilities. The four domains, which are: Planning and Preparation; Classroom environment; Instruction; Professional responsibilities, include 22 components and a total of 76 smaller elements of teaching. This level of detail has proven extremely useful for school administrators (to provide adequate and evidence-based feedback and unbiased improvement recommendations), teachers (to better reflect on their teaching methods and improve specific aspects of their work) and students (to benefit from their teachers' increased effectiveness in the long term). The best results from this model are yield in those establishments where the model users have been professionally trained on and have profound knowledge of the model. Variations in how staff members interpret the FFT may lower the results from the model use.

Considering how close the FFT and Marzano models are, here we will present the FFT model, which is a bit more detailed, allowing the administrator to investigate in greater depth the four domains and discover areas, which teachers are not adequately effective in, or which teachers should increase their effectiveness in. Where Marzano's model has something interesting and different to add to what is already in the FFT, we will explicitly make a reference to that.

Domain 1: Planning and preparation

As already mentioned briefly above, the first domain in the FFT model is PLANNING AND PREPARATION. According to this domain, to be able to carry out the instructional tasks, a teacher

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needs to arrange for learning and to prepare the learning activities. This preparation calls for the teacher not only to understand the curriculum, but also to know his/her students and their needs to adapt his/her content delivery (the teaching methods bouquet) and his/her expectations of the forms in which students should report back on what they have learned². Therefore, teachers who excel in this domain have great mastery of the discipline they teach and know how to prepare for the specific group of students (a mix of cultures, races, comprehension levels, practical skills, languages, etc.). This preparation also covers the topic of motivation – answers to the big question of why we need to study and how this is going to be useful in our later life (The Danielson Group, 2022).

The components of this domain cover:

1a: Applying Knowledge of Content and Pedagogy (being master of the scientific content, which is to be taught, understanding interdisciplinary links, knowing what teaching methods exist for the respective discipline and select those, which are best suited to a certain group's advancement, being aware of most students' misconceptions and how to resolve those)

1b: Knowing and Valuing Students (celebrating and preparing for diversity, understanding the different learning styles that exist and preparing for instruction following the principles of UDL)

1c: Setting Instructional Outcomes (what it is that the students should learn because of the experience)

1d: Using Resources Effectively (both materials and instruments useful for practicing certain skills or understanding certain concepts, as well as humans, providing additional support on a topic – such as STEM for example – or a student – someone, requiring materials adapted for sensory or physical impairment, which the teachers need assistance for)

1e: Planning Coherent Instruction (all the different elements of the instructional plan – outcomes, materials, activities, student groups, methods – make sense together and support each other)

1f: Designing and Analyzing Assessments (the type of assessment, which provides information to both teachers and students about the progress made is usually formative, frequently accompanied by various forms of informal assessment. The effective teacher knows how to analyze the assessment results and use those for adapting their own instructional techniques, rather than solely attributing any poor results to the students).

² Check Universal design for learning: <https://www.understood.org/en/articles/universal-design-for-learning-what-it-is-and-how-it-works>

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Domain 2: Learning environments

The second domain – Learning environments – describes qualities and conditions, which help conduct the learning and support student success. It is about setting up a safe and respectful classroom, aware of and responsive to the students' identities, and on top of that adding an atmosphere of excitement and inspiration related to the learning.

The components of this domain cover:

2a: Cultivating Respectful and Affirming Environments (these are compulsory if we are to expect social and emotional wellbeing and academic success)

2b: Fostering a Culture for Learning (describing and expecting adherence to norms that govern interactions, valuing hard work, perseverance, content mastery and personal growth)

2c: Maintaining Purposeful Environments (via routines and procedures, which are set in order to support other aspects of learning)

2d: Supporting Positive Student Behavior (for learning to successfully take place and students to feel safe and their dignity affirmed)

2e: Organizing Spaces for Learning (that are design to enhance the educational processes and to support the collaborative work done by the students³)

And from Marzano's model here we can add: Celebrating success!

Domain 3: Learning experiences

The third domain - "Learning experiences" – reflects the primary mission of schools, which is to enhance student learning. The experiences teachers prepare and present in class are based on deep understanding of content and it consults with the other scientific subjects, are aligned with appropriate standards and are designed to engage all students, regardless of their learning styles and building upon students' strengths and talents. Teachers who are effective in this domain can easily shift from one approach to another, incorporate concepts from other parts of the curriculum into their explanations, monitor students' comprehension and engagement and when they sense struggle or lack of attention, they adjust.

The components of this domain cover:

3a Communicating About Purpose and Content (to support students' engagement and their academic advancement)

³ Check out "Golden Ratio Teaching" Erasmus+ project training programme and the part related to "Future classroom": <http://golden-ratio-teaching.eu/wp-content/uploads/2022/03/12-Future-Classroom-Methodology-Of-Teaching.pdf>

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3b Using Questioning and Discussion Techniques (that successfully engage all students, asking them to respond to skillfully framed questions, which gradually lead the whole group to the necessary comprehension of added content)

3c Engaging Students in Learning (in a way that goes beyond simple compliance, but leads to comprehension through rich learning experiences, collaboration, and reflection)

3d Using Assessment for Learning (for the purpose of constantly monitoring whether and with what steps students are progressing towards their goals)

3e Responding Flexibly to Student Needs (by adjusting during the course of the learning that is taking place, for the purpose of responding to changes in the scenario of how the lesson is progressing)

Domain 4: Principles teaching

The fourth and last domain of the FFT is the “Principled Teaching” domain, which extends beyond the teachers’ classrooms and spills over to other areas that are also critical for the success of the students. Being effective in this domain requires teachers to remain in the position of constant learners themselves, members of a larger community of colleagues and parents, who are collectively responsible for and contributing to the students’ growth.

The components of this domain cover:

4a Engaging in Reflective Practice (that involves a self-assessment and develops the teachers’ own knowledge base and pool of teaching techniques)

4b Documenting Student Progress (to monitor where students are compared to where they would like to be or they have a potential to be, according to their goals and abilities)

4c Engaging Families and Communities (to have a larger horde of potential supporters of the process of students’ growth, making parents a part of the learning community)

4d Contributing to School Community and Culture (promoting positive and mutually enriching interactions with colleagues)

4e Growing and Developing Professionally (with a spirit of curiosity towards the latest developments in their disciplines, refining their skills to enhance students’ engagement and achieving an even better understanding of their communities)

4f Acting in Service of Students (always being guided by the best interest of each student, being committed to students’ wellbeing and being supportive enough to make it clear when certain practices make students feel excluded or unsafe)

The advantages of this model of assessment are its complexity and the fact that the different elements of teaching have been broken down into great details, which could lead to certain areas appearing in contrasting need of improvements. Such specific feedback, provided to

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teachers during the school year and not at the end of it, could lead to beneficial results for the students.

Summary

The so-called value-added model has been long used for evaluating teacher effectiveness. It is an objective model, contrasting to most effectiveness models used in a number of other occupations, which rely on subjective superior evaluations. With teaching however, as we have stated already, there is a lot more than just evaluating scores and each student should be treated, approached, and cared for in his/her uniqueness and individuality if long-term learning outcomes are to be expected.

Combining VAM with other models, which include headmaster/peer observations and students' evaluations, together with one of the more details FFT or Marzano models, would lead to the most comprehensive and accurate results and to a much deeper understanding of the organizational biome – the conditions and relations, in which staff members function as well as the qualities and effectiveness levels of individual members.

Even if VAM can be cheap and easily maintained within the organizational annual routine, it comes post-factum and does not offer specific suggestions for improvements. Wasting teaching potential due to refusal to help it evolve is not the path any responsible administrator should select for their educational establishment.

3.3 Foundations and Implementation of Gifted Education Programs

***Keywords:** effectiveness; evaluation; model; teacher; value-added; framework for teaching*

This part encapsulates the essential components covered in the further sub-chapters, emphasizing both theoretical underpinnings such as key aspects of gifted education and practical strategies. It reflects the comprehensive nature of the exploration into fostering excellence among gifted learners.

3.3.1 Key aspects of gifted education

Adapting the subject or activity to meet the individual needs and interests of each gifted child is the primary task of a teacher of gifted children. To do this effectively, draw on the theoretical and practical knowledge shared by international researchers, as well as your own experience gained through working with children. What kind of education, then, best meets the needs of gifted children, and how is it organized?

- Inquiry-based learning. Encourage students to ask questions in order to explore topics as deeply as possible and to establish connections between what is being taught and the real world.
- Practical and project-based activities. Allow students to apply their knowledge in a meaningful and engaging way.
- Problem-solving and critical thinking exercises. Encourage students to think creatively, analyze information, and make decisions.
- Accelerated pace. Review theoretical material faster for those who grasp concepts quickly.
- Self-study. Allow students to undertake individual or team research/projects independently, serving as a consultant or advisor in the subject.
- Mentoring programs. Aim to pair students with professionals in their fields of interest to help them gain experience and knowledge.
- Collaborative learning. Encourage students to work together in small groups to share ideas, perspectives, and solutions.
- Enrichment activities. Provide students with additional opportunities to explore their interests and develop new skills, e.g., through clubs, competitions, and field trips.

3.3.2 Organization of activities

In this part of the chapter we provide examples of two partnership countries - Israel, where gifted kids' education has strong routes and is maintained for more than 30 years and Lithuania,

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where gifted kids' education started several years ago and in these days having separate center for gifted kids' education we could share some good practices and how it works in reality.

Educational activities at the VDU Gifted Center for the 2022-2023 school year are scheduled Monday through Thursday from 4:00 p.m. to 6:30 p.m. for students in grades 1-12, and on Saturdays from 10:00 a.m. to 1:00 p.m. for pre-school/pre-primary school students. Educational activities are not organized during school holidays.

Teachers at the Gifted Center plan activities by organizing separate educational modules, consisting of 5-6 sessions for 5th to 12th graders and 6 sessions for lower-grade students and preschool/pre-primary school children.

Teachers send all descriptions of the modules they will teach during the year to the Unit Coordinator before the start of the school year. Upon admission to the Gifted Center, the scheduling of modules is mutually agreed upon over the course of the school year.

Before the start of each module, the teacher sends an introduction letter to the parents of the children in their group, in which the teacher briefly introduces themselves and the module, including the topic, key questions, objectives, and expected outcomes. At the end of the module, a reflection sheet is sent to the parents, giving an overview of the group's work during the module. This includes the group's involvement in activities, motivation, emotional microclimate, and other aspects.

The total duration of the educational activities spent with the teacher is 2.5 hours (including breaks, the frequency of which is determined by each teacher individually, depending on the age of the children). Throughout this period, the group teacher is responsible for the safety of the students. During educational activities and breaks, it is important for the entire community of the Center – including teachers, administrative staff, and maintenance staff – to ensure student safety and an emotionally safe learning environment. They should recognize and respond to situations of abuse and bullying and take preventative measures to ensure that they do not occur.

When organizing educational activities, it is important to consider students' abilities and competencies, as well as their motivation to learn. The activities organized at the VDU Gifted Center are intended to increase student motivation. Additionally, teachers must be capable of developing effective teaching and learning strategies, designing high-quality modules, and disseminating good pedagogical practices.

If there are any concerning signs, such as apathy in activities, aggression towards other children in the group or towards the teacher, lack of motivation, etc., it is advisable to consult the Center's psychologist. Like the teacher, the psychologist works with each group and meets with them at the end of each module. The psychologist can provide consultations to the teacher, the student, and the student's parents.

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Considering the students' ability to focus and maintain their attention at different ages, it is important to organize activities in intervals, balancing work, and rest time.

Since students come to the Center from different educational institutions and arrive after school, it is advisable to allocate some time at the beginning of the session for an introduction to the activity, and at the end of the activity, for reflection and self-evaluation.

Gifted children, like all children, are individuals with their own unique interests and preferences. Even so, we can list a few activities that most gifted children enjoy. These can be considered when planning your own activities:

1. Challenges: Gifted children often enjoy puzzles, brainteasers, and other intellectual challenges.
2. Creative expression: Gifted children may enjoy artistic activities such as painting, drawing, writing, and performing arts.
3. Independent projects: Gifted children may enjoy pursuing their interests and studying a subject or topic in depth.
4. STEM activities: Gifted children are often interested in science, technology, engineering, and mathematics, and they may enjoy hands-on experiments, coding, and construction projects.
5. Discussions: Gifted children may enjoy engaging in lively debates and discussions about current events, political issues, and philosophical topics.
6. Competitions: Some gifted children enjoy friendly competitions such as chess, debating, and science Olympiads.

It is important to remember that not all gifted children will have the same interests, and that it is crucial to offer a variety of activities to help them discover their interests and strengths.

3.3.3 Individual and group work with gifted children

Individual and group work both have pros and cons, advantages and disadvantages. It is important to evaluate them and take them into account when planning educational activities and setting their objectives.

Advantages of individual work:

1. Allows students to work at their own pace.
2. Promotes individual responsibility.
3. Gives introverted students a chance to shine.
4. Develops independence and self-confidence.
5. Advantages of group work:
6. Promotes cooperation and communication skills.
7. Provides opportunities to gain experience from peers and support each other.
8. Helps develop social skills and a sense of community.

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9. Provides opportunities to explore different solutions to problems.

In summary, the combination of individual and group work can provide a comprehensive educational experience for gifted children, allowing them to develop a wide range of skills and abilities.

Key aspects and examples of organizing group work

Working in groups improves relationships between students, creates an atmosphere of trust and support, and the recognition of the importance of personal contribution strengthens self-esteem and engagement. Students can develop creativity, as well as subject-specific, communication, and social skills. When organizing group work, tasks should be designed to encourage students to work together, to combine their efforts, and to understand their individual contribution and role in completing the collaborative work effectively. Assessment should also focus more on the performance of the group than on the performance of the individual. Students will be more successful in learning to work together effectively if they are given the opportunity to reflect on the group work process.

Jigsaw

This is a cooperative learning method where each member of the group becomes an expert in a different part of the learning material and teaches it to others. At the start of the activity, small groups (3-4 students) are formed. These are called "cooperative" groups. Each member of the "cooperative" group is given different material (a topic, question, or task) to learn independently and then teach to other group members. In the "cooperative" group, students familiarize themselves with their portion of the material and share the topics on which they are working. Students then regroup into "expert" groups, each consisting of students with the same assigned material. Together, they study the material and plan how to teach their "cooperative" group mates and present the information so that others understand it. The teacher may suggest checking to see if everyone in the group is ready to teach others. After completing this task, the students return to their "cooperative" groups and teach each other. The team goal is for all group members to master all the material presented. To ensure that students have understood and retained the key points, the teacher may ask that the gist of each topic/question be presented by members of the "cooperative" group, not the "experts". The activity concludes with an evaluation of what was learned and how it went. Students can be encouraged to reflect on the advantages, disadvantages, and potential applications of the learning method used in the lesson.

