

UNDERACHIEVEMENT IN GIFTED AND TALENTED STUDENTS: UNRAVELLING THE PARADOX

INSUCCESSO NEGLI STUDENTI AD ALTO POTENZIALE: ALLA SCOPERTA DEL PARADOSSO

Chiara D'Alessio

University of Salerno, Department of Medicine, Surgery and Dentistry, Italy
chdalessio@unisa.it



Martina Errico

University of Campania L. Vanvitelli, Department of Advanced Medical and Surgical Sciences, Italy
martina.errico2@studenti.unicampania.it



Double Blind Peer Review

Citation

D'Alessio, C., & Errico, M. (2025). Underachievement in gifted and talented students: unravelling the paradox. *Giornale italiano di educazione alla salute, sport e didattica inclusiva*, 9(1).

Doi:

<https://doi.org/10.32043/gsd.v9i1.1316>

Copyright notice:

© 2023 this is an open access, peer-reviewed article published by Open Journal System and distributed under the terms of the Creative Commons Attribution 4.0 International, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

gsdjournal.it

ISSN: 2532-3296

ISBN: 978-88-6022-509-2

ABSTRACT

Underachievement in gifted students is a complex issue influenced by internal factors like low motivation, emotional issues, and external factors such as family dynamics, school environment, and socio-economic status. Neuroscientific findings suggest that gifted students have enhanced brain connectivity, which allows them to process information efficiently. Tools like the GUT and GRS-S are essential for early identification and intervention. Talent promotion requires a collaborative approach involving schools, families, and communities to nurture gifted students' potential effectively.

L'*underachievement* negli studenti dotati rappresenta un fenomeno complesso influenzato da fattori interni, come la bassa motivazione, l'autoefficacia accademica ridotta e difficoltà socio-emotive, e da fattori esterni, quali le dinamiche familiari, l'ambiente scolastico, le relazioni con i pari e lo status socio-economico. Le evidenze neuroscientifiche suggeriscono che gli studenti dotati presentano una maggiore connettività cerebrale, che consente loro di elaborare le informazioni con maggiore efficienza. Strumenti come il GUT e il GRS-S si rivelano fondamentali per una diagnosi precoce e per l'attuazione di interventi mirati. La promozione dei talenti richiede un approccio integrato che coinvolga attivamente scuole, famiglie e comunità, al fine di favorire il pieno sviluppo del potenziale degli studenti dotati.

KEYWORDS

Underachievement, Gifted students, Talent promotion, Neuroscience, Educational interventions

Underachievement, Studenti dotati, Promozione del Talento, Neuroscienze, Interventi educativi

Received 27/04/2025

Accepted 11/06/2025

Published 20/06/2025

Introduction

Several factors have contributed to bringing attention back to the promotion of talent. In the scientific field, the development of experimental research methods in evolutionary psychology, genetics and neuroscience has re-proposed in new terms the problem of the development of intellectual structures, the sequence of developmental phases, the acceleration or delay of maturation, the heredity-environment interaction. In the meantime, the flourishing of intercultural research conducted with increasingly accurate statistical methods has made it possible to evaluate the environmental influences that hinder or facilitate the realization of talent. We need solutions to the problems of pollution, inflation, urbanization, education for all and there is a need for figures capable of using talent to find creative answers to these issues (Sternberg, R.J., e Davidson, J.E., 2005).

Gifted and talented students, by definition, possess exceptional intellectual abilities and potential. Yet, a perplexing phenomenon known as underachievement plagues a significant portion of this population. This phenomenon, characterized by a notable discrepancy between a student's demonstrated abilities and their actual academic performance, has baffled educators, researchers, and parents alike for decades (Leana-Taşçılar, M. Z., 2024).

Underachievement in gifted students represents a significant loss of human potential, demanding comprehensive understanding and effective intervention strategies. This contribute aims to delves into the complexities of underachievement in gifted and talented students, exploring its definitions, contributing factors, and potential solutions. Addressing gifted underachievement requires a comprehensive approach that considers this interplay of internal and external factors. Early identification and intervention are crucial, utilizing standardized tests, teacher observations, and specialized assessment tools. (Jackson, R. L., & Jung, J. Y., 2022).

Schools play a pivotal role in fostering supportive learning environments that cater to the unique needs of gifted students (D'Alessio, 2001). Differentiated instruction, enrichment opportunities, and a focus on social-emotional well-being are essential elements of effective intervention strategies. Collaboration between educators, families, and communities is also fundamental to provide a holistic system of support that empowers gifted students to reach their full potential (Zigler, A., e Heller, K.A., 2000).

