

ISSUE

42



WorldTalentWeb NEWSLETTER

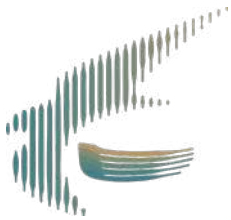
September 2026

A newsletter of the World Giftedness Center

ISSN
2709 - 0728

TABLE OF CONTENTS

Why Tier 1 is the Foundation of Talent Development Jennie Quinn & Penina Kiss	01
When Giftedness and Motor Challenges Coexist: A Conversation with Séverine Séverine Alonso-Bekier and Keri M. Guilbault	05
Generative Artificial Intelligence Applications in Gifted Education: New Frontiers for Supporting Gifted and Twice-/Multi-Exceptional Learners Dr Michelle Ronksley-Pavia	12
High Abilities in the Age of Artificial Intelligence: Development of Socioemotional Skills in Childhood Paula Irueste	22
Layered Communication in Multicultural Classrooms: Rethinking Ability and Giftedness in Global Higher Education Meeyoung Kim	28



THE 20TH ASIA-PACIFIC CONFERENCE ON GIFTEDNESS (APCG 2028)

WE ARE THRILLED TO ANNOUNCE THAT THE APCG 2028 WILL BE HOSTED
BY HAMDAN BIN RASHID AL MAKTOUM FOUNDATION FOR MEDICAL
AND EDUCATIONAL SCIENCES.



WHEN

10 – 14 April 2028



WHERE

World Trade Center , Dubai,
United Arab Emirates (UAE)



THEME

Future-Proof Minds:
Crafting the Gifted for Unseen Challenges

The APCG is a biennial event that provides an opportunity to contribute to the global dialogue about gifted and talented education. In general, it functions as an interactive hub for different educational parties, including, but not limited to, scholars, researchers, educators, policymakers, and advocates dedicated to the advancement of gifted and talented education.

The Conference Website will come very soon.

Stay tuned for the call of papers, and for more information about the event.



WHY TIER 1 IS THE FOUNDATION OF TALENT DEVELOPMENT

Jennie Quinn & Penina Kiss

Welcome to the September edition of the WTW Newsletter. We are delighted you have joined us. This issue features four new articles showcasing the research and practice of our talented contributors, and we hope they inspire you to share your own work and experiences with our WTW community.

Recently, I was invited to facilitate a workshop on neurodiversity for a group of early-career teachers. As I prepared for the session and reflected on the questions many beginning educators are grappling with, I found myself returning to a deceptively simple idea: What matters most when we want learners not just to access learning, but to participate, contribute, and flourish within it?

For those with an education background, I am sure you can recall those early years in the classroom, when enthusiasm for teaching was abundant, but the experience and skill needed to truly engage learners was still developing. Every day was exciting, exhilarating, and somewhat terrifying. While teaching remains every bit as rewarding today as it was when I began all those years ago, the demands on teachers have grown exponentially, and student cohorts have become ever more complex.

I was determined to honour the time these new teachers had taken away from their classrooms with something practical and worthwhile but I quickly encountered a challenge. How do you distil decades of experience working with neurodiverse and high-potential learners into just three hours? Rather than attempting to address every challenge in education, I settled on the foundation that sits beneath, a foundation that is often overlooked.

If our remit is to truly engage, inspire, and empower students, then Tier 1 supports must provide the bedrock of our classrooms. Working with both neurodiverse and high-potential students has reinforced a consistent reality: classrooms often lack strong universal practice. Without these foundations, students may become disengaged, anxious, confused, frustrated, or dysregulated. Some mask the impact of these experiences, while others express it through behaviours that are frequently misunderstood.

This brings me back to my original question: what matters most when we want learners not only to access learning, but to thrive within it?

Gifted education rightly emphasises, among other things, identification, differentiation, acceleration, and talent development as essential components of effective practice. Yet in our focus on these important elements, we can sometimes overlook a more fundamental consideration.

Before we can challenge learners, extend them, or develop their talents, we must first consider the barriers that prevent them from demonstrating what they know, what they can do, and what they might become.

A learner may possess exceptional mathematical reasoning but struggle with written expression. A highly creative student may not thrive within narrow definitions of success. A twice-exceptional learner's advanced thinking may be obscured by challenges in executive functioning, communication, or processing speed. A culturally or linguistically diverse learner may possess remarkable capability that remains hidden because prevailing pathways privilege particular forms of performance.

In each of these situations, the issue is not necessarily ability.

The issue may be access.

This distinction matters because talent development begins with opportunities to engage deeply, think critically, communicate understanding, take intellectual risks, and participate meaningfully in learning. When barriers limit access to these opportunities, talent can remain concealed, regardless of its magnitude.

From this perspective, talent development becomes as much about removing barriers as it is about providing challenge.

Within a Multi-Tiered System of Supports (MTSS), Tier 1 represents the core learning environment available to all students. Historically, gifted education and MTSS have often existed as separate conversations. Increasingly, however, researchers argue that they are deeply interconnected. Troxclair (2025) suggests that without intentional attention to advanced learners within Tier 1 systems, there is little assurance that general education classrooms will consistently address gifted students' needs.

This observation is significant because Tier 1 is where students spend most of their educational experience. Regardless of the quality of enrichment, intervention, or acceleration, the everyday classroom remains the primary context in which talent is either cultivated or constrained.