The Six Hats method

To better understand another person's point of view or to see a phenomenon or fact from a different perspective, we need to go beyond conventional thinking. This is where the concept of "thinking hats" comes into play. The idea was proposed by Edward de Bono, who identified six

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types of thinking, each associated with a different colored hat: white, red, black, yellow, green, and blue. To see a phenomenon from a new perspective, we need to mentally switch from wearing one "hat" to another.

The white hat. When we wear it, we focus on facts, remain neutral and unemotional, and can analyze facts and phenomena rationally. We care about what information we have, what information is missing, and where and how we can get it.

The green hat. Green symbolizes the growth of something new. When we wear this hat, we become creative and strive to do interesting and unusual things. We generate new ideas, propose various unconventional solutions, and explore alternative paths and possibilities.

The yellow hat. Yellow evokes the sun and warm, happy days. When wearing this hat, we evaluate phenomena, thoughts, and ideas positively; we are uncritical and may overlook hidden dangers. The black hat. Black represents negative thinking, seeing only the negative aspects of a phenomenon or thought, and being critical. This way of thinking helps to avoid potential mistakes.

The red hat. Red is a warm, even hot, color, symbolizing thinking that is driven by emotions. With this hat, we pay little attention to facts and arguments, focusing instead on emotional reactions to things (happy, sad, love, dislike, like, etc.), and are unable to rationally analyze facts and arguments.

The blue hat. Just as the blue sky covers the entire planet, thinking with this hat on connects and summarizes the thinking of the other hats. It is typically worn at the beginning and end of an activity. At the beginning, we define the situation and determine what needs to be accomplished. At the end, wearing the blue hat, we present conclusions and decisions and outline the next steps.

The Six Hats method focuses thinking, fosters conditions for creative thinking, and facilitates better group communication and decision-making. It requires focusing on a single task at a time. All participants simultaneously either focus on information (white hat), anticipate dangers (black hat), generate new ideas (green hat), or express feelings (red hat). This parallel thinking, where all participants wear the same colored "hat" at the same time, consolidates the experience and intelligence of all participants and helps prevent unconstructive arguments.

The "hats" can be used singly or in a sequence. One such sequence could be as follows: first, we clarify the situation and the course of the discussion (blue hat); then we present facts related to the subject under consideration (white hat); next, we generate ideas related to the subject (green hat); after that, we evaluate the ideas by identifying potential advantages (yellow hat) and disadvantages and obstacles (black hat); then we express feelings related to the different alternatives (red hat); and finally, we summarize and make a decision (blue hat).

(Based on De Bono, E. "Mąstytk kitaip!". Vilnius: Alma littera, 2008.; "Mokymosi pagrindai". Vilnius: Kronta, 2007.)

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Corners

This is a cooperative learning method that allows students to choose and discuss a particular aspect of a topic. Each corner of the classroom corresponds to a specific aspect of the topic. Students choose a particular aspect in response to a question posed by the teacher and move to the appropriate corner. Once in their chosen corner, they pair up and discuss the reasons for their choice.

Students can also address additional questions that foster critical thinking about the topic. After the discussion, the teacher randomly asks pairs from each corner to share their viewpoints with the entire class.

This method is most often used for debate topics, but can also be used in other situations where students need to make a choice and explain the reasons for their choice.

Practical activity

Conducting practical activities in science classes is highly significant for developing students' skills and competencies. These activities can be interesting and active, motivating students to better understand their surrounding environment and apply their acquired knowledge and skills to solve various problems.

Conducting a practical activity is more interesting and active when students are allowed to carry it out independently. They learn to raise questions and problems and to formulate hypotheses.

Various methods can be employed to test a hypothesis. The choice of methods depends on:

- the aims and objectives of the practical activity.
- the teacher's competence.
- the level of students' preparation.
- the tools available.
- the time allocated for completing the task.

Proper planning is crucial to ensure a successful learning experience for students during the practical activity. When planning a practical activity, the teacher should consider the following questions:

- how prepared are the students for the practical activity?
- will the students follow the teacher's instructions, or will they try to find the right approach on their own?
- will they work individually or in groups?

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If there is a lack of tools and equipment, divide the students into groups and have one group do the practical activities while the others attend the class as usual. Or rotate between several different practical tasks.

Decide precisely what you aim to achieve with this lesson and then plan it more meticulously than usual:

- are there specific aspects that students need to pay attention to?
- do you want students to describe the activity in some way?
- will it be necessary to demonstrate examples?
- have you emphasized safety requirements enough?

Make sure that there are no students who have nothing to do. You may want to give an extra open-ended task to those who finish early.

Use of digital learning tools

A virtual learning environment provides opportunities not only to engage students, but also to involve them in interactive learning. Appropriate use of digital learning tools can enhance learning effectiveness, foster student independence, and encourage them to explore, discover, and experience the joy of discovery. These tools also provide opportunities to differentiate and individualize learning, allocate class time more efficiently, and employ methods that promote cooperative learning.

In schools, digital learning tools can be used as:

- tools for cooperative learning.
- tools for networking.
- tools for information search and database browsing and creation.
- communication tools.
- tools for presenting material.
- research tools.
- tools for fostering creativity.
- administrative tools.
- distance learning tools.
- data collection and analysis tools.
- management tools.
- personal learning tools.

(Based on Norman Longworth, 2007)

Digital learning tools help students learn to investigate, recognize, and understand objects in both living and non-living nature that are difficult to see with the naked eye, to grasp or observe over long processes, or to see results that are not immediately apparent. In this way, students

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develop not only natural science competencies but also skills in learning how to learn and cognitive abilities.

Concept Map

The Concept Map method is known by various terms in literature, such as "Perception Map", "Knowledge Map", and others. It is a method of constructive learning – a schematic that visually represents the understanding of objects, events, phenomena, or certain aspects of them. Creating a concept map encourages deeper exploration of a particular concept, helps to visually organize one's knowledge, identifies gaps in understanding, and helps pinpoint areas where additional knowledge is needed.

The Sequential Roundtable Alphabet

The Alphabetical Sequential Roundtable strategy is appropriate when students possess a solid foundation of knowledge. They are required to think of and write as many words or associations as possible that relate to the topic being studied. The aim is to fill as many grids of the table as possible. Each grid can contain more than one word. While filling in the table, students can consult various literature sources to discover unfamiliar words that can be associated with the topic. This table can also be used to engage students.

K-W-L

What I Know - What I Want to Know - What I Learned (KWL) is a reading method that fosters an attitude of active thinking while reading. Active readers predict what they are going to read about, recall what they already know about the topic, and consider what they wish to learn or find out before they read. Then, as they read, they check to see if their predictions were correct and write down what new information they have learned. Thus, the KWL method enables students to develop the ability to anticipate what they know about a particular topic and what they will read about in a text; they learn to raise new questions and actively read in search of answers. This method also teaches students how to meaningfully process new information and evaluate and adjust their understanding.

The foundation of this method is a graphic organizer – a three-column KWL table. The main topic of the lesson or text is written at the top of the table. The first column – What I Know – is completed first. The middle column – What I Want to Know – lists the questions the students are interested in. The third column – What I Learned – records what new information students have learned from reading the text. This table serves as a guide for students before reading, during reading, and when summarizing information after reading. The table can be provided to each student or group on paper, or displayed on a board using a multimedia projector, with students invited to draw it in their notebooks.

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3.3.4 Expectations regarding the quality of activities

Let us assess the following:

- Is there a predominance of an academic style of teaching?
- Do most students receive individual support?
- Is teaching extended to explorations in other environments?
- Is the fundamental function of initiating learning, which enables the intellectual, emotional, and practical activity of the learner, being fulfilled? "Came with a question and left with a question."
- Are challenging goals set with assured feedback and dialogue on progress toward these goals?
- Is a structured approach to information, along with its meaning, being developed?
- Is adequate time allocated for learning and revision, and are both skills and content being taught?
- Is there an effort to seize opportunities arising in specific situations, to use them in one's own way, to feel a surge of personal empowerment, and to experience its authentic expansion?

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TEACHING METHODS, TECHNIQUES AND STRATEGIES IN GIFTED EDUCATION

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Introduction

Gifted education is at the forefront of pedagogical innovation, aiming to develop the exceptional talents and potential of intellectually advanced students. One of its main challenges is to design and implement teaching methods, techniques, and strategies that are suitable for the diverse and complex needs of gifted learners. Gifted learners are not a homogeneous group; they have different abilities, interests, preferences, and learning styles. Therefore, gifted education requires a strategic pedagogy that is flexible, adaptable, and responsive to the individual characteristics and goals of each student.

Strategic pedagogy in gifted education is the art and science of planning, delivering, and evaluating effective and engaging learning experiences for gifted learners. It involves selecting and applying appropriate pedagogical approaches, to match the content, process, and product of learning. It also involves using various techniques and strategies, to facilitate and monitor learning outcomes. Moreover, it involves creating a supportive and inclusive learning environment that fosters the cognitive, affective, and social development of gifted learners and provides gifted teachers with opportunities and resources for their professional development, emotional needs, and time management.

This part aims to comprehensively analyse the aspects of teaching methods, techniques and strategies in gifted education. It examines the complex interaction between strategic gifted pedagogy and the holistic development of gifted students. It is divided into three main sections: the gifted classroom, gifted teaching, and the gifted curriculum.

The first section explores the concept and characteristics of the gifted classroom, both as a natural development arena and as an inclusive setting. It also discusses the challenges and opportunities of understanding and meeting the needs of gifted learners in different contexts.

The second section focuses on the pedagogic practices and principles of gifted teaching, and how to become a gifted teacher. It introduces the interconnection of methods, techniques, and strategies, and presents a comprehensive framework for designing effective teaching approaches for gifted learners. It also covers various aspects of strategic gifted pedagogy, such as the holistic-cognitive approach, the socio-emotional approach, the psycho-pedagogical approach, and presents the mapping model and analysis of a lesson.

The third section centres on the gifted curriculum, and how to develop and structure it according to the specific processes, goals and objectives of gifted education. It also examines the intersection of teaching methods and subjects in gifted curriculum, and how to adapt them to the diverse and complex needs of gifted learners.

By the end of this part, the reader should be able to understand and apply the main concepts and principles of teaching methods, techniques, and strategies in gifted education, and to design and implement effective and engaging learning experiences for gifted learners.

4.1. The gifted classroom

This part explores the subtleties and dynamics of setting up the best possible learning environment for students who are gifted.

The education of gifted students is a multifaceted and complex process that requires a deep understanding of their needs and characteristics. Designing and promoting an appropriate educational setting is essential.

The chapter emphasises what the gifted classroom represents, as a unique educational environment tasked with addressing the diverse needs of intellectually advanced students while prioritising their holistic well-being. Its ability to offer a thorough educational response that recognises the multifaceted nature of giftedness. Its functionality as a hub for cognitive and emotional development, promoting a sophisticated awareness of the interactions between these domains as a fundamental component of the educational system.

4.1.1. Understanding

Within the field of education, there is a unique space known as the gifted classroom. This is a dynamic environment that nurtures the minds of gifted and talented students, not just a physical room.

The gifted classroom is characterised by its vibrant intellectual atmosphere. It is a place where curiosity is encouraged, where questions are as important as answers, and where learning is not just about acquiring knowledge, but about understanding concepts at a deeper level.

In this classroom, you will find students engaged in thought-provoking discussions, solving complex problems, and working on projects that go beyond the standard curriculum. These activities are designed to challenge the students, to push their boundaries, and to address their advanced cognitive abilities. Gifted programs are designed to engage students in higher-level thinking, hands-on learning, and problem-solving activities, which are essential for nurturing their potential (Fredricks et al., 2009).

The gifted classroom is also marked by its flexibility. The teaching strategies employed are diverse and adaptable, taking into account the unique learning styles and needs of the gifted students.

Moreover, the gifted classroom is a safe space for gifted and talented students. It is a place where they can express their ideas without fear of judgement, where their unique talents are recognized and their development is encouraged, and where they can interact with peers who share similar abilities and interests.

In essence, the gifted classroom is more than just a room with desks and a blackboard. It is a nurturing environment, a community of learners, and a hub of intellectual exploration.

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4.1.2. The gifted classroom as a natural development arena

Two pivotal components anchor this environment: the gifted student and the teacher. Each plays an essential role in the dynamics of the classroom.

Gifted students that demonstrate outstanding levels of aptitude or competence in one or more domains, having unique learning needs and often requiring differentiated instruction to fully realise their potential. Their intellectual curiosity, creativity, and capacity for complex problem-solving set them apart. While they may also face unique challenges, such as asynchronous development, heightened sensitivity, and social-emotional needs. Understanding these characteristics is key to effectively educating gifted students.

Gifted teachers, whose role in a gifted classroom extends beyond the traditional duties of education, as they need to be facilitators, guides, and advocates. They must be able to recognize and nurture the unique talents and potentials of each student. This often requires specialised training in gifted education strategies. Teachers also take on the responsibility in addressing the social-emotional needs of gifted students, helping them navigate the challenges associated with giftedness.

The gifted classroom is a dynamic ecosystem where the gifted student and the teacher interact in a symbiotic relationship. The teacher provides the necessary guidance and support, while the gifted student brings a level of intellectual vitality that can stimulate a rich and rewarding learning environment. Both components are essential for the gifted classroom to function effectively as a natural development arena for gifted students.

The concept of the “gifted classroom” as a “natural development arena” refers to the idea that a classroom for gifted students should be a space that naturally fosters their intellectual, social, and emotional growth.

Gifted classrooms often provide a rich, stimulating environment that challenges students intellectually. The curriculum in these classrooms is typically designed to go beyond the standard, allowing students to explore subjects in greater depth. This can involve complex problem-solving tasks, creative projects, and opportunities for independent research. Such an environment naturally fosters the intellectual development of gifted students, allowing them to fully utilise and expand their cognitive abilities.

Gifted classrooms also serve as a social development arena. By interacting with peers who share similar abilities and interests, gifted students can develop social skills and form meaningful relationships. Group projects and collaborative activities can further enhance these social interactions. Additionally, teachers in gifted classrooms are often trained to address the unique social needs of gifted students, such as feelings of isolation or asynchronous social development.