In this context, the noteworthy contribution of Olivieri (2018) deserves mention, as it has significantly advanced the discourse on giftedness within the Italian scientific community. Beginning with the classification of different types of giftedness, Olivieri traces their theoretical underpinnings through the work of various scholars over the past four decades, articulating the educational and pedagogical implications and strategies in a clear and practically oriented manner.

1. Underachievement: the individual within

One of the critical aspects concerns the correct identification of the gifted population. For the recognition of these subjects, IQ has represented the essential point of reference for measuring cognitive abilities, however today the belief is widely shared that these represent only one aspect of a subject's potential (Newman, 2008). The answer to the question "what is giftedness?" it calls many skills into play, as taught by researchers considered authorities on the subject, such as Sternberg (1997), Gardner (1999), Gagnè (2000). Most people tend to consider only intellectual endowment, but these children show many talents in art, music, sports, relationships and creativity (Pfeiffer, 2008). The number of them and their typology has its limit in what a given society recognizes and values.

As is well understood, this has implications for the choice of tests and procedures to be used in identifying gifted students. Defining underachievement in gifted students has been a subject of much debate, with no universally accepted definition. However, a widely adopted definition, proposed by Reis and McCoach (2000), describes it as "a significant discrepancy between expected and actual academic performance" that is not attributable to a diagnosed learning disability and persists over time.

This definition highlights the crucial element of a noticeable gap between a student's potential, as measured by standardized achievement tests or cognitive ability tests, and their actual academic achievements, reflected in grades, teacher evaluations, or work output (Dowdall, C. B., & Colangelo, N., 1982). Several other definitions exist, with some focusing on a discrepancy between predicted achievement, derived from regression equations involving measures of ability and performance and actual achievement. Others define underachievement as a failure to develop or utilize latent potential without direct comparison to other measures.

The lack of a unified definition poses challenges for research comparisons and hinders the development of effective interventions (Karaduman, G. B., 2013).

2. Underachievement: the environment surrounding the individual

External factors that influence underachievement in gifted students are just as significant and complex as the individual ones. The family, school, and social environment plays a determining role in whether a gifted individual will be able to realize their potential. These external factors, including family dynamics, educational environment, peer interactions, and cultural and socio-economic influences, can either contribute positively or negatively to the phenomenon of underachievement.

A school environment that does not sufficiently challenge gifted students can be particularly detrimental to their motivation and development. The absence of a differentiated curriculum, lacking adequate challenges, quickly leads to boredom and disengagement from school activities (D'Alessio, 2001).

The difficulty in finding teachers who can recognize and nurturing gifted students' abilities can create an atmosphere in which these students do not feel supported or understood. The lack of advanced learning opportunities, such as accelerated courses or enrichment programs, limits the potential for growth and intellectual development in these students (Neihart et al., 2002).

Family dynamics can be a crucial factor in the underachievement of gifted students. Excessive pressure from parents, especially those with high expectations, can create an emotionally tense environment that generates anxiety and stress in the young student (Adelodun, 2013). In some cases, families of gifted children may exhibit overprotective behaviors or a desire to "live out" their own ambitions through their children, creating unrealistic expectations. These expectations not only hinder the development of intrinsic motivation but also foster constant dissatisfaction (Johnsen, 2018). On the other hand, lack of support or family instability can reduce the emotional resources necessary to face academic challenges, further exacerbating the underachievement situation.

Peer influence can also have a significant impact on underachievement in gifted students. Peer pressure may push a gifted child to downplay their abilities in order not to appear "different" or "superior" to others. This phenomenon, known as the "peer norm," may lead students to avoid situations that highlight their intellectual

capabilities (Sak, 2004). The lack of peers with similar interests and abilities can contribute to feelings of isolation, reducing motivation to excel academically. In some cases, this isolation can lead to the perception that intelligence and excellence are not valued, and this negatively affects academic engagement.

Access to educational resources plays a fundamental role in underachievement. Gifted students from disadvantaged socio-economic backgrounds may face significant barriers to accessing resources such as advanced courses, enrichment programs, tutoring, or extracurricular learning opportunities. Inequality in access to such resources increases the likelihood that these students will not be able to fully express their potential. Additionally, difficulties related to a cultural mismatch between the educational environment and the student's culture of origin can contribute to a sense of alienation, further reducing motivation and academic success (Ford et al., 2008).

3. Neuroscientific insights into gifted and talented students

Recent neuroscientific studies have provided valuable insights into the brain functioning of gifted and talented students, revealing structural and functional differences that may contribute to their exceptional abilities.

Advanced neuroimaging techniques, such as functional magnetic resonance imaging (fMRI) and electroencephalography (EEG), have shown that gifted individuals often exhibit enhanced connectivity in specific brain regions, particularly in the prefrontal cortex, which is involved in higher-order cognitive functions such as problem-solving, planning, and abstract reasoning (Prescott et alii, 2010).

In Kuhn et alii's work (2021) it was found that there is a significant difference between the size and connectivity of two separate memory systems when comparing intellectually gifted children and their typically developing counterparts. Relative to the typically developing group, the gifted children had larger subcortical structures and more highly connected white matter microstructural organization between those structures in regions associated with explicit memory and IQ, bilateral hippocampus and right putamen. Specifically, the putamen, likely via integrating connections with the prefrontal cortex, and subregions of the hippocampus associated with new learning and information integration were larger in intellectually gifted children. The pronounced integrity of the white matter

connections between these regions is consistent with an anatomical basis for the inherent propensity for intellectually gifted children to learn, integrate, and use explicit information rapidly and efficiently. These findings suggest that intellectually gifted and typically developing children may have innately different neurodevelopmental trajectories mediated by different learning strategies. Explicit and implicit memory occupies different regions of the brain and create independent, though interconnected networks of learning. These structural differences may enable gifted students to process information more efficiently, facilitating their ability to quickly grasp complex concepts, solve difficult problems, and perform well across a variety of domains.

Furthermore, studies have highlighted functional differences in the brain's response to stimuli, suggesting that gifted students tend to experience heightened sensitivity to intellectual challenges and environmental stimuli (Sternberg, 2024). For example, gifted children often exhibit stronger neural responses to novel or stimulating tasks, which could explain their tendency to seek out more intellectually demanding activities or to show greater intrinsic motivation when faced with complex problems. Moreover, emotional regulation, which is typically linked to the amygdala, is often more intense in gifted individuals, leading to greater emotional sensitivity. This sensitivity can result in heightened anxiety, particularly in social or academic situations where the individual feels unchallenged or misunderstood, further hindering their academic progress (Sternberg & Davidson, 2005).

These findings suggest that the cognitive profiles of gifted students are not merely a result of inherent intelligence, but also a product of unique brain functioning, which is more attuned to processing advanced and challenging information. Neuroplasticity has been shown to be particularly pronounced in gifted individuals, contributing to their ability to rapidly acquire new skills and knowledge (Schmitt et alii, 2023). This increased brain plasticity means that gifted students can adapt and excel in novel learning environments, allowing them to thrive when exposed to challenging and enriched educational experiences. However, this also emphasizes the importance of providing an appropriately stimulating environment, as gifted students may become bored in situations where their cognitive potential is not sufficiently challenged.

Understanding the neurological underpinnings of giftedness also has significant implications for educational practices. By tailoring learning experiences to match

the specific needs and cognitive strengths of gifted students, educators can help prevent underachievement and foster the development of their talents.

For instance, providing more complex problem-solving tasks or opportunities for self-directed learning could help leverage the unique brain functioning of gifted students, stimulating their cognitive and creative potential (Prescott et alii, 2010). In this way, neuroscientific findings not only deepen our understanding of how gifted students think but also provide a framework for designing more effective interventions that align with their brain-based cognitive strengths.

4. Tools to identify the underachievement: GUT and GRS-S

The Gifted Underachievement Tool (GUT) is a psychometric assessment tool designed to identify and understand underachievement in gifted students (Leana-Taşçılar, M. Z., 2024). It is a multi-perspective tool, incorporating input from parents, teachers, and the students themselves. This multifaceted approach recognizes that underachievement is a complex phenomenon influenced by various factors. We explore the key features of the GUT: it's possible to evaluate four distinct factors, such as the teacher's perspective, the parent's perspective and the kid's perspective about underachievement, the level of anxiety.

The GUT employs a 5-point Likert scale, ranging from "Definitely Disagree" to "Definitely Agree", to assess the various factors related to underachievement. The student version of the GUT utilizes digital scenarios instead of a traditional paper-and-pencil test. Students are presented with short scenarios and asked to rate their relevance to their own experiences. This approach aims to elicit more authentic responses from students.