The emotional development of gifted students is another key aspect of the gifted classroom. Gifted students often experience intense emotions and sensitivities, and they may face

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unique emotional challenges such as perfectionism or heightened anxiety. A supportive classroom environment can help students navigate these challenges and develop emotional resilience. This can involve strategies such as social-emotional learning, mindfulness practices, and individualised support from teachers and counsellors.

The concept of the "gifted classroom" as a "natural development arena" is supported by various studies in the field of gifted education. The Classroom Practices Observation Study conducted by The National Research Center on the Gifted and Talented (NRC/GT) examined instructional and curricular practices used with gifted and talented students in regular elementary classrooms throughout the United States, highlighting the importance of understanding the classroom environment for gifted students ([Westberg et al., 1993](#)). Additionally, a qualitative study of self-contained gifted classes emphasised the significance of planning based on students' interests, abilities, and needs, indicating that the classroom serves as an arena for tailored programming and curriculum selection ([Linn-Cohen & Hertzog, 2007](#)). Furthermore, the understanding of giftedness by classroom teachers is vital for successful programming for gifted children, underscoring the role of the classroom as a natural development arena for nurturing the potential of gifted learners ([Lamb-Milligan, 2019](#)).

These studies collectively underscore the significance of the classroom as a natural development arena for gifted students, emphasising the need for tailored practices, understanding of giftedness, and advocacy within the educational environment.

The components

For the natural development of an educational process within a gifted classroom, the following components are to be considered:

- The classroom as a space for common development for all sides, both the pupils and the teacher, where everyone can learn from each other, share their strengths and weaknesses, and support each other's growth. The teacher being not only an instructor, but also a learner, a facilitator, and a mentor. The pupils being not only learners, but also teachers, collaborators, and leaders.
- A place where growth is shared and relies on interdependence, where everyone contributes to the collective learning and success of the group and recognizes, respecting the diversity and uniqueness of each individual. A place where everyone values and celebrates the achievements and challenges of each other.
- A space where everyone - pupils and teachers – learn and not just study material. Learn about themselves and about life as individuals, a team, a class, and a society. Learn not only facts and skills, but also concepts and principles, not only what to think, but also how to think, not only to acquire knowledge, but also to create knowledge.

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- A gifted class as a space of openness and trust, as this is a challenge when it comes to gifted students that are critical-thinkers, analytical and sometimes doubtful. A space where everyone feels comfortable to express their opinions, ideas, and emotions, listens to and respects each other's perspectives and is honest, authentic, and accountable.
- As an opportunity to experience trust in a protected environment, where everyone feels safe to take risks, to make mistakes, and to learn from them, where everyone feels supported, encouraged, and empowered, accepted, valued, and appreciated.
- As an "open classroom door" for the teacher, giving the opportunity to be observed, assessed, mentored, and given feedback. As a space where the teacher can reflect on their own practice, receive constructive feedback, and seek professional development, can collaborate with other teachers, experts, and stakeholders and thus can showcase their work, share their experiences, and inspire others.
- As a space where everyone can use observation, assessment, and judgement as tools for learning and improvement and where everyone can use feedback as a gift and an opportunity, as well as self-regulation and self-evaluation as skills for growth and development.
- As a place where everyone might be wrong, the gifted and the teacher embrace failure as a part of learning from their own and others' mistakes. As a space where everyone can develop a growth mindset, resilience, and perseverance.

In conclusion, the gifted classroom serves as a natural development arena by providing a supportive, stimulating environment that caters to the unique intellectual, social, and emotional needs of gifted students. It is a place where gifted students can thrive, grow, and reach their full potential. It is a space that fosters intellectual, social, and emotional growth for both the pupils and the teacher, that embraces diversity, challenge, and creativity, and cultivates a culture of learning and excellence.

4.1.3. The inclusive classroom

Mixed classrooms, also known as heterogeneous or inclusive classrooms, are educational settings where students of varying abilities, including gifted and non-gifted students, learn together. This model is based on the philosophy that everyone benefits from diversity and that all students have the right to be educated with their peers. ([Unlu, V. 2017](#)) Some of the particularities of mixed classrooms are the diverse learning environment, differentiation, and inclusive socio-emotional development.

Through the means of providing a diverse learning environment, students of different abilities, interests, and backgrounds interact with each other. This diversity can enrich the learning experience, promoting tolerance, empathy, and mutual respect among students.

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In mixed classrooms, teachers often use differentiated education methods to address the varied learning needs of their students. Thus, allowing gifted students to work at higher levels in areas where they are gifted and work at other levels in areas where they are not. ([USC Rossier, 2024](#))

This involves modifying the content, process, product, and learning environment to meet each student's unique needs and abilities. For gifted students, this could mean providing more challenging tasks or opportunities for independent study.

Inclusive classrooms can offer social-emotional benefits for all students. Gifted students can learn to appreciate different perspectives and develop empathy by interacting with peers who have different abilities. Meanwhile, non-gifted students can benefit from the intellectual stimulation provided by their gifted peers.

While their particularities have many benefits, they also present certain challenges. Teachers must be skilled in managing a wide range of abilities and ensuring that all students are engaged and challenged. They need to be able to deliver their instruction in a gifted and intuitive manner. Such a skilled teacher will help the student utilise his own giftedness and will channel resources and enhanced learning opportunities towards that student that will enlarge the student's natural gifts in ways that the students did not even realise existed. ([Johnson, B., 2011](#)) There is also a risk that the unique needs of gifted students might be overlooked in an effort to address the majority.

Fundamentally, these classrooms offer a diverse and inclusive learning environment that can benefit all students. However, they require thoughtful preparation, skilled teaching, and adequate resources to meet the needs of all students, including gifted ones.

4.2. Gifted teaching and learning: techniques and strategies

“A gifted teacher is not only prepared to meet the needs of today’s child but is also prepared to foresee the hopes and dreams in every child’s future.”- Robert John Meehan.

This chapter explores the multifaceted aspects of the gifted teacher’s role. It discusses methods - the **why**, techniques - the **how**, and strategies - the **what** of gifted teaching, in their interrelation and complementarity of an effective pedagogy in addressing the unmatched learning styles of the students who are gifted.

It also emphasises the importance of emotional intelligence in managing the heightened sensitivities often associated with gifted students.

This chapter aims to equip aspiring gifted teachers with the knowledge and skills necessary to guide gifted learners towards realising their full potential, while also fostering a nurturing and stimulating environment that encourages holistic growth. The journey may be challenging, but the rewards of shaping the minds of these exceptional learners make it a truly fulfilling endeavour.

4.2.1. Becoming a gifted teacher

“I touch the future. I teach.” – Christa McAuliffe.

Embarking on the formative path of a teacher for gifted students is an enriching journey that necessitates a thorough understanding of the unique needs, challenges, and potentials of intellectually advanced learners. It entails a commitment to nurturing not only academic brilliance, but also the social and emotional growth in a population distinguished by exceptional cognitive abilities and heightened sensitivities.

The journey begins with a deep dive into the concept of giftedness itself. Understanding giftedness represents the core of the overall process and makes the essential difference. Teachers must familiarise themselves with the diverse profiles of gifted learners, which may include areas such as intellectual, creative, artistic, and leadership abilities. Recognizing the multiplicity of giftedness allows educators to appreciate the unique strengths and challenges each student brings to the classroom.

A gifted teacher needs to have a positive and flexible mindset that embraces the diversity and complexity of gifted learners. A gifted teacher should be able to recognize and appreciate the unique strengths, needs, and challenges of each student, and be willing to adapt and differentiate the instruction accordingly. The reality is that you will be teaching gifted students in your classroom, but they do not always behave because they have high IQs. This is a common

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misconception—that teaching gifted students is easy because they are all good students. Often, the opposite is true. These students require more attention and energy because of their faster learning rates and stronger emotional needs. Understanding gifted students and what makes them tick will help you avoid possible behaviour problems and classroom management challenges. ([Haberlin, S., 2012](#))

A gifted teacher should also be able to foster a growth mindset in the students, encouraging them to embrace challenges, learn from mistakes, and pursue their passions. ([Kroeper, K., 2022](#))

Students who are identified as gifted frequently experience profound emotions, a drive for perfection, deep philosophical inquiries, and uneven development across different areas. This makes it crucial to prioritise their emotional health. Teachers and mentors have a significant role in this process. They need to foster a sense of empathy, develop the ability to listen attentively, and create a secure and encouraging classroom atmosphere. In such an environment, students should feel appreciated, comprehended, and accepted for their unique selves. Social-emotional learning programmes, mindfulness practices, and personalised support systems can all help build emotional resilience and self-awareness.

Gifted teachers must be culturally competent and sensitive to their students' diverse backgrounds, experiences, and identities. Recognising and addressing stereotypes, promoting equity and inclusivity, and designing culturally responsive learning environments are all essential for ensuring the success and well-being of all gifted students.

Teaching gifted students requires expertise and the use of a diverse set of pedagogical methods, techniques and strategies tailored to their advanced intellectual capacities and thirst for knowledge. This may include differentiated instruction, inquiry-based learning, problem-based learning, and opportunities for self-directed research and exploration. Flexibility and adaptability are key as teachers tailor instructional approaches to the diverse learning needs and interests of gifted students.

Integral to the role of a teacher for gifted students is advocacy. They take on the responsibility to advocate and promote giftedness recognition, appropriate educational opportunities, and the adoption of policies that address the needs of gifted students. Building a strong support system that promotes the holistic development of gifted students requires cooperation between parents, coworkers, administrators, and gifted education specialists.

A gifted teacher should be able to communicate effectively with various stakeholders, such as students, parents, colleagues, and principals, regarding the needs and achievements of gifted learners.

The path to becoming an educator for gifted students is a continuous and evolving process. It necessitates a dedication to never-ending learning, professional advancement, and keeping up to date with the most recent studies, developments, and effective strategies in gifted education.

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Active participation in various professional development activities can significantly contribute to this learning journey. These activities can include attending workshops and conferences that focus on gifted education, joining peer networks for knowledge sharing and support, and enrolling in advanced degree programs specialising in gifted education.

These experiences not only broaden teachers' understanding of gifted education but also refine their teaching skills. By staying committed to their own learning and growth, teachers can ensure they are equipped with the necessary knowledge and skills to effectively meet the unique needs of gifted students. This commitment to lifelong learning and professional development is a cornerstone of excellence in gifted education.

4.2.2. Pedagogic practices in Gifted education

The Philosophy

A thorough approach that recognises the unique needs and potentials of gifted students, as well as the importance of targeted teaching methods, of promoting equity and inclusivity and integrating socio-emotional learning, along with the need of an appropriate identification of giftedness, is reflected in the philosophy of gifted education. It has a foundation in a profound comprehension of the complex intellectual, social, and emotional traits that are specific to giftedness.

Students who are gifted frequently demonstrate high levels of creativity, curiosity, motivation in areas of interest and critical thinking skills. They learn at a faster pace than regular students and also tend to finish their assignments more quickly and crave more intellectually challenging assignments. They also may act out in class if bored or under stimulated. ([Weselby, C., 2014](#)). As a result, they might not be completely engaged or have their learning needs met by conventional teaching methods.

The core principle upholds the commitment to providing gifted students with the tools, opportunities and support they need to reach their full potential.

The philosophy of gifted education also highlights the importance of promoting equity and inclusivity, ensuring that gifted education programs are accessible to all students, regardless of background or circumstance. It recognizes the diversity within gifted populations and strives to address the unique challenges and barriers that gifted students may face in realising their potential.

Students identified as gifted, regardless of their areas of giftedness, deserve to be challenged and to reach their potentials. Giftedness exists across all cultures and socioeconomic levels and must be cultivated correctly in order to grow. ([Bright Hub Education, Retrieved February 8, 2024](#))

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Giftedness also encompasses emotional and social aspects that require attention and support. Socio-emotional learning is a key component of gifted education philosophy as it adopts a holistic approach to cultivating the emotional development of gifted students.

Giftedness manifests itself in several areas. Therefore, a simple test cannot necessarily identify a gifted student. The philosophy of gifted screening and assessment consists in combining various methods for an accurate decision.

Within the context of gifted education philosophy, the complex aspects of giftedness highlight the dynamic nature of teaching views and methodological concepts. These concepts are constantly evolving, both on a larger scale and in response to the needs of individual students.

Some teachers believe that gifted students should have access to more complex coursework in an ordinary classroom, or that they should be encouraged to assist their peers in learning grade-level materials. Others believe in differentiation according to the area of giftedness and ability, self-motivated study, and extremely challenging material that goes beyond what is normally taught in the classroom. ([Bright Hub Education, retrieved February 8, 2024](#))

Nonetheless, there is consensus on the importance of using targeted teaching methods, techniques, and strategies. Given gifted students' exceptional cognitive abilities and diverse learning profiles, traditional teaching approaches are recognised as having limitations in effectively addressing their unique learning needs.

In essence, the philosophy of gifted education serves as a guiding framework that values excellence, diversity, and inclusivity in the education of gifted students.

The Interconnection of Methods, Techniques, and Strategies

In the context of gifted education, methods, techniques, and strategies are interconnected and often used interchangeably. While there is a logical flow from methods to techniques to strategies, in practice, these elements are deeply intertwined. A comprehensive approach to gifted education will consider all three, using appropriate methods, techniques, and strategies to meet the unique needs of gifted students.

- **Methods** are the general approaches or models that guide how education is delivered to gifted students. They answer the “why” of teaching - why we choose certain approaches over others. This is based on the understanding that gifted students have unique learning needs that are not always met by traditional teaching methods. Several methods are recommended for teaching gifted students, some of them are acceleration, enrichment, differentiation. Some of the methods are listed underneath.
- **Method of acceleration** is allowing a student the opportunity to move through an educational program at a younger age or at a faster pace than typical. It is the most research-supported intervention in gifted education. A whole-grade acceleration

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("grade-skipping") or a single-subject acceleration (skipping a year of maths, for example) are just two forms of acceleration that can make a positive impact on a student's achievement, attitude towards school, and social and emotional development. Acceleration is an excellent option, but is it the right intervention for every gifted child? The answer is "no." An IQ score in the gifted range does not guarantee that a child is a good candidate for moving ahead. There are many factors to consider when making this important decision. ([Carroll Boham, K., 2020](#))

- **Enrichment:** This method provides gifted students with additional learning opportunities that extend or deepen their knowledge and skills beyond the regular curriculum. It is a supplementary educational program designed to enhance students' academic experience and challenge them academically. It is not a replacement for the core curriculum, but rather an addition to it. There are many different types of enrichment activities that can be used in an enrichment program. Some examples include field trips, guest speakers, service-learning projects, hands-on projects, and problem-solving exercises. Education is no longer only about learning to read and write or adding and subtracting. It is about using engagement activities that challenge the student both mentally and physically. Learning does not only take place in the traditional manner of the teacher as the lecturer and the students as the recipient. Students need to be actively involved in their education and enrichment in school is the way to accomplish this. ([Curacubby Team, 2022](#)).
- **Differentiation** involves modifying the content, process, product, or learning environment to meet the individual needs and preferences of gifted students. The method is grounded in an understanding that curriculum and instruction promote learning and growth when they are linked to the specific, assessed needs and capabilities of the learners involved. Differentiation for gifted students consists of carefully planned, coordinated learning experiences that extend the core curriculum, combine the curricular strategies of enrichment and acceleration, and integrate instructional strategies that engage learners at appropriate levels of challenge. ([National Association for Gifted Children \(NAGC\), 2014](#)) It is seen as the least intrusive intervention for gifted students, as it provides within the classroom with the best environment for having academic needs met. Differentiation is not only beneficial for gifted students, but for all students in the classroom.
- **Techniques:** These are the specific ways in which these methods are implemented in the classroom. They answer the "how" of teaching - how we put our methods into practice. Techniques can include curriculum compacting, individualised programmes, pull-out programs and other specialised programs, independent projects, mentorships. Some techniques, which can be used are listed below.
- **Curriculum compacting:** This technique condenses, modifies, or streamlines the regular curriculum to reduce repetition of previously mastered material. It involves

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identifying students' areas of mastery and providing opportunities for them to skip or modify content that they have already mastered, allowing more time for in-depth study of new material. Through defining the goals and outcomes of a particular unit or block of instruction, determining, and documenting the students who have already mastered most or all of a specified set of learning outcomes, and providing replacement strategies for material already mastered through the use of instructional options that enable a more challenging, interesting, and productive use of the student's time. ([Davis, G. A., & Rimm, S. B., 2004](#))

- **Individualised programmes** for gifted students are a key technique in gifted education. They are one of the ways in which curriculum can be adapted to take into account the identified educational needs of gifted students, providing a tailored approach to student's unique abilities and interests. These programmes involve the development of plans in which targets and activities are planned in order to adapt the school and extra-curricular programme to the needs of these children. The planning of individualised programmes for gifted students depends on school legislation, the concept of 'giftedness', the curriculum model, and the ability of the school and student system to implement these programmes. ([Željeznov Seničar, M., 2016](#))
- **Pull-out programs and other specialised programs** involve grouping gifted students for instruction or enrichment activities. This may include small-group seminars, talent development workshops, mentorship programs or an after-school program. They should involve more than a minimal time commitment; they should reflect interaction with classroom teachers and the regular curriculum; they should be more than a random collection of fun and games activities or process training skills; and they should be based mainly on differentiated teaching methods and materials that reflect both horizontal enrichment and vertical acceleration. Pull-out programs provide gifted students with opportunities to interact with intellectual peers and engage in advanced learning experiences tailored to their unique needs. ([Renzulli, J. S., 1987](#))
- **Independent Projects:** This technique allows gifted students to pursue their own questions, goals, and passions. They involve planning, researching, creating, and presenting a product that demonstrates their learning and understanding. Independent projects can be done individually or in collaboration with peers or mentors.
- **Mentorships** are a valuable technique in gifted education. They involve establishing relationships between gifted students and experts or professionals in a field of interest. Mentors can provide guidance, advice, feedback, and opportunities for learning and growth. Some ways a mentor might help a gifted child:

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- **Provide breadth and depth:** They can introduce students to advanced topics as well as broaden the connections between one field and another.
- **Provide academic or professional career guidance:** Mentors can provide gifted students with career guidance.
- **Support unique gifts and talents:** They allow children trying to understand their unique gifts and talents an avenue to share interests, passions, thoughts, and doubts in a constructive, supportive space.
- **Promote personal growth:** One of the most valuable experiences a gifted student can have is exposure to a mentor who is willing to share personal values, a particular interest, time, talents, and skills. ([Davidson Institute, 2021](#))
- **Strategies:** These are the specific tools or actions used to accomplish the objectives of the techniques. They answer the “what” of teaching - what we do in the classroom to support our students. Strategies can include interest-based learning, project-based learning, problem-based learning and social-emotional learning. Possible strategies to use are briefly presented here below.
- **Interest-Based Learning (IBL):** IBL is a universal, comprehensive, easy-to-implement design framework. It uses a child’s interests as the basis for making decisions about what to teach and for how long. It provides choice, voice, and support for student inquiry, empowering their sense of agency, creativity, and innovation. ([Purcell, J. H., Burns, D. E., & Purcell, W. H., 2020](#))
- **Project-Based Learning (PBL)** is a highly effective strategy in gifted education, in which students gain knowledge and skills by working for an extended period of time to investigate and respond to an authentic, engaging, and complex question, problem, or challenge. ([PBLWorks. \(n.d.\)](#)) Gifted students often thrive in PBL environments as they are given the freedom to explore topics in depth and apply their learning in real-world contexts. This approach also allows for exploration beyond the classroom, enabling students to synthesise learning from across disciplines. ([Marzilli, A., 2018](#)) However, implementing PBL in a gifted classroom requires careful planning and scaffolding.
- **Problem-Based Learning (PBL)** is a powerful teaching strategy in gifted education, in which gifted students learn about a subject by solving an open-ended problem. It originated in the medical field, where instructors felt that students would benefit from real-world situations instead of simply learning facts. Gifted education has expanded on this idea, encouraging practitioners to use PBL in their classrooms. ([Presently Gifted. n.d.](#)) It involves students learning through facilitated problem solving, where student learning centres on a complex problem that does not have a single correct answer. Students work in collaborative groups to identify what they need to learn in order to solve a problem. They engage in self-directed learning (SDL) and then apply their new knowledge to the problem and reflect on what they

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learned, and the effectiveness of the strategies employed. The teacher acts to facilitate the learning process rather than to provide knowledge. The goals of PBL include helping students develop 1) flexible knowledge, 2) effective problem-solving skills, 3) SDL skills, 4) effective collaboration skills, and 5) intrinsic motivation.

([Hmelo-Silver, C. E., 2004](#)) Standard rubrics and outcomes can act as ceilings for gifted students when it comes to test performance. Open-ended problems allow students, particularly gifted students, to challenge themselves.

- **Social-Emotional Learning (SEL)** is a crucial aspect of gifted education. It addresses the unique emotional needs of gifted students and helps them manage their emotions, and achieve personal goals. Recognising the unique characteristics and needs of gifted students and helping them to extend their skills to develop SEL competencies are preludes to enhancing their academic achievement, while consecutively promoting their personal well-being and healthy relationships. ([Smith, S., 2017](#)). To meet the academic and social-emotional learning needs of gifted learners, the following should be provided to those students at every stage of development: learning situated within multiple contexts; differentiated educational experiences, including forms of grouping; adjustment in the level, depth and pacing of curriculum; and access to information about outside-of-school programs. ([American Psychological Association, 2017](#)).

In essence, the methods, techniques, and strategies, along with other specialised programs, play a vital role in meeting the diverse academic, social, and emotional needs of gifted learners. It is important for educators to consider the strengths and preferences of individual students when selecting and implementing appropriate instructional strategies.

The design of a continuum of services for gifted learners requires careful planning and integration of various methods and strategies to ensure that the curriculum meets the academic, social, and emotional needs of these students. ([VanTassel-Baska, 2008](#)). Furthermore, an effective pedagogy for gifted education involves the seamless integration of differentiated instruction, enrichment activities, acceleration options, and talent development programs" ([Robinson, A., Shore, B.M., & Enersen, D., 2007](#)).

By recognizing the interconnectedness and complementarity of different approaches and integrating a variety of them, teachers can create dynamic learning environments that nurture the intellectual growth and holistic development of gifted students.

4.2.3. Strategic Gifted Pedagogy: Designing Effective Teaching Approaches

In the sphere of education, the success of teaching and learning is heavily reliant on the development and implementation of a well-planned strategy. These strategies serve as guidelines for educators, providing a way to navigate the complex landscape of intellectual and holistic development in gifted students.

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The professional approach to solving any problem and coping with any dilemma is to have a firm, educated, and adequate strategy based on the vision of the strategy maker or the entity he is a part of. A well-constructed strategy is vital for the development of work plans that support the strategy and vision and allow for the achievement of the corresponding goals and the interests.

A strong strategy, regardless of field, is the foundation for addressing challenges and resolving uncertainties. It encapsulates the strategists' shared vision and objectives, providing a structured framework for directing efforts towards desired outcomes. In the context of learning strategies, educators use insights into gifted students' cognitive processes and personality traits to develop tailored approaches that address their specific needs.

Likewise, teaching strategies are derived from a diverse array of best practices and pedagogical methods and techniques. Educators combine these approaches to develop engaging and effective lesson plans that accommodate a wide range of learning styles and abilities. Whether dealing with abstract concepts or concrete topics, teaching strategies provide a structured framework for organising classroom activities, assignments, and discussions.

Adapting strategies to meet the needs of gifted students necessitates a thorough understanding of their individual characteristics and learning styles. It involves synthesising and customising best practices in order to create a cohesive framework for nurturing giftedness in schools. The process of designing efficient teaching strategies for gifted education requires the integration of best practices, tailored to suit the unique needs of gifted students.

The GATE project represents a professional commitment to modernise teaching practices and raise educational standards, particularly in gifted education settings.

It is a conscious effort to lay the groundwork for excellence in contemporary teaching methodologies, empowering educators to unlock the full potential of gifted learners and foster a culture of academic excellence and innovation.

The core principles

Stepping into a classroom filled with bright, eager faces, knowing that among these students are those who have an extraordinary ability to grasp complex concepts, think abstractly, and have an insatiable thirst for knowledge, and that these gifted students require a unique approach to learning, calls for a teacher's challenge of deep understanding, flexibility, and commitment to creating an environment that supports their intellectual curiosity and growth.

The core principles that facilitate a gifted teacher's journey, start with the **familiarisation with giftedness**, this allows tailoring the foundation of the appropriate teaching strategy. And continues with **discarding the notion of "Normal"**, through understanding that each student is unique and that their learning journey should start from where they are, not where conventional teaching methods dictate, they should be. This understanding adds a deeper layer to the foundation of the teaching strategy.

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Next, **the Bloom's Taxonomy tool** that helps teachers design their lessons and activities that stimulate higher-order thinking, aiming to engage their gifted students in tasks that involve creating and evaluating, pushing them to stretch their intellectual boundaries. For example, activities could include conducting an experiment, designing a game or musical composition, or writing an editorial about a current events topic.

Recognizing that gifted students often finish their work ahead of their peers, the **assignment of independent projects** will allow them to delve deeper into topics of interest. These projects not only keep them occupied but also fuel their passion for learning.

In gifted education, questions are not just requests for information; they are challenges that provoke critical and creative thinking. **Carefully crafting and asking intellectually stimulating questions** will challenge gifted students' curiosity, critical thinking and encourage them to view problems from multiple perspectives. ([Weselby, C., 2014](#))

To further stimulate intellectual curiosity, **assignment of open-ended problem-solving projects will** require students to come up with creative solutions. This not only challenges their problem-solving skills but also fosters creativity and innovation.

To enrich the learning experience students should be allowed to **add to the instruction**. This could be in the form of presentations, projects, or even leading a class discussion. This not only enhances their understanding of the subject matter but also builds their leadership and communication skills. Also, **arranging enrichment activities will** provide opportunities for deeper exploration and understanding, allowing students to explore topics of interest at their own pace. **Encouragement of self-directed learning skill development** of all students, and particularly of the gifted ones, through regular meetings to help students plan their work and through providing support for difficulties and evaluation, maintaining a focus on meaningful content will help students become lifelong learners. ([Edmentum, 2023](#)).

Technology plays an important role in the educator's teaching strategy. **Introducing problems that can be solved using technology**, will offer a modern and relevant context for learning.

Understanding the importance of mentorship, the teacher, having the parents' or legal tutor's consent, could connect their gifted students with mentors who can guide and inspire them. These mentors, experts in their respective fields, could serve as an advisor, counsellor and role model and could provide invaluable insights and experiences that textbooks cannot offer. (Weselby, C., 2014)

Ultimately, strategic gifted pedagogy emphasises a multifaceted student-centred approach, where learners are empowered to take ownership of their education, explore their passions, and cultivate lifelong learning skills. By embracing these core principles, teachers can create dynamic learning environments that empower gifted students.

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The “Dual Glasses Model”

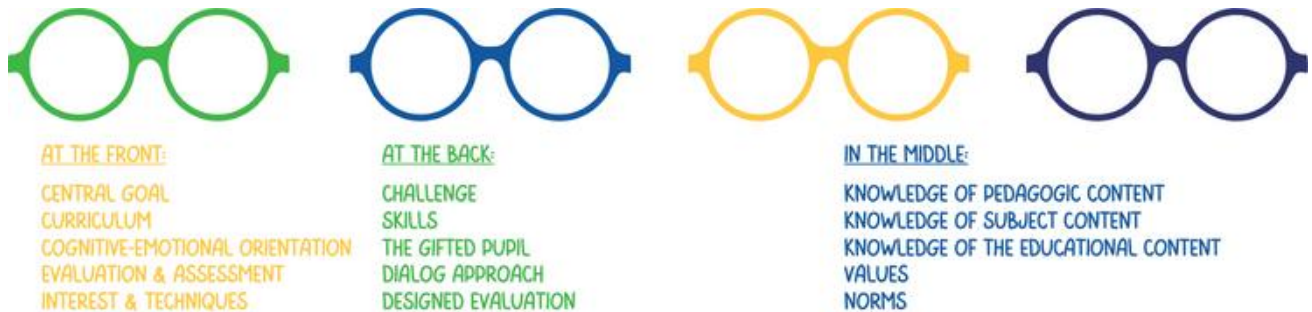


Image 8. The „Dual glasses Model”

The “Dual Glasses Model” for teaching in gifted classes is a comprehensive approach that involves viewing the educational landscape through three distinct lenses, each focusing on a different aspect of the learning environment. This model integrates these perspectives into a cohesive scene, providing a holistic view of the teaching and learning process.