Some benefits of the GUT may be the comprehensive assessment: by incorporating perspectives from parents, teachers, and students, the GUT provides a more holistic understanding of the factors contributing to a student's underachievement. Thanks to the early identification, it can help identify underachievement in its early stages, allowing for timely intervention and support. The four-factor structure of the GUT allows to find more targeted interventions, addressing specific areas of concern, such as motivation, anxiety, or family dynamics.

Some limitations of the GUT are, for example, the sample size, because the initial validation study of the GUT involved a relatively small sample size, potentially

limiting the generalizability of the findings. Further research with larger and more diverse samples is needed. Even the use of digital scenarios in the student version may influence student responses. Students might feel more comfortable disclosing personal information in this format compared to traditional assessments. Another limit that can be considered is the age range: the GUT was initially developed and validated with primary school students, parents, and teachers. Its applicability to older students requires further investigation.

The development of the GUT represents a significant step forward in understanding and addressing underachievement in gifted students. By providing a comprehensive, multi-perspective assessment tool, the GUT has the potential to facilitate early identification, inform targeted interventions, and ultimately help gifted students reach their full potential.

The Gifted Rating Scales - School Form (GRS-S) is a teacher-completed assessment tool designed to identify gifted students (Margulies, A.S., e Floyd, R.G., 2004). It's a valuable resource for talent promotion efforts in schools, providing a standardized method for recognizing students with high potential.

The GRS-S assesses giftedness across six key scales: intellectual ability, academic ability, creativity, artistic talent, leadership, motivation. Each scale consists of 12 items, totaling 72 items overall. Teachers rate each item on a 9-point scale, categorized into three ranges: 1-3 below average, 4-6: average, 7-9: above average. Raw scores are converted to T-scores with a mean of 50 and a standard deviation of 10. This allows for comparison across different students and age groups.

The GRS-S has demonstrated high reliability and validity in various studies. This means it consistently measures what it is intended to measure and produces accurate results. It is a relatively short and easy-to-use screening tool. It can be used alongside other assessment methods to identify potentially gifted students who may benefit from differentiated instruction and talent development programs. The GRS-S is particularly beneficial in educational contexts like Italy, where there is a growing need for consistent and reliable identification methods for gifted students. By using tools like the GRS-S, schools can implement targeted interventions and support systems to nurture the talents of these students and address potential underachievement.

5. Talent promotion: an educational perspective

Talent promotion is a crucial aspect of gifted education, focusing on identifying, nurturing, and developing the potential abilities of gifted individuals. It encompasses a range of strategies and interventions designed to create an environment where gifted students can thrive and reach their full potential.

Talent promotion begins with identifying gifted individuals in their early years. Various methods, including standardized tests, teacher observations, and talent-specific assessments, can be used to identify potential. Once identified, it is essential to provide consistent support and encouragement throughout their development.

The talent development is significantly influenced by the environment in which individuals grow. A supportive environment includes access to stimulating learning experiences, positive relationships with mentors, teachers, peers, and family members who provide emotional, social, and financial support and opportunities for deliberate practice and training. This allows gifted individuals to refine their skills and transform their potential into demonstrable talent (Costa-Lobo, C., de Sá S., Ribeiro A., 2021).

Despite their potential, gifted individuals may experience underachievement due to various factors, including a lack of challenge, inadequate support, or social-emotional difficulties. Talent promotion programs need to consider these risks and implement strategies to mitigate them. This includes providing differentiated instruction that caters to the advanced learning needs of gifted students, preventing boredom and fostering continued engagement and offering counselling and mentoring to address social-emotional challenges that may hinder talent development. Effective talent promotion requires collaboration between schools, families, and communities because schools should implement talent development programs, provide differentiated learning opportunities, and train teachers to recognise and support gifted students; families play a crucial role in providing emotional and practical support, fostering a growth mindset, and advocating for their children's needs. It's important to not underestimate the role of communities, that can contribute by providing access to enrichment opportunities, mentorship programs, and resources that support talent development (Gagnè, 2000).

Ultimately, talent promotion aims to help gifted individuals develop their abilities to a high level of performance and make meaningful contributions to their chosen

fields. By understanding the multifaceted nature of talent and implementing comprehensive support systems, we can empower gifted students to reach their full potential and benefit society with their unique talents.