At the Back: This perspective focuses on the foundational elements of the learning environment. It involves identifying the challenges that might arise during the learning process and understanding their potential impact on the students and the overall learning outcomes. It also involves assessing the skills required for effective learning and teaching, and determining whether these skills are currently available. Understanding the pupils, their characteristics, and traits is crucial at this stage. The dialog approach focuses on the communication strategies that will be employed, while the designed evaluation outlines how the conduct and success of the learning process will be evaluated.

At the Middle: This perspective focuses on the content and values that will be imparted during the learning process. It involves assessing the existing knowledge of pedagogic content, subject content, and educational content, and identifying any gaps that need to be filled. It also involves identifying the values and norms that need to be embedded in the learning process to create a conducive learning environment.

At the Front: This perspective focuses on the goals and outcomes of the learning process. It involves identifying the central goal of learning the subject and outlining the curriculum that will guide the learning process. It also involves considering the cognitive-emotional relations and how they will be taken into account during the learning process. The evaluation and assessment strategies outline how the success of the pupils and the teacher will be measured. Finally, it involves identifying the interests that have been raised and the techniques that have been used during the learning process.

In summary, the “Dual Glasses Model” provides a comprehensive framework for designing effective teaching strategies for gifted classes. It involves a holistic view of the learning

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environment, taking into account the challenges, skills, pupils' characteristics, dialog approach, evaluation strategies, content knowledge, values, norms, goals, curriculum, cognitive-emotional relations, and interests and techniques. This model serves as a guide for educators in creating a conducive learning environment that caters to the unique needs of gifted students, fostering their intellectual growth and helping them reach their full potential.

The holistic-cognitive approach

The holistic-cognitive approach to teaching gifted students is a comprehensive strategy that integrates all aspects of the student's mind, body, and personality. It aims to educate the whole person, beyond the core academics. This approach recognizes that each student is unique and has different strengths and abilities that can be nurtured and developed.

This allows for a tailored approach to each student, enabling them to bring forward their dominant talents and abilities, whether they are intellectual, behavioural, or physical.

The teacher, in this approach, creates a holistic map for each student. This map, which can be updated periodically based on the student's development and the teacher's growing familiarity with the student, is drawn based on observations, testimonials from others, and personal attitudes and approaches. Different teachers may draw slightly different maps for the same student, but these differences are usually marginal.

The holistic-cognitive approach to teaching gifted pupils consists of nine components:

- **Physical & Gross Motor:** This component examines whether the student is organised and can focus on a theme or concept, or if they tend to be more scattered and unfocused.
- **Fine Motor:** This component looks at whether the student can relate to specific, sometimes dictated subjects, or if they are more innovative and self-focused on internal subjects. It also considers the student's knowledge and power sources.
- **Sensory:** This component explores whether the student uses their physical senses to understand the world in all its dimensions, or if they tend to avoid this. It also seeks to understand the reasons for any avoidance.
- **Self-help:** This component assesses whether the student is independent in their conduct, behaviour, and learning, whether they can master gaining information, and whether they are resilient to failure.
- **Language:** This component evaluates whether the student is verbal and how well they master the language, allowing them to understand more complex texts.
- **Cognitive:** This component determines whether the student is aware of their surroundings and whether they can generalise from the specific to the general.

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- **Emotional:** This component looks at the student's abilities to stay calm, contain themselves, and be patient with the teacher and their surroundings. It also considers the student's ability to understand, show, and share emotions.
- **Social:** This component assesses the student's ability to work in a team, to relate, share, and cooperate with their surroundings.
- **Spiritual:** This component examines whether the student sees the whole picture and whether they are developing a set of constructive values.

Each of these components raises questions that the teacher must observe, analyse, and answer in order to effectively implement the holistic-cognitive approach.

The holistic-cognitive approach is a comprehensive strategy, but whether it is the "most complex" can depend on various factors such as the context, the specific needs of the students, and the teacher's expertise. However, it is certainly one of the more nuanced approaches due to its focus on the whole person and the integration of multiple aspects of learning. Its benefits rely on the positive aspects of a more complete understanding of the student, leading to more effective teaching strategies.

The socio-emotional approach

The social and emotional approach to teaching gifted pupils focuses on understanding the student's needs through five key vectors of behaviours. Each vector represents a different social and emotional trait of the student, contributing to a holistic understanding of the individual.

- **Self-awareness:** This vector explores whether the student is conscious of their appearance, behaviour, and how they are perceived by others. It involves understanding one's own emotions, personal goals, and values, and recognizing how this influences behaviour.
- **Responsible decision-making:** This vector assesses whether the student makes decisions that serve their interests and whether they are aware of these interests. It involves making constructive choices about personal behaviour and social interactions based on ethical standards, safety concerns, and social norms.
- **Self-awareness:** This vector explores whether the student is conscious of their appearance, behaviour, and how they are perceived by others. It involves understanding one's own emotions, personal goals, and values, and recognizing how this influences behaviour.
- **Relationship skills:** This vector examines how the student interacts with peers, their surroundings (which might be intellectually inferior to them), and sources of authority. It involves the ability to establish and maintain healthy and rewarding relationships with diverse individuals and groups.

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- **Social awareness:** This vector determines whether the student is aware of their surroundings and the expectations placed on them, and how they respond to these expectations. It involves taking the perspective of and empathising with others from diverse backgrounds and cultures.
- **Self-management:** This vector assesses whether the student can cope with everyday duties and responsibilities and identifies any areas where they may need support. It involves managing one's emotions, stress, motivation, and setting and achieving personal and academic goals. ([Harris, A., 2021](#))

These five vectors provide a framework for understanding the social and emotional aspects of gifted students. By mapping each student according to these vectors, teachers can gain a comprehensive understanding of the student's needs and tailor their teaching strategies accordingly.

This approach recognizes that gifted students often have unique social and emotional needs. For example, it is not uncommon for gifted students to experience anxiety, perfectionism, difficulties within peer relationships, and self-identity issues. ([Harris, A., 2021](#))

By focusing on social and emotional learning, teachers can help gifted students navigate these challenges and thrive both academically and personally.

Practical Tools for Socio-Emotional approach

- **The Think Space:** A designated space in the classroom for students to calm down, be themselves, and process their feelings and emotions. The teacher provides students with tools such as fidgets or breathing exercises, and then engages 1:1 with them after they have had time on their own.
- **Restorative Circles:** Circle discussions around the carpet that allow teachers to get a temperature check on students' emotional states and allow students to talk about non-academic topics in the classroom. The teacher uses prompts and activities to facilitate the circle and help students resolve conflicts or process current events.
- **Self-Affirmation Notebooks:** Notebooks that the teacher gives to students who struggle with anxiety and depression. The students are prompted to make a list of at least two things each day that they like about themselves. The teacher checks in with them once a week to keep them accountable and invite them to share if it's been helpful.
- **Growth Mindset and Perfectionism:** The teacher challenges students' thinking that intelligence is fixed, and mistakes are failures. The teacher encourages students to see mistakes as opportunities for learning and growth. The teacher uses resources and activities to help students reframe their perspectives and develop a positive self-efficacy.

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- **Identity Needs:** The teacher talks with students about what it means to be gifted and creates space for them to share their frustrations and fears. The teacher creates opportunities for students to collaborate with peers who have similar cognitive abilities or interests. The teacher also helps students identify and celebrate the benefits of being gifted. ([Harris, A., 2021](#))

In conclusion, the social and emotional approach to teaching gifted students is a thorough and nuanced approach that focuses on recognising and addressing the unique social and emotional needs of gifted students. It proposes a framework for understanding the student as a whole person and tailoring teaching strategies to their specific needs.

Best Practices – the mechanisms

Strategic gifted pedagogy involves designing and implementing effective and engaging learning experiences for gifted learners. However, this is not an easy task, as it requires a deep understanding of the needs and interests of gifted learners, as well as the content and objectives of the curriculum. Therefore, this subchapter explores some of the best practices, or the mechanisms, that can help gifted teachers to apply strategic gifted pedagogy in their classrooms.

Liberated while Demanding

“Liberated While Demanding” in gifted education represents the pedagogical mechanism that emphasises the process of learning over the accumulation of knowledge. It advocates for a dynamic, student-centred learning environment where the teacher acts as a guide rather than a leader.

Traditional frontal teaching, where the teacher is the sole source of knowledge and students are passive recipients, is not the focus. Instead, the emphasis is on the learning process, with the teacher supervising and facilitating this process. The goal is to create a dynamic learning environment that evolves based on the needs of both the students and the teacher.

The primary objectives of this mechanism are to foster independent learning and responsibility, nurture curiosity and the joy of learning, develop key learning skills and capabilities (such as research, analysis, questioning, and academic writing), and help students formulate a reasoned and well-founded worldview on various topics. This approach aims to give students a better understanding of the complexity of the world.

The principles of this mechanism include liberated teaching, where the teacher acts as a guide rather than a leader, and demanding teaching, which involves high expectations and promotes self-learning. Another key principle is the creation of a class internal culture, where the teacher is not the sole owner of knowledge and students take responsibility for their learning.

Modus Operandi: The implementation of this approach involves designing the curriculum and choosing subjects and materials, promoting self-learning, facilitating common and shared

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conversations, demonstrating understanding, organising space, time, and technology, and formulating evaluations.

The Benefits:

Promotes Independent Learning: By emphasising self-learning and high expectations, students are encouraged to take charge of their own education. This fosters independence and self-reliance, skills that are valuable in lifelong learning.

Nurtures Curiosity and Joy of Learning: It nurtures students' natural curiosity and joy of learning. By focusing on the learning process rather than just the accumulation of knowledge, students are more likely to develop a love for learning that extends beyond the classroom.

Develops Key Learning Skills: The approach helps students develop key learning skills such as research, analysis, questioning, and academic writing. These skills are not only essential for academic success but also for navigating the complexities of the world.

Encourages a Well-Founded Worldview: By helping students formulate a reasoned and well-founded worldview on various topics, they are better equipped to understand and engage with the world around them.

Promotes a Collaborative Learning Environment: The creation of a class internal culture, where the teacher is not the sole owner of knowledge, encourages a collaborative learning environment. This not only enhances learning but also helps students develop important social and teamwork skills.

Facilitates Personalized Learning: The teacher, acting as a guide, can tailor the learning process to each student's unique needs and abilities. This personalised approach can lead to more effective learning outcomes.

Prepares Students for the Future: By encouraging independence, curiosity, key learning skills, and a well-founded worldview, this approach prepares students for future academic pursuits and careers. It also equips them with the skills needed to be lifelong learners.

The Challenges

Teacher Preparedness: Not all teachers are prepared or trained to support gifted students. Implementing this approach requires a shift from traditional teaching methods and may require additional training and resources.

Time and Resource Intensive: This approach can be time-consuming and resource intensive. Designing personalised curricula, facilitating self-learning, and managing a dynamic learning environment require significant time and effort from teachers.

Student Engagement: Engaging all students in a class, especially when they have diverse abilities and interests, can be challenging.

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Risk of Inequality: There is a risk that gifted programs can exacerbate existing inequalities in the education system. (Weselby, C., 2014) Care must be taken to ensure that all students have access to the resources and support they need.

Potential for Underachievement: Gifted students often have unique social and emotional needs, and some may struggle with issues such as anxiety, perfectionism, and underachievement. (Weselby, C., 2014) Teachers need to be equipped to address these issues.

Evaluation Difficulties: Formulating evaluations that accurately reflect students' progress can be challenging, especially when the focus is on the learning process rather than the accumulation of knowledge.

Despite these challenges, many educators believe that the benefits of this approach outweigh the difficulties, particularly when it comes to meeting the unique needs of gifted students.

Knowledge and Information vs. Skills and Capabilities

A key distinction in gifted education strategies and pedagogy is represented by the difference between knowledge and information versus skills and capabilities.

The basic principle is that while knowledge and information are readily accessible and easy to retrieve, especially in the digital age, skills and capabilities need to be intentionally taught, built, and nurtured. This reflects the shift in modern education from a focus on rote memorization to the development of critical thinking and problem-solving skills.

The Learning Pyramid is a model that illustrates the varying effectiveness of different learning methods. It suggests that passive learning methods (like reading or listening to a lecture) result in lower retention rates, while active learning methods (like teaching others or doing practical work) result in higher retention rates. This model can guide the design of teaching strategies for gifted students.

In the context of a gifted class, several practices are highlighted:

Vast and Broad Knowledge: A preference is given to vast and broad knowledge over minimal knowledge with deep drill down to details. This approach encourages students to make connections across different areas of knowledge and fosters a more comprehensive understanding of the world.

The Beauty of the Story: This refers to the practice of focusing on reflection and feelings based on the details of a subject (like History), rather than just the details alone. This approach encourages students to engage more deeply with the material and to develop their own interpretations and understandings.

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The Guild Approach: This approach sees the gifted student as an apprentice learning from the master (the teacher). It emphasises hands-on learning and the application of knowledge in practical contexts.

Cross Learning: This practice involves connecting new subjects to subjects learned before, or that are studied with other teachers in other professions, or in connection to present, future, or historic events. This approach fosters interdisciplinary learning and helps students see the interconnectedness of knowledge.

In conclusion, the “Knowledge and Information vs. Skills and Capabilities” mechanism in gifted education emphasises the importance of developing skills and capabilities, rather than just imparting knowledge and information. It advocates for a more active and engaged form of learning, where students are encouraged to think critically, make connections across different areas of knowledge, and apply their learning in practical contexts.

Collaborative Learning

The teaching practice for gifted education is a complex and multifaceted process, with several key goals and principles guiding its implementation.

The primary aim of Collaborative Learning is to provide significant and challenging learning experiences that stimulate the intellectual curiosity of gifted students. The teaching practice is designed to address the multiple intelligences present in the classroom, acknowledging the diverse learning styles and abilities of the students. It also provides opportunities for interrelated work among the gifted students, fostering social interaction and collaboration.

Basic Principle of the Teaching Practice: The basic approach in collaborative learning is to encourage students to work in teams, conducting research and creating knowledge around a chosen subject. Each assignment is thoughtfully designed and arranged to demand complex processing of data and knowledge, providing a significant learning challenge for the students.

This teaching practice is structured in stages. In the first stage, students work on sub-topics in teams. In the second stage, students from the original teams are redivided into integration teams that deal with the entire scope of the subject. This structure promotes a comprehensive understanding of the subject matter.