6. Enhancing talent: specific educational strategies for gifted students

Educational practices aimed at gifted students represent a crucial aspect of a truly inclusive educational system, one that seeks to promote the right to education and the full development of each student's potential (Lucangeli, D., 2019).

In Italy, the explicit recognition of gifted children as students with Special Educational Needs (Bisogni Educativi Speciali, BES) only came with the Ministry of Education Note No. 562 of April 3, 2019, which allowed the possibility of drafting a Personalized Educational Plan (PDP). The need for personalized and differentiated teaching pathways was already implicit in previous legislation promoting school autonomy and the enhancement of individual talents (Sandri, P., Zanetti, M. A., & Bennardi, I., 2023).

A key element for the implementation of effective practices is teacher training, considered essential both for recognizing the characteristics of gifted students and overcoming common prejudices, such as the belief that they do not need help or should be treated like everyone else, and for applying differentiated and personalized approaches. What is needed is adaptive and flexible competence, allowing individual differences to be seen not as obstacles but as opportunities for learning and pedagogical innovation (Vinci V., Sgambelluri R., 2020).

Among specific educational strategies, in addition to enrichment and content deepening, it is possible to use differentiated instruction, which involves adapting methodologies, tools, timing, and content to each student's specific needs (Mangione, G. R., & Maffei, F., 2014). It requires flexible planning of the educational offering and providing varied learning opportunities (Tomlinson, C. A., 2022). Another kind of method could be acceleration, which consists of advancing in the study path, either in specific subjects or overall (e.g., grade skipping), aligning the curriculum with their higher abilities (Renzulli, J.S., Renzulli, S.R. 2010). While effective, it may pose risks linked to asynchronous development, especially emotional.

Curriculum compacting, which condenses content already mastered by the student, may free up space for more challenging or in-depth activities. It can affect aspects such as content, format, product, environment, and assessment (Winebrenner, S. 2018). Teachers can also propose additional activities with greater depth and complexity, often chosen by the student based on their interests, promoting critical thinking. “Learning Menus” are a concrete example, offering a range of differentiated activities to encourage autonomy and the discovery of personal talents (Vinci V., Sgambelluri R., 2020). Problem Solving and Project-Based Learning are particularly suitable as active methodologies; they are more stimulating, interesting, and challenging for gifted students, fostering the integration of knowledge and skills. Cooperative learning allows gifted students to support peers through peer tutoring, promoting positive interaction. However, consistently assigning them to “helper” roles or grouping them by fixed levels must be handled carefully to avoid labeling or undue pressure (Luzzo, D. 2010).

Digital technologies play an important role in supporting inclusive and differentiated teaching for gifted students, enabling greater personalization of content (Mangione, G. R., & Maffei, F., 2014). Online collaborative environments, forums, blogs, or shared documents facilitate enrichment, exchange of ideas, and active participation. During Distance Learning, technology proved potentially beneficial for these students, allowing greater autonomy, control over the learning process, freedom to choose content for deeper exploration, and the enhancement of their digital skills (Sandri, P., Zanetti, M. A., & Bennardi, I., 2023).

Finally, effective personalized planning is based on assessment that goes beyond IQ, considering the multidimensionality of giftedness (including creativity, motivation, leadership, and specific talents). The use of specific tools (such as the Gifted Rating Scales or the Potential Intelligence Test – TIP, which measures potential and cognitive modifiability) and an integrated evaluation model are essential to inform educational planning innovation (Vinci V., Sgambelluri R., 2020).

7. Breaking the cycle: interventions for underachievement

Addressing underachievement in gifted and talented students requires a multifaceted approach that targets both internal and external factors. Effective interventions should be tailored to the individual student's needs and context, involving a collaborative effort between educators, parents, and the student

themselves (Kanapathy, S., Hazir, N. M., Hamuzan, H. A., Menon, P., & Woon, Y. H., 2022).

Beyond cognitive aspects, it is crucial to consider the psychological and socio-emotional well-being of gifted students. Their development can be asynchronous, with high cognitive abilities paired with age-appropriate emotional maturity, making them potentially vulnerable to social discomfort, frustration, boredom, or internalizing disorders if not adequately supported (Ambrosini M., 2016). Schools must therefore create stimulating environments that support both academic success and well-being, developing socio-emotional and relational skills. Research on different grouping models (such as full-time vs. part-time programs with non-gifted peers) suggests that the opportunity to interact with students of varying abilities can positively influence self-perception and reduce loneliness (Burkett-McKee, S. et alii, 2021).