The preparation process involves selecting the subject that will form the basis of the assignment, defining the purpose and goals of the assignment, dividing the assignment into sub-assignments for the first-stage teams, and dividing the students into second-stage teams based on their matched sub-assignments.

The collaborative learning teaching practice is implemented through a series of steps, starting with an introduction of the subject or topic, dividing the class into first-stage teams, and launching the assignment. The teams get organised and divide responsibilities, then work on

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research and understanding in order to deliver their sub-assignments, after which the class is divided into second-stage teams. Each team member brings specific knowledge from their subtopic team, and the second-stage teams work to accomplish the final stage of the assignment. The final product is combined and delivered by every team, followed by a general understanding and analysis of the results and process, and a general evaluation of the delivery.

Asking questions

Strategic pedagogy in gifted education frequently includes the use of effective questioning techniques to stimulate critical thinking, deeper understanding, and promote active learning.

The essence of effective communication and information exchange lies in asking the right questions. This is particularly important in an educational setting where the goal is not just to impart knowledge, but also to develop skills such as critical thinking, problem-solving, and effective communication. By asking the right questions, teachers can encourage students to think more deeply, express their thoughts, and engage more actively in the learning process.

Open and Closed Questions: Open and closed questions serve different purposes in communication and learning. Closed questions, which typically elicit short, factual answers, can be useful for checking understanding or gathering specific pieces of information. However, in a gifted education context, open questions are often more valuable. These questions, which typically start with “what,” “why,” or “how,” encourage students to think more deeply, express their thoughts and feelings, and share their knowledge and insights. This can lead to richer discussions and more meaningful learning experiences.

Inquiry Questions: Inquiry questions are used to probe deeper and gather more detailed information. These questions can help clarify understanding, explore ideas more thoroughly, and challenge assumptions. In the context of gifted education, inquiry questions can stimulate critical thinking and encourage students to engage more deeply with the material. They can also help teachers assess students' understanding and guide them towards deeper insights.

Funnel Questions: Funnel questions involve starting with general questions and gradually narrowing down to more specific ones. This technique can be particularly effective in guiding students to focus on the details of a concept or problem, thereby deepening their understanding. It is like peeling back the layers of an onion - each question reveals a new layer of information or understanding. This technique can be especially useful in subjects like science or history, where understanding often involves delving into complex systems or events.

HOW TO RESPOND TO VARIOUS QUESTIONS

QUESTION	RESPONSE
Pupil asks about something that was already discussed in class	Transfer the question to the class and ask, "who can answer the question?"
Pupil asks a clarification question on something you now talk about	Answer by finding other words to explain the same thing
Pupil asks something that divert the conversation to places you don't want	Apologizing for not answering and diverting conversation back to track
Pupil asks question that clearly come for resisting place	Relating to the resistance and promise the pupil to answer his question after class
Pupil asks something related but not connected to the flow of the lesson	Is short answer and continue, if long, promise to discuss it after class
Pupil asks about something that comes later at the flow of the lesson	Relate shortly and promise that the question will be answered later in class

Table 1. How to respond to various questions

In essence, effective questioning is a powerful tool in gifted education. By using a range of questioning techniques, teachers can stimulate critical thinking, foster deeper understanding, and promote active learning. This not only enhances the learning experience for gifted students but also equips them with important skills for lifelong learning.

Building resilience

The essence of "Emotional resilience" in the context of gifted education is the idea that a significant part of a teacher's role is to help gifted students develop emotional and mental resilience. This task can be daunting due to the unique emotional needs of gifted students, and there is no one-size-fits-all approach. However, several key messages can guide teachers in fostering emotional resilience among gifted students:

Multiple Points of View: Encourage students to understand that their perspective is just one among many. This understanding can help them develop better relationships with others and

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foster empathy. For instance, in a classroom discussion about a controversial topic, teachers can encourage gifted students to consider and respect the viewpoints of others. This could involve role-playing exercises where students are asked to argue from a perspective different from their own.

Understanding the Temporal Nature of Experiences: Help students realise that every experience is temporary and changing. This understanding of the fluidity of life and the accumulation of knowledge and experience over time can help them see challenges as opportunities for growth. Teachers can use historical events or biographies of famous personalities to illustrate how experiences evolve over time. For example, discussing the life of Thomas Edison could help students understand that failure is often a temporary step on the path to success. Or the story of Nikola Tesla's numerous experiments, many of which did not succeed as expected, is a great example to illustrate the concept of experiences being temporary and changing.

Friendliness and Humour: Gifted students often exhibit a level of seriousness that can isolate them from their peers. Encouraging light-heartedness and humour can help them blend into society more easily. Teachers can incorporate fun activities and games into the curriculum. For example, a maths teacher could use humorous word problems or puzzles to make learning more enjoyable and less stressful.

Seeing the Positive: Gifted students, with their analytical minds, often focus on the negative, the deviant, and the wrong. Balancing this tendency with experiences that highlight the positive can help them develop a more balanced worldview. Teachers can balance critical thinking exercises with activities that focus on positive aspects. For instance, after a debate on environmental issues, students could be asked to research and present about renewable energy solutions.

The Power of Togetherness and Belonging: Individuals cannot satisfy all their needs alone. We need others and need to relate to them. Gifted students need to explore a common language with their surroundings to experience a sense of belonging. Group projects can provide opportunities for gifted students to work with others and build a sense of community. Teachers can also establish a classroom culture that celebrates diversity and inclusivity.

The Power of Influencing: Gifted students have the ability and tendency to capture the "big picture", which can sometimes lead to feelings of inferiority, powerlessness, and despair. Stories like David vs. Goliath, where the seemingly inferior, through wisdom, defeats the mighty, can inspire them. Teachers can share stories of individuals who have made significant contributions to society despite facing adversity. For example, discussing the achievements of Malala Yousafzai can inspire students to believe in their ability to effect change.

Multiple Ways to Exist in the World: Gifted students often see themselves as different and strange to society, leading to introversion. They need guidance to venture out into the world and be part of it, using their strengths to become equal and influential members of their community. Teachers can expose students to a variety of career paths and ways of life. Field trips, guest

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speakers, and career exploration activities can help gifted students see the many ways they can contribute to society.

These messages provide a roadmap for teachers to help gifted students develop emotional resilience. However, it is important to remember that each gifted student is unique, and these strategies should be adapted to fit the individual needs of each student. To make these messages more relatable, they should be reinforced on a regular basis and illustrated with real-world examples.

The goal is to help gifted students navigate their emotional landscape effectively, enabling them to reach their full potential. This is the essence of building emotional resilience among gifted children. It's a challenging task, but one that can be accomplished with patience, understanding, and the right strategies.

The class as a team – the psycho-pedagogical approach

Gifted education is a specialised field that addresses the unique intellectual and emotional needs of gifted students. The psycho pedagogical approach has proven to be effective in this context. This approach emphasises the integration of cognitive and social-emotional learning, viewing the two as inseparable and equally important for the holistic development of gifted students.

Traditionally, schools have separated the teaching and educating arena, which is perceived as cognitive, intellectual, and professional, from the social-emotional arena, which is often seen as an additional aspect of education. The responsibility for these two arenas is typically divided between the classroom teacher and other school personnel such as the class educator, school counsellor, and school psychologist.

However, the psycho-pedagogical approach challenges this separation. It posits that teachers in the classroom should be aware of and combine these two arenas in all encounters with the pupils. This need becomes even more significant when dealing with gifted students, who often have heightened emotional sensitivities alongside their advanced intellectual abilities.

The psycho-pedagogical approach views the classroom as a team, where the interrelations among the gifted students themselves and between them and the teachers are integral to the learning process. The professional subject matter is interrelated with the emotions of the team towards it, and the way these emotions are dealt with is a crucial part of the learning process. This approach involves careful planning and reflection before, during, and after class.

A psycho-pedagogical lesson integrates both cognitive and social-emotional learning. The teacher is responsible for both the intellectual development and the emotional well-being of the students.

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Before class, the teacher considers the social-emotional aspects while planning the lesson. This involves thinking about how students might feel about the subject matter, anticipating their reactions to new material, identifying gaps in understanding among students, considering significant events that might influence the learning process, and reflecting on their own feelings towards the subject. The teacher also decides on the balance between guided instruction and self-learning, and whether to use individual or group learning activities.

During Class, the teacher conducts a social-emotional discussion about the subject matter. This includes acknowledging and discussing any emotions that arise during the learning process. The teacher models how to deal with these emotions, demonstrating that they are a normal part of the learning process rather than a side effect, allowing for spontaneous personal discussions about the topics covered.

After class, the teacher reflects on the lesson, analysing not just whether all planned topics were covered, but also how effectively the emotions in the class were managed. The teacher asks themselves whether they were satisfied with the result, their own ability to cope with the questions asked, and with the emotional dynamics.

Embracing challenges, a particular aspect

Gifted students often develop a perception of superior learning abilities during their early years, based on their successes and the feedback they receive. However, as they progress to secondary school, they encounter their first real academic challenges and potential failures. These experiences can lead to discouragement and avoidance behaviours if students lack the necessary resilience. Fortunately, these failures can also serve as pivotal moments that foster maturity, resilience, and strength.

The primary goals of the teaching practices under the psycho-pedagogical approach are to develop students' capabilities and resilience to cope with difficulties and failures, enhance their ability to work under uncertain conditions, foster meta-cognitive skills, and create a classroom environment where difficulties and failure are not equated with a lack of intelligence. This involves delivering challenging assignments, employing condensed or partial teaching methods, emphasising mistakes without blaming the individual, and specifying the difficulty involved.

Working in uncertain conditions is a key aspect. This includes leaving questions open and unsolved, avoiding direct answers and solutions, practising techniques to achieve solutions without fully understanding them, and modelling problem-solving exercises.

Creating a nurturing class climate is also crucial. This involves legitimising difficulties and lack of understanding, criticising patronising, snobbish, and arrogant behaviours, promoting learning from mistakes, and developing questioning skills over answering ones.

Finally, working on reflection and meta-cognitive skills is an integral part. This includes delivering self-study assignments and reflecting on the process rather than the outcomes, sharing

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pedagogical considerations for given assignments, and promoting mutual learning before an examination.

In conclusion, the psycho-pedagogical approach in gifted education emphasises the integration of cognitive and social-emotional learning. It views the classroom as a team and recognizes the teacher's role in facilitating both intellectual and emotional development. This approach can be particularly beneficial for gifted students, helping them to engage more deeply with the material, develop critical thinking skills, and navigate the emotional challenges that can accompany advanced learning.

Pupils as individuals – the dialogue (or The Gifted dialogue)

In the context of gifted education, the teacher-student dialogue is an essential component. It is a dynamic, two-way communication process that supports the cognitive and emotional development of gifted students.

Its essence lies in recognizing and treating gifted students as individuals with unique intellectual and emotional needs. The conversation with the gifted, while covering similar subjects as with other students, should be conducted differently. The teacher's role is that of a colleague who exchanges thoughts and experiences, rather than of a figure who is stronger and has more resources.

The dialogue should be a collaboration between two educated individuals striving together to achieve something. The teacher and the gifted student are working together towards common learning goals. Conversations on learning and academic achievements should extend beyond the classroom and relate to their implications on life, society, and the future.

A good conversation in this context should have the following characteristics:

Equality: There should be no domination in the conversation. The teacher and the student are equal partners in the learning process.

Exploration: The conversation should involve a mutual attempt to explore the gifted student's inner world. This includes understanding their thoughts, feelings, interests, and aspirations.

Contextual Reference: The conversation should always relate to the gifted class, society, obligations, thoughts & feelings, friends, etc. These elements serve as a central point of reference for the conversation, grounding it in the student's reality.

Intellectual Stimulation: The dialogue should be designed to stimulate the advanced intellectual abilities of gifted students, involving complex, abstract, and in-depth discussions that challenge and extend the students' thinking.

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Emotional Engagement: The conversation should touch on emotions, either directly or indirectly. To guarantee the discussion stays civil and productive, it is necessary to find the ideal balance between quantity and depth.

Navigation: The conversation should navigate among opportunities, chances, expectations, and desires. This helps the student to explore different possibilities and make informed decisions.

S.W.O.T Analysis: Using a S.W.O.T (Strengths, Weaknesses, Opportunities, Threats) analysis can be beneficial in the conversation. It can help the student understand their strengths and weaknesses, recognize opportunities, and identify potential threats or challenges.



Image 9. Example of S.W.O.T. Analysis

The meaningful communication in gifted education emphasises the importance of individualised teacher-student dialogue. Mutual respect should be the foundation of it; the student should respect the teacher's knowledge and direction, and the teacher should acknowledge the student's advanced abilities and ideas. By treating gifted students as equals, exploring their inner world, engaging with their emotions, and using tools like S.W.O.T analysis, teachers can create a supportive and stimulating learning environment where students feel valued, understood, and challenged.

The Triangle: Gifted-Teacher-Parents

The journey of nurturing a gifted child's potential is not a solitary one. It is a collaborative effort that requires the active participation of both teachers and parents. Teachers, with their professional expertise and understanding of the gifted child's academic needs, provide the

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intellectual stimulation and challenging learning environment these students require. On the other hand, parents, with their intimate knowledge of their child's personality, interests, and emotional needs, provide the necessary emotional support and guidance.

The triadic relationship between teachers, gifted students, and their parents plays a pivotal role in the holistic development of the gifted child.

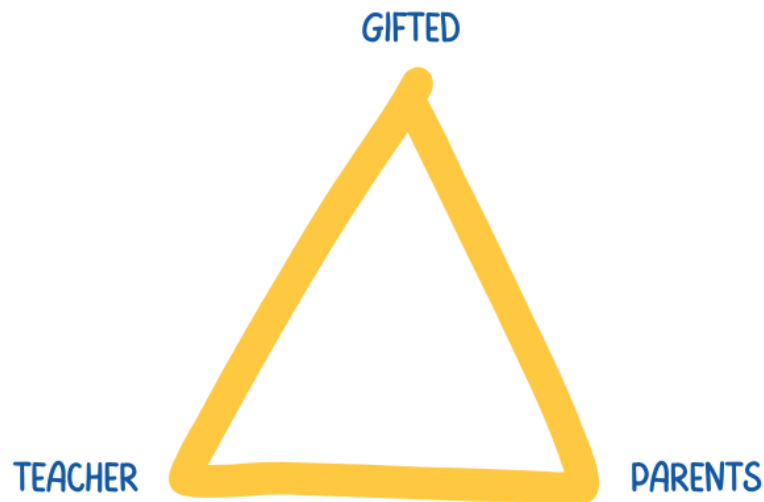


Image 10. The Triangle: Gifted - Teacher - Parents

However, this collaboration is not without its challenges. Gifted children often exhibit characteristics that can be overwhelming for both teachers and parents. Their extreme curiosity, fast thinking, heightened sensitivities, and high expectations can sometimes lead to misunderstandings and conflicts. Therefore, it is crucial for teachers and parents to understand and effectively manage these unique traits.