Another type of intervention can be the motivational and self-regulatory support such as goal setting and self-monitoring, growth mindset interventions, attribution retraining, building self-efficacy, providing opportunities for success and positive feedback (Veas, A., Castejón, J.-L., O'Reilly, C., & Ziegler, A., 2018).

Therefore, it is important to provide social and emotional support, through counselling and therapy, to address underlying mental health issues, such as anxiety or depression, and to remove barriers to learning and improve overall well-being. Another instrument that can be use is the social skills training, because helping students develop effective communication and interpersonal skills can foster positive relationships and reduce social isolation. Mentoring programs may be useful: connecting students with positive role models, either peers or adults, can provide guidance, support, and a sense of belonging.

The intervention also must be focused on family and school collaboration: in fact, providing parents with information about giftedness, underachievement, and effective parenting strategies can empower them to support their child's academic and emotional development (Zanetti, M. A., 2017). Moreover, equipping teachers with the knowledge and skills to identify and support gifted underachievers is crucial for creating an inclusive and stimulating learning environment. Even fostering open communication channels between parents, teachers, and the student is essential for addressing concerns, developing individualized plans, and monitoring progress.

In the end it could be useful addressing systemic barriers: ensuring that all gifted students, regardless of background or circumstance, have access to appropriate educational opportunities, including advanced coursework, enrichment programs, and counselling services. That is crucial for promoting equity, maximizing potential and raising awareness about the diverse needs and challenges of gifted students, particularly those from underrepresented groups; this can help combat negative stereotypes and create a more supportive environment for their development (White, S. L. J., Graham, L. J., & Blaas, S., 2018).

In summary, educational practices for gifted students require a holistic, flexible, and personalized approach, supported by trained and aware teachers, aimed at stimulating their cognitive, creative, and socio-emotional potential within an inclusive context that values differences and prevents difficulties linked to inadequate stimulation (Sgambelluri, R., 2019).

Conclusions

Underachievement in gifted and talented students represents a complex and multifaceted issue, demanding a comprehensive and individualized approach. Understanding the interplay of internal and external factors, implementing targeted interventions, and fostering collaboration between educators, parents, and students are crucial steps in unlocking the potential of these exceptional learners. By addressing the unique needs and challenges of gifted underachievers, we can empower them to thrive academically, emotionally, and socially, contributing their talents to the world. It is also necessary to examine the risk that the individualization of teaching through more perfected techniques increases the natural distances between the most gifted and the others.

On the other hand, we cannot even suggest humiliating the best minds by forcing them to slow down or artificially making their studies easier which instead will have to deal with increasingly complex topics: the important thing is that the teacher, even when giving the gifted child a different task does not adopt an attitude of complacency and preference, and can also enhance the performance of the less gifted. The gifted natural need for success should be oriented towards the task, towards the difficulty to be solved, not towards affirmation over others.

It is important that children, from an early age, are accustomed to choosing useful goals for others, not in a utilitarian sense, but in the sense of participation. Raising gifted people to make them a ruling elite or to cultivate sterile, narcissistic research aimed only at personal success seems immoral and contrary to the purposes of education.

We want to conclude by quoting “Pensieri degli anni difficili” by A. Einstein (1934):

“Knowledge is a dead thing; school, on the other hand, serves to live. It should develop in young people those qualities and abilities that represent a value for the well-being of the community. But this does not mean that individuality should be destroyed, and that the individual should become a simple instrument of the community, like a bee or an ant. A community of individuals who are all the same, without originality and without personal goals would be a poor community without the possibility of development. On the contrary, the goal must be the education of individuals who act and think independently, who, however, see community service as their highest life problem. As far as I can judge, the English type of school comes closest to the reality of this ideal.”

References

- Adelodun, G. A. (2013). Parental involvement as a determinant of academic performance of gifted underachieving students. *Journal of Education and Practice*, 4(12), 95-100.
- Ambrosini, M., Faleri, E., Gallimberti, F., Pedron, M., Polezzi, D., Re, A., & Ronchese, M. (2016). Gli studenti ad alto potenziale cognitive (Gifted Students). In D. Lucangeli (a cura di), *Manuale Operativo. Interventi e strategie per l'Alto Potenziale Cognitivo*. Vicenza: Centro Produttività Veneto.
- Burkett-McKee, S., Knight, B. A., & Vanderburg, M. A. (2021). Psychological Well-Being of Students With High Abilities and Their School's Ecology: Is There a Relationship?. *Roeper review*, 43(3), 197-211.
- Çakır, L. (2014). The relationship between underachievement of gifted students and their attitudes toward school environment. *Procedia - Social and Behavioral Sciences*, 152, 1034–1038. <https://doi.org/10.1016/j.sbspro.2014.09.269>

Costa-Lobo, C., de Sá S., Ribeiro A. (2021). Talent Promotion & Psychological Intervention: literature contributions. *Dossier - Creativity, emotion and education, Educ. rev.* 37.

Cross, T. L. (2001). *Handbook of giftedness in children: Psycho-educational theory, research, and best practices*. Kluwer Academic/Plenum Publishers.

D'Alessio, C. (2002). *Il fanciullo dotato: Identificazione e ambiente educativo*. Edisud Salerno.

Dowdall, C. B., & Colangelo, N. (1982). Underachieving gifted students: Review and implications. *Gifted Child Quarterly*, 26(4), 179–184.

Einstein, A. (2000). *Pensieri degli anni difficili* (A. La Porta, Trans.). Edizioni Comunistiche. (Original work published 1934)

Ford, D. Y., Grantham, T. C., & Whiting, G. W. (2008). Culturally and linguistically diverse students in gifted education: Recruitment and retention issues. *Exceptional Children*, 74(3), 285-300. <https://doi.org/10.1177/001440290807400302>

Gagnè, F. (2000) *A Differentiated Model of Giftedness and Talent*. Year 2000 Update.

Gardner, H. (1999). *Intelligence reframed. Multiple intelligences for the 21st century*. New York: Basic Books.

Gross, M. U. M. (2004). *Exceptionally gifted children*. Routledge.

Jackson, R. L., & Jung, J. Y. (2022). The identification of gifted underachievement: Validity evidence for the commonly used methods. *The British Journal of Educational Psychology*, 92(3), 1133–1159.

Johnsen, S. K. (Ed.). (2018). *Identifying gifted students: A practical guide*. Prufrock Press Inc.

Kanapathy, S., Hazir, N. M., Hamuzan, H. A., Menon, P., & Woon, Y. H. (2022). Gifted and Talented Students “Underachievement” and Intervention: A Case Study. *European Journal of Education and Pedagogy*, 3(5), 114-122. <https://doi.org/10.24018/ejedu.2022.3.5.453>

Karaduman, G. B. (2013). Underachievement in gifted students. *International Journal on New Trends in Education and Their Implications*, 4(4), 165-172.

Kuhn T, Blades R, Gottlieb L, Knudsen K, Ashdown C, Martin-Harris L, Ghahremani D, Dang BH, Bilder RM, Bookheimer SY. Neuroanatomical differences in the memory systems of intellectual giftedness and typical development. *Brain Behav.* 2021 Nov;11(11):e2348. doi: 10.1002/brb3.2348. Epub 2021 Oct 14. PMID: 34651457; PMCID: PMC8613411.

Leana-Taşçılar, M. Z. (2024). Psychometric analysis of underachievement tool for gifted students. *Cogent Education*, 11(1), 2397167. <https://doi.org/10.1080/2331186X.2024.2397167>

Lucangeli, D, (a cura di) (2019) *Gifted: la mente geniale: riconoscere ed educare bambini plusdotati*. Milano: Giunti Scuola.

Luzzo, D. (2010). *Un problema di intelligenza*. Trento: Erickson.

Mangione, G. R., & Maffei, F. (2014). Didattica e Gifted Children. Approcci consolidati e prassi emergenti. *Italian Journal of Educational Research*, 11, 140–156.

Margulies, A.S., e Floyd, R.G. (2004). Review of gifted rating scales (GRS). *Journal of Psychoeducational Assessment*, 22(3), 275-282.

Neihart, M., Reis, S. M., Robinson, N. M., & Moon, S. M. (Eds.). (2002). *The social and emotional development of gifted children: What do we know?*. Waco, TX: Prufrock Press.

Olivieri, D. (2018). Modelli di plusdotazione e sviluppo dei talenti: i gifted children. *Formazione & Insegnamento*, 16(2), 153–172.

Pfeiffer, S. I. (2013). *Serving the gifted: Evidence-based clinical interventions*. Routledge.

Pfeiffer, S.I., Petscher, Y., e Kumtepe, A. (2008). The Gifted Rating Scales—School Form: A validation study based on age, gender, and race. *Roeper Review*, 30, 140–146.