Moreover, parents of gifted children often face specific challenges and pitfalls. These include the pressure to constantly demonstrate their child's giftedness, treating the gifted child as a "small adult," and having extreme expectations.

The following provides insights into these issues and offers strategies for parents to avoid these common pitfalls.

Parents – Children's gifts and challenges:

Extreme Curiosity: Gifted children are naturally curious and have an insatiable desire to learn. Parents need to nurture this curiosity while also teaching them to respect boundaries.

Constant Search for Justice: Gifted children often have a strong sense of fairness and justice. Parents need to guide them in understanding that the world is not always fair and help them cope with injustices.

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High and Sometimes Condescending Language: Gifted children may use advanced language for their age, which can sometimes come across as condescending. Parents need to teach them to communicate respectfully with others.

Extremely Fast Thinking: Gifted children often think faster than their peers. Parents need to be patient and give them time to express their thoughts.

Strongly Reacting to Stimulus Situation: Gifted children may have heightened sensitivities and react strongly to stimuli. Parents need to help them manage their reactions and emotions.

Jumping to the Right Answer Without the Ability to Explain How and Why: Gifted children often intuitively know the answer but may struggle to explain their thought process. Parents need to encourage them to articulate their thinking.

A Vast Need for Autonomy: Gifted children often crave independence. Parents need to provide opportunities for them to make decisions and take responsibility, within appropriate limits.

Significant Gaps in Behaviours and Areas of Function: Gifted children may excel in some areas while struggling in others. Parents need to provide support in areas of weakness without neglecting their strengths.

Connecting High Intelligence with Maturity: Gifted children may be intellectually advanced but emotionally on par with their age peers. Parents need to understand this discrepancy and not expect them to act older than they are.

Great Expectation That Can Result with Disappointment: Gifted children often set high standards for themselves, leading to disappointment when they fall short. Parents need to help them set realistic expectations and cope with failure.

Parents should avoid certain behaviours that can negatively impact their gifted children:

Treating the Gifted as the Central Life Project of the Parent: Parents should avoid living vicariously through their gifted children. Each child should be allowed to follow their own path.

Parental Pressure to Demonstrate the Giftedness: Parents should avoid putting undue pressure on their children to constantly perform at their highest level. It is important to allow gifted children to relax and just be kids.

Treating the Gifted as "Small Adult": Despite their advanced intellectual abilities, gifted children are still children and should be treated as such.

Having Extreme Expectations from the Gifted: Parents should avoid setting unrealistic expectations for their gifted children. It is important to celebrate their achievements without losing sight of their age and developmental stage.

Delivering the Message That the Gifted Could Be Independent: While it is important to foster independence in gifted children, they still need guidance and support from their parents.

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Gifted children needs and support from their parents:

Borders and Limitation: Despite their advanced abilities, gifted children still need structure and boundaries. They need to understand that being gifted does not exempt them from rules.

Assistance with Executive Functioning: Gifted children may struggle with organisation and planning. Parents can help by teaching them strategies for managing their time and tasks.

Real Expectation and Ability to Handle Failure: Parents should set realistic expectations for their gifted children and teach them that it is okay to fail. Failure should be considered as an integral part of the process of learning and growing.

Feedback Based on Investment and Not Only on Result: Parents should praise their gifted children for their effort and hard work, not just their achievements. This fosters a growth mindset.

Going with the Gifted Preferences and Interests: Parents should support their gifted children's interests, even if they do not align with their own. This validates the child's individuality and passion.

Potential conflicts between teachers and parents may also arise, the objective is to use effective strategies to find a win-win solution. A supportive and nurturing environment can be created for the gifted child by teachers and parents through encouraging open communication, appreciating one another's viewpoints, and working towards a common objective.

Conflicts That Might Rise:

Parents Relying on School to Deal with the Gifted and Give Solutions to Everything: Parents may expect the school to fully cater to their gifted child's needs. However, supporting a gifted child is a collaborative effort that requires involvement from both parents and teachers.

Blaming School and the Teachers for Not Exuding Expectations and Failures: Parents may blame the school or teachers if their gifted child is not performing to their expectations. It's important for parents to understand that teachers are doing their best within their resources and constraints.

A win-win solution in conflicts with families of gifted pupils can be achieved by:

Identifying the Family's Situation, Needs Complexities, and Problems: Understanding the family's unique circumstances can help in finding a solution that meets their needs.

Identifying Your Interests. What Do You Want to Accomplish?: Teachers should be clear about their goals and what they hope to achieve in their interactions with the family.

Identifying the Facts and Arguments to Support School's Side: Teachers should gather evidence to support their perspective and decisions.

Thinking of Possible Desires of the Family as a Whole and Parents in Particular: Considering the family's desires can help in finding a mutually beneficial solution.

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Opening Lines of Communications with All Family Members, Empower the Parents: Open and honest communication is key to resolving conflicts. Empowering parents to participate in decision-making can also help in finding a win-win solution.

Leading to a Solution with Positive Outcome for All Sides, Agreed by All: The ultimate goal should be to find a solution that benefits all parties and is agreed upon by all.

Working with the parents of gifted children requires mutual understanding, empathy, and collaboration. This means recognizing the unique challenges and strengths that gifted children possess and working together to nurture their potential.

Understanding is the first step in this process. Both teachers and parents need to understand that gifted children often think and learn differently from their peers. They may have intense interests, ask probing questions, and exhibit a deep curiosity about the world around them. Understanding these traits can help adults provide the right kind of support and guidance.

Empathy is also crucial. Gifted children can sometimes feel isolated or misunderstood because of their advanced intellectual abilities. They may struggle with social interactions and have difficulty relating to their peers. Adults need to empathise with these challenges and provide emotional support.

Collaboration between parents and teachers is key to effectively supporting gifted children. Parents and teachers need to communicate regularly and openly about the child's progress, challenges, and achievements. They should work together to develop strategies and interventions that meet the child's unique needs.

In addition, parents of gifted children have a special role to play. They can help their children explore their interests, encourage their curiosity, and provide opportunities for intellectual stimulation outside of school. At the same time, they need to ensure that their children have a balanced life with time for play, relaxation, and social interactions.

Gifted teacher's emotional needs

Teachers in gifted classes often find themselves in emotionally demanding situations. The intellectual intensity of gifted students can sometimes be overwhelming, leading to feelings of inadequacy or stress. Just as gifted students require constant emotional support to thrive, so do their teachers. It is crucial for the schooling system to recognize this need and provide the necessary support.

Creating an intra-school ventilation group among teachers can be a useful strategy for managing these emotional challenges. Such a group can provide a safe space for teachers to share their experiences, express their feelings, and support each other. This can be particularly beneficial in the short run, providing immediate emotional relief and fostering a sense of camaraderie among teachers.

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Moreover, coping with the emotional side of teaching in gifted classes should be an integral part of teacher training. Prospective teachers need to be equipped with the skills and strategies to manage their emotions effectively, ensuring their well-being and enabling them to provide the best possible education for their gifted students.

Schools can play a significant role in supporting teachers in gifted classes. Some strategies that schools can implement include:

Self-Help: Encourage teachers to engage in self-care activities and provide resources to help them manage stress and maintain their emotional health.

Principal's Support: School leaders should provide emotional support to teachers, acknowledging their challenges and appreciating their efforts.

Peers' Support: Encourage a supportive school culture where teachers can rely on each other for emotional support.

Therapy: Provide access to professional mental health services for teachers who may need them.

Group Therapy: Consider implementing group therapy sessions where teachers can share their experiences and learn from each other.

Teachers' needs can be understood in the context of Abraham Maslow's hierarchy of needs (1943). According to Maslow, individuals have five categories of needs: physiological, safety, love and belonging, esteem, and self-actualization. In the context of teaching gifted classes, these needs can be interpreted as follows:

Physiological Needs: Teachers need a comfortable and healthy work environment to perform their duties effectively.

Safety Needs: Teachers need to feel safe and supported in their work environment. This includes job security, fair treatment, and a supportive school culture.

Love and Belonging Needs: Teachers need to feel a sense of belonging and acceptance in their school community. This includes positive relationships with colleagues, students, and parents.

Esteem Needs: Teachers need to feel valued and respected for their work. This includes recognition of their efforts, opportunities for professional development, and a sense of accomplishment.

Self-Actualization Needs: Teachers need opportunities for personal growth and fulfilment. This includes opportunities to pursue their interests, engage in meaningful work, and contribute to their field.

In conclusion, teaching in gifted classes can be emotionally challenging, but with the right support and strategies, teachers can manage these challenges effectively. By understanding and

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addressing teachers' emotional needs, schools can create a supportive environment where teachers can thrive and provide the best possible education for their gifted students.

Gifted teacher's time management

Teaching, especially in the context of gifted education, is a complex and demanding profession. It requires not only a deep understanding of the subject matter and pedagogical strategies but also effective time management skills.

Teachers in gifted classes often have a multitude of tasks that consume their time. These include planning and preparing lessons, creating, and grading papers and exams, communicating with students, parents, visitors, and colleagues, attending staff meetings, and participating in professional training. Each of these tasks is essential for the effective functioning of the class and the academic progress of the students.

Despite the demanding nature of their work, teachers also need time for themselves, their families, and their social lives. This is often referred to as life-work balance. Achieving this balance can be challenging but is crucial for the well-being and effectiveness of the teacher.

Before teachers can effectively manage their classes, they need to manage themselves. This involves organising their tasks, setting priorities, and allocating time slots for different activities.

Teachers' tasks can be categorised into proactive and reactive assignments. Proactive assignments are connected to the essence of the job, such as lesson planning and professional development. Reactive assignments deal with the efficient flow of the job, such as responding to emails and handling unexpected issues.

Tasks should be prioritised based on their importance and urgency. Important tasks are those connected to the essence of the job and require deep consideration. These are usually proactive assignments. Urgent tasks are those that need to be dealt with immediately and are usually reactive assignments.

Teachers should allocate long time slots for important issues and assignments, which are usually proactive assignments. Short time slots should be set aside for urgent and immediate issues and assignments, which are usually reactive assignments.

There are some basic time rules that teachers should follow:

- Every teacher deserves a break. It is crucial for them to take regular breaks for rest and rejuvenation. A teacher could set a timer for every 90 minutes of intensive work to take a 15-minute break. During this break, they could engage in activities that help them relax and rejuvenate, such as taking a short walk, meditating, or reading a book.
- They should not spend more than one-third of their break on urgent matters. Breaks are meant to be a time for relaxation, not merely catching up on work. During their

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break, a teacher could spend the first 5 minutes addressing any urgent issues that have come up. The remaining 10 minutes could be spent on relaxation activities to ensure they are not just catching up on work.

- They should establish specific times for addressing important issues and communicate these times to others. This strategy aids in managing expectations and minimising interruptions. A teacher could set aside the first hour of their workday to plan and prepare for their classes. They could communicate this schedule to their colleagues and students to manage expectations and minimise interruptions.
- They should also set specific times for phone calls, such as during their lunch break or after school hours and announce these times to parents and colleagues to ensure that phone calls do not disrupt their teaching or preparation time. This approach helps manage communication and ensures that phone calls do not interfere with other tasks.
- They should restrict phone calls to urgent matters only. Non-urgent issues can be dealt with through other communication channels, via email or during parent-teacher meetings. This would ensure that their teaching and preparation time is not disrupted by non-urgent phone calls.
- They should adhere to the 3-minute rule: if a conversation with a colleague or parent extends beyond 3 minutes, it is not considered urgent. a teacher could politely suggest continuing the conversation at a later time or via email. This would help keep their conversations focused and efficient, allowing them to manage their time more effectively.

In conclusion, effective time management is crucial for teachers in gifted classes. By organising their tasks, setting priorities, and following basic time rules, teachers can manage their workload, achieve a healthy life-work balance, and provide the best possible education for their gifted students.

The Mapping model and analysis of a lesson in gifted education

In the context of gifted education and strategic gifted pedagogy, the model for mapping and analysing a lesson in a gifted class is a comprehensive approach that allows teachers to plan, execute, and evaluate their lessons effectively.

The essence of an excellently formulated lesson lies in the adoption of best practices and various models that allow for differentiation in content, process, product, and learning environment based on students' readiness, interest, and learning profile, for flexibility in adjusting the pace of instruction, providing different pathways for learning, or offering choices in assignments, in order to incorporate activities that challenge gifted students' cognitive skills and promote self-directed learning by providing opportunities for students to set their own learning goals, choose their own projects, or pursue their own interests. The model should also incorporate

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the use of technology to enhance learning, provide access to advanced content, or facilitate communication and collaboration.

The efficient mapping of a lesson should incorporate a combination of teaching strategies, such as: Inquiry, Context based, Questioning techniques, Problem solving, Problem-based learning, Pacing, and Bibliotherapy, within a structured, layered framework. Each layer being measurable, allowing for precise formulation of the entire lesson and its individual parts. This layered structure can be spread out on a table, facilitating control over the conduct of the lesson, and enabling subsequent evaluation, which allows for the visual mapping out of the progression of the lesson, identification of potential areas for improvement, and making adjustments as needed during instruction.

**COMPARISON OF CREATIVE PROBLEM SOLVING, INQUIRY AND
PROBLEM - BASED LEARNING**

DIMENSION	CREATIVE PROBLEM SOLVING	INQUIRY	PROBLEM-BASED LEARNING
NATURE OF THE PROBLEM	Starts with a discussion in which learners seek to understand the problem	Starts with a presentation of a puzzling situation	Starts with the presentation of a real-world problem
ROLE OF THE TEACHER	Facilitator of group process	Question poser	Metacognitive coach
ROLE OF LEARNERS	Construct meaning through generating ideas	Construct meaning through questions, data collection, and analysis	Construct meaning through metacognitive and scientific inquiring
APPLICATION OR TRANSFER OF LEARNING	Application of plan to action	Application to conceptual	Application to real world

Table 2. Comparison Matrix of Key Teaching Strategies

This table provides a comparison over four dimensions across three key educational strategies: Creative Problem Solving, Inquiry, and Problem-Based Learning.