Prescott, J., Gavrilesco, M., Cunnington, R., O'Boyle, M. W., & Egan, G. F. (2010). Enhanced brain connectivity in math-gifted adolescents: An fMRI study using mental rotation. *Cognitive Neuroscience*, 1(4), 277–288. <https://doi.org/10.1080/17588928.2010.506951>

Raoof, K., Shokri, O., Fathabadi, J., & Panaghi, L. (2024). Unpacking the underachievement of gifted students: A systematic review of internal and external factors. *Heliyon*, 10, e36908. <https://doi.org/10.1016/j.heliyon.2024.e36908>

Reis, S. M., & McCoach, D. B. (2000). The underachievement of gifted students: What do we know and where do we go? *Gifted Child Quarterly*, 44(3), 152–170.

Renzulli, J.S., Renzulli, S.R. (2010). The Schoolwide Enrichment Model: A Focus on Student Strengths and Interests. *Gifted Educational International*, 26(2-3), 140-157.

Sak, U. (2004). *About creativity, giftedness, and teaching the creatively gifted in the classroom*. Roeper Review, 26(4), 216–222. <https://doi.org/10.1080/02783190409554272>

Sandri, P., Zanetti, M. A., & Bennardi, I. (2023). Gifted Students and Inclusive Distance Learning: an Exploratory Survey. *Form@re - Open Journal Per La Formazione in Rete*, 23(2), 189–208. <https://doi.org/10.36253/form-14189>.

Schmitt A, Wollschläger R, Blanchette Sarrasin J, Masson S, Fischbach A, Schiltz C. (2023). Neuromyths and knowledge about intellectual giftedness in a highly educated multilingual country. *Front Psychol*. 2023 Oct 20;14:1252239. doi: 10.3389/fpsyg.2023.1252239. PMID: 37928578; PMCID: PMC10623439.

Sgambelluri, R. (2019). Valutare e valorizzare gli studenti gifted a scuola: verso la progettazione di un modello integrato di valutazione per l'inclusione. *Formazione & Insegnamento*, 17(3), 104–117. https://doi.org/10.7346/-fei-XVII-03-19_08

Sternberg, R. J. (2024). Reframing Social and Emotional Development of the Gifted. *Behavioral Sciences*, 14(9), 752. <https://doi.org/10.3390/bs14090752>

Sternberg, R.J., e Davidson, J.E. (a cura di) (2005). *Conceptions of giftedness*. (2nd ed.). Cambridge: Cambridge University Press.

Tomlinson, C. A. (2022). La differenziazione didattica in classe. Per rispondere ai bisogni di tutti gli alunni. Brescia: Morcelliana.

Veas, A., Castejón, J.-L., O'Reilly, C., & Ziegler, A. (2018). Mediation analysis of the relationship between educational capital, learning capital, and underachievement among gifted secondary school students. *Journal of Education of the Gifted*, 41(4), 369–385. <https://doi.org/10.1177/0162353218799436>

Vinci, V., & Sgambelluri, R. (2020). Riconoscere e promuovere il talento e l'alto potenziale di studenti Gifted: Dai test di valutazione alle strategie didattiche

personalizzate. *Formazione & Insegnamento*, 18(2), 253–269.
https://doi.org/10.7346/-fei-XVIII-02-20_21

White, S. L. J., Graham, L. J., & Blaas, S. (2018). Why do we know so little about the factors associated with gifted underachievement? A systematic literature review. *Educational Research Review*, 24, 55–66.
<https://doi.org/10.1016/j.edurev.2018.03.001>

Winebrenner, S. (2018). *Teaching Gifted Kids in Today's Classroom: Strategies and Techniques Every Teacher Can Use (Revised & Updated Third Edition)*. Minneapolis: Free spirit publishing.

Zanetti, M. A. (2017), *Bambini e ragazzi ad alto potenziale. Una guida per educatori e famiglie*. Roma: Carocci.

Zigler, A., e Heller, K.A. (2000). Conceptions of giftedness from a meta-theoretical perspective. In K.A. Heller, F.J. Monks, R.J. Sternberg e R.F. Subotnik, *International handbook of giftedness and talent* (2nd ed., pp. 2-21). Amsterdam: Elsevier.

Zimmerman, B. J. (2000). Attaining self-regulation: A social cognitive perspective. In M. Boekaerts, P. R. Pintrich, & M. Zeidner (Eds.), *Handbook of self-regulation* (pp. 13-39). Academic Press.