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Nature of the problem:

- Creative Problem Solving starts with a discussion in which learners seek to understand the problem.
- Inquiry starts with a presentation of a puzzling situation.
- Problem-Based Learning starts with the presentation of a real-world problem.

Role of the teacher:

- In Creative Problem Solving, the teacher acts as a facilitator of the group process.
- In Inquiry, the teacher acts as a question poser.
- In Problem-Based Learning, the teacher acts as a metacognitive coach.

Role of learners:

- In Creative Problem Solving, learners construct meaning through generating ideas.
- In Inquiry, learners construct meaning through questions, data collection, and analysis.
- In Problem-Based Learning, learners construct meaning through metacognitive and scientific inquiry.

Application or transfer of learning:

- In Creative Problem Solving, the focus is on the application of plan to action.
- In Inquiry, the emphasis is on the application to conceptual understanding.
- In Problem-Based Learning, the application is directed towards real-world scenarios.

Before the class, a table is constructed that outlines the subject and conduct before, during, and after the class in relation to the techniques used, the time allocated, and the teaching means employed. This allows for a comprehensive overview of the lesson and enables all vectors of the matrix to be evaluated for further development.

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BEFORE CLASS

	TECHNIQUE	TIME	MEAN	EVALUATION
SUBJECT SELECTION				
BEFORE CLASS				
IN CLASS		90 min		
AFTER CLASS				
EVALUATION				

Table 3. Before the class

During the class, another table is constructed that preliminarily describes the tasks, the division of assignments, the teamwork required, and the method of presenting results in relation to the techniques used, the time allocated, and the teaching means employed. This provides a roadmap for the conduct of the lesson and allows for the evaluation of all vectors of the matrix for further development.

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IN CLASS - 90 MINUTES

	TECHNIQUE	TIME	MEAN	EVALUATION
PRESENTING TASK				
DIVIDING ASSIGNMENTS				
TEAMWORK				
PRESENTING RESULTS				
EVALUATION				

Table 4. During the class

In summary, this model provides a structured approach to planning, conducting, and evaluating lessons in a gifted class. It ensures that all aspects of the lesson are measurable and controllable, thereby facilitating continuous improvement and development. It also ensures that the unique learning needs of gifted students are addressed through the use of appropriate teaching strategies.

4.3. The gifted curriculum

Education is a powerful tool that shapes the minds of our future generations. It is a dynamic process that requires careful planning and ongoing evaluation, especially when it comes to teaching gifted pupils.

Students who exhibit extraordinary talent or potential in one or more domains of human ability are considered gifted. These pupils need a classroom setting that will not only drive them academically but also support their individual talents and passions. The curriculum plays a pivotal role in creating this enriching environment. It is more than just a document or a guide; it is the backbone of the educational program. It outlines the learning objectives, the teaching strategies, and the assessment methods. It provides structure, direction, and a sense of purpose. A well-structured curriculum is a key success factor for the school and the program, contributing significantly to the success of the learning program, the students, and the teachers. This chapter will provide a comprehensive guide on how to successfully undertake this process.

4.3.1. Curriculum development process

The first step in building an adequate curriculum is understanding the unique needs and characteristics of gifted students. These students often require a faster pace of learning, more challenging material, and opportunities for in-depth study. This can be achieved through conducting a needs assessment that involves all stakeholders, including teachers, parents, and the students themselves.

Once the needs are identified, the next step is to set clear, measurable objectives. These objectives should align with both the students' needs and the overall goals of the gifted program. They should be challenging yet achievable, pushing students to reach their full potential.

The curriculum development process consists of three major phases: the design, the implementation and evaluation and revision phase.

The design phase involves deciding on the content, instructional strategies, and resources to be used, further referred to as the structure, the skeleton and the mechanisms. It should offer depth and complexity, promote creative and critical thinking, and provide opportunities for independent study and real-world application.

The structure of the curriculum refers to the organisation and sequence of topics and skills to be covered. For gifted students, the curriculum structure should allow for acceleration (moving through the curriculum at a faster pace), enrichment (providing greater depth and complexity) and differentiation (integrating strategies that engage students at appropriate levels of challenge).

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The skeleton of the curriculum refers to the key concepts and skills that form the backbone of the curriculum. These should be clearly defined and aligned with the learning outcomes for the course/program.

The mechanism of the curriculum refers to the teaching strategies and methods used to deliver the curriculum. This could include strategies such as problem-based learning, project-based learning, inquiry-based learning, interest-based learning, social-emotional learning and differentiated instruction, which are particularly effective for gifted students.

The curriculum implementation phase requires commitment as teachers play an essential role in adapting their teaching strategies to meet the needs of gifted students. This might involve differentiating instruction, providing enrichment activities, or implementing a flexible pacing guide. A varied and flexible assessment should accurately measure the learning of gifted students. This could include formative assessments (to provide feedback and guide instruction) and summative assessments (to evaluate learning at the end of a unit or course). Ongoing professional development of teachers will complement this phase.

Finally, the curriculum should be regularly **evaluated and revised** based on feedback from students, teachers, and parents, as well as current research in gifted education, to ensure that it remains relevant and effective.

4.3.2. The adequate structure

The structure of the curriculum provides an organised framework that outlines the sequence and progression of learning. It ensures that the content is logically arranged and builds upon previous learning. A well-structured curriculum is flexible enough to accommodate the diverse learning needs and paces of gifted students.

The curriculum should be built with the involvement of the teachers in the gifted classrooms, pedagogic instructors, and other relevant figures, to ensure it is tailored to the specific needs and abilities of the gifted students.

It should combine content and teaching styles to deliver enrichment, deepening, and broadening of knowledge, to address the diverse learning styles and high cognitive abilities of gifted students.

The curriculum should strike a balance between team learning and individual learning, in order to promote collaboration and independent thinking, both of which are essential skills for gifted students.

It should create a challenging learning experience that matches the level of the students and the scope of their knowledge, to encourage creativity, curiosity, and critical thinking by allowing for deepening of knowledge, complexity, and bridging between different fields.

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The gifted curriculum should pave the way for active student involvement. This can be achieved by involving the student in choosing the content of their studies and the way it will be delivered to them, making them a full partner in the pedagogic process.

It should match the studied content to the individual and to the class, in terms of acceleration, scope, and presentation method.

Parents should be included as partners in the educational process within the gifted classes, through mutual decision making, support, updates, and general involvement.

The curriculum should include potential role models. This can inspire and motivate gifted students to strive for excellence.

4.3.3. The skeleton

The skeleton of the curriculum refers to the key concepts, skills, and competencies that students are expected to learn. These form the core of the curriculum, providing substance and depth. For gifted students, these should be challenging and stimulating, pushing them to stretch their boundaries and reach their full potential.

The curriculum should not only focus on academic content but also integrate emotional and social processes. This involves teaching students about values, empathy, and social skills. It also means creating a safe and supportive learning environment where students feel valued and understood. It should be designed to promote continuity from year to year, integrating content from science, humanities, and art.

The curriculum should be constructed as a perennial spiral, with each year building on the previous one, in collaboration by the school's educational staff and the pedagogic instructor. This approach allows for the distribution of content and skills across different age groups and for the integration of new content and skills as students advance through the program, ensuring that they are continually challenged and engaged, and their learning is continuous and progressive.

It should be tailored to the needs and interests of the gifted students. This involves identifying the specific learning opportunities that will best serve these students and designing the curriculum to provide these opportunities, in order to expose students to a wide range of fields, including science, humanities, and art, at every age level.

There should be coordination between the gifted class in the regular school and the gifted school that students attend once a week, to allow for the students to receive a consistent and comprehensive educational experience and for the sharing of resources and expertise between the two settings.

The curriculum should be coordinated with external entities and programs, such as academic seminars and enrichment programs, to provide students with additional learning opportunities and expose them to a wider range of experiences and perspectives.

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It should integrate multidisciplinary and intradisciplinary content to address the gifted students' curiosity. This involves drawing connections between different subject areas and exploring topics in depth from multiple angles.

In addition to traditional academic content, the curriculum should also incorporate 21st-century skills. These include critical thinking, problem-solving, creativity, digital literacy, and communication, along with elements of rhetoric, logic, and philosophy to promote higher-order thinking.

4.3.4. The mechanism

The mechanism of the curriculum refers to the methods and strategies used to deliver the content and facilitate learning. This includes teaching methods, learning activities, and assessment techniques. The mechanism should be dynamic, interactive, and student-centred, promoting active learning and critical thinking.

Gifted education is a specialised field that requires a unique approach to teaching and learning. Gifted classes aim to educate for both academic and social excellence. This means not only focusing on academic achievement but also developing students' social skills and emotional intelligence.

The cognitive characteristics of gifted students often require adapting teaching methods in the classroom. This could involve using differentiated instruction, providing challenging and engaging learning activities, and promoting critical and creative thinking.

The gifted program should treat the gifted class as a community with unique emotional and social needs. This involves creating a supportive and inclusive learning environment where students feel valued and understood. It also means teaching students about empathy, cooperation, and respect for diversity.

It should also encourage students to express their talents in social and community involvement and action. This could involve participating in community service projects, leading initiatives in the school or local community, or engaging in advocacy work. The aim is to expand the circles of belonging and influence of the students, helping them to become active and responsible citizens.

The educational staff is required to become familiar with each of the students in the class. This involves getting to know each student's strengths, interests, and learning needs. It also means building strong relationships with students and creating a learning environment where students feel seen and understood. If necessary, this should involve dialogue with the student and coordination with his parents. This could involve regular meetings or conferences, ongoing communication through emails or phone calls, and collaboration on individual learning plans.

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4.3.5. The Intersection of Teaching Methods and Subjects in Gifted Curriculum

One of the key challenges of designing and implementing a gifted curriculum is to balance the scope and depth of the content, as well as the pace and complexity of the instruction, to match the diverse characteristics and preferences of gifted learners. Different teaching methods can be integrated and adapted to create a rich and engaging gifted curriculum.

The teaching methods should be matched to the subjects being taught. This ensures that the teaching methods are effective in facilitating the learning of the subject matter. For example, a more hands-on, practical teaching method might be more effective for teaching science, while a more discussion-based teaching method might be more effective for teaching humanities. The teaching methods should also be adapted to the learning styles and preferences of the gifted students. This ensures that the students are able to learn in a way that suits them best, thereby enhancing their learning experience.

Individual independent learning allows gifted students to pursue their own interests and passions, and to work at their own pace and level of challenge. This can enhance their motivation, creativity, and self-regulation skills. For example, teachers can give students choices in their assignments, projects, or topics of study, while providing the resources and tools to help them plan, monitor, and evaluate their own learning.

Choosing and marking challenging interdisciplinary subjects with significant importance, through selecting and highlighting topics or concepts that are relevant, meaningful, and complex, and that span across different disciplines or domains of knowledge. This can help gifted students develop their critical thinking, problem-solving, and interdisciplinary skills. For example, teachers can design units or lessons around real-world issues, such as climate change, social justice, or artificial intelligence, while emphasising the connections and applications of the content to different fields or contexts.

Organising the lessons and teaching units around problems, challenges and questions demanding the students to creatively think and learn, by means of using inquiry-based, project-based, open-questions based or problem-based learning approaches, where students are engaged in exploring, investigating, and solving authentic problems or questions. This can help gifted students develop their creative thinking, research, and collaboration skills. For example, teachers can pose open-ended or essential questions to guide the learning process, while providing students with opportunities to present and share their findings or solutions with others.

Diversity and flexibility in teaching methods on a daily basis, using a variety of instructional strategies and techniques to meet the diverse needs, preferences, and abilities of gifted students. This can help gifted students stay engaged, challenged, and supported in their learning. For example, teachers can use differentiation, acceleration, enrichment, or compacting to adjust the content, process, product, or environment of the learning and also scaffolding, feedback, or peer tutoring to provide guidance and assistance to students according to their individual needs.

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Explicit engagement in developing and imparting learning skills and strategies, metacognitive skills, and self-direction of the learner, through teaching gifted students how to learn effectively and efficiently, how to monitor and regulate their own thinking and learning, and how to take charge of their own learning goals and outcomes. This can help gifted students develop their academic, social-emotional, and lifelong learning skills. For example, teachers can reveal to the students the strategies for note taking, summarising, or memorising. They can also teach students how to set SMART goals, reflect on their progress, and evaluate their performance and encourage them to seek feedback, ask questions, and seek new challenges.

Selection of teaching methods that foster interpersonal skills in all areas of knowledge, by making use of teaching methods that promote social interaction, communication, and cooperation among gifted students and others. This can help gifted students develop their interpersonal, intercultural, and leadership skills. For example, teachers can use cooperative learning, peer learning, or service learning to facilitate group work, peer feedback, or community involvement and also role-playing, simulations, or debates to enhance students' oral and written expression, listening, and perspective-taking skills.

Stalling on topics - Along with changing activities at a fast pace, one must be careful to linger on significant and weighty issues, balancing the pace and depth of the learning, so that gifted students are not bored or overwhelmed by the content. This can help gifted students develop their curiosity, interest, and understanding of the content. For example, teachers can use pre-assessments, formative assessments, or interest surveys to determine the prior knowledge, readiness, and interests of the students. They can also use flexible grouping, tiered assignments, or learning contracts to provide different levels of challenge and complexity for different students.

Usage of alternative assessment - adding assessment elements that require personal contribution, high-order thinking and challenge, that measure not only the knowledge and skills of gifted students, but also their creativity, originality, and application of the content. This can help gifted students demonstrate their learning in meaningful and authentic ways. For example, teachers can use portfolios, exhibitions, or performances to assess students' products or processes and also rubrics, checklists, or self-assessments to assess students' criteria or standards.

Extracurricular learning, Technology and online based learning, providing gifted students with opportunities to extend and enrich their learning beyond the classroom, using technology and online resources. This can help gifted students access more information, explore more topics, and connect with more people. For example, teachers can use online platforms, such as Khan Academy, Coursera, or EdX, to offer students online courses, tutorials, or lectures. They can also use online tools, such as Google Classroom, Padlet, or Flipgrid, to facilitate online collaboration, communication, or feedback, or online programs, such as Scratch, Code.org, or Tynker, to offer students coding or programming activities.

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In essence, building an adequate curriculum for teaching gifted pupils is a complex but rewarding process. It requires a deep understanding of the needs of gifted students, a clear vision of the learning goals, and a commitment to providing an enriching learning environment, while carefully considering various factors.

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