Frameworks such as Universal Design for Learning (UDL) offer a powerful way of thinking about this challenge. UDL begins with the assumption that learner variability is normal rather than exceptional. Instead of designing for an imagined "average" learner and then retrofitting accommodations, educators proactively plan for diversity from the outset.

For gifted education, this has profound implications.

A common misconception is that universal design reduces academic challenges. In reality, effective UDL does quite the opposite. By removing unnecessary barriers, it creates greater access to rigorous, complex, and intellectually demanding learning experiences.

Providing multiple ways to access information, activating prior knowledge, highlighting patterns and concepts, encouraging interdisciplinary thinking, and allowing flexible ways to demonstrate understanding creates multiple pathways for students to engage with high expectations and reveal capabilities that might otherwise remain hidden.

In this sense, Tier 1 is more than a support structure. It can also be a mechanism for talent discovery and a foundation for effective identification. When high-quality universal practices are consistently available to all learners, educators gain a clearer picture of student strengths, needs, and potential. This matters not only for identifying giftedness, but also for recognising when additional layers of support may be required. Strong Tier 1 practice helps differentiate between students who need adjustments to access learning and those who require more intensive Tier 2 or Tier 3 interventions. In other words, when the foundation is solid, learners who need additional challenges, targeted support, or specialist intervention become easier to identify and are more likely to receive the access they need.

This may be especially important for twice-exceptional learners, whose strengths and challenges often interact in complex ways. Too often, the absence of strong Tier 1 practices can blur the picture. A learner's difficulties may be attributed solely to disability, while their strengths remain hidden, or advanced potential may mask significant support needs. Effective Tier 1 environments reduce these barriers and create conditions where both strengths and challenges can be observed more accurately. As a result, decisions about Tier 2 and Tier 3 supports become more responsive, evidence-informed, and aligned to individual need.





As I reflected on that workshop for beginning teachers, I realised that conversations about neurodiversity and gifted education often arrive at the same destination. In both fields, the challenge is not simply recognising difference. The challenge is creating learning environments in which difference can be expressed, valued, and developed.

Perhaps that is why Tier 1 matters so much.

Not because it sits at the bottom of a framework, but because it shapes the daily learning experiences of every student. It is where curiosity is sparked, confidence is built, barriers are reduced, and strengths begin to emerge. When Tier 1 is effective, it not only improves access and engagement for all learners, it provides the foundation upon which the rest of the system can function effectively.

References:

Troxclair, D. A. (2025). MTSS+Gifted Module: Infusing the Needs of Gifted Learners Within the MTSS Model in Graduate Education Programs. *Gifted Child Today*, 48(3), 198-220.



WHEN GIFTEDNESS AND MOTOR CHALLENGES COEXIST: A CONVERSATION WITH SÉVERINE ALONSO-BEKIER

Séverine Alonso-Bekier¹ and Keri M. Guilbault²

¹Institut Supérieur de Rééducation Psychomotrice (ISRP), France

²Department of Advanced Studies, Johns Hopkins University, USA

In this reflective conversation, Dr. Séverine Alonso-Bekier—a psychomotor therapist, researcher, and educator with over 25 years of clinical experience in France—discusses psychomotor therapy and its relevance for gifted and twice-exceptional learners (i.e., students with both gifts and disabilities). The interview was conducted by Dr. Keri Guilbault, who collaborated with Dr. Alonso-Bekier in France as a visiting scholar during her sabbatical from Johns Hopkins University.

KG: For readers unfamiliar with the profession, how do you define the role of a psychomotor therapist? What unique focus distinguishes psychomotor therapy from purely cognitive or academic interventions?

SAB: Psychomotor therapy is a holistic approach grounded in the conviction that body and mind are inseparable: dysfunction in neurological functions has repercussions on the body, including behavior. Every person uses the psychomotor system—body schema, spatial and temporal orientation, gross and fine motor skills, executive functions, memory, and muscle tone—to interact with and adapt to the environment. When one of these elements is disturbed, the symptoms we observe are often manifestations of underlying psychomotor problems.

Psychomotor rehabilitation mobilizes brain plasticity by engaging impaired motor, cognitive, and psychosocial functions to reduce, compensate for, or eliminate deficits. Though the terms date to the late 19th century, the discipline took shape in 1950s France through the collaboration of Giselle Soubiran and Professor Julian de Ajuriaguerra, who established the close articulation of body and psyche as a new clinical and scientific field.

KG: What training and credentials are required to become a psychomotor therapist in France, and how is psychomotricity regulated as a profession?

SAB: In France, psychomotor therapy requires a three-year state diploma earned after the baccalaureate, with selective admission based on academic results and a motivational interview. The program combines anatomy, physiology, neurology, psychology, psychiatry, neuropsychology, and the administration and interpretation of assessment tools, alongside extensive clinical internships (two days per week over two years). A re-engineering of the profession is underway to extend training to five years (bachelor's through the master's level). A 1995 decree widened the field from education to rehabilitation, integrated the discipline into national healthcare plans, and recognized psychomotor therapists as medical auxiliaries. The discipline is cited in Haute Autorité de Santé guidelines and in national plans for autism, Alzheimer's, and cerebral palsy.

KG: Many readers are familiar with physical therapy or occupational therapy. How would you describe the key differences between psychomotor therapy and these other practices, and where do they collaborate?

SAB: Psychomotor therapy and occupational therapy are complementary but distinct. Psychomotor therapy is grounded in neuroscience, psychogenesis, cognitive psychology, and movement science, treating the body as the central site of therapeutic work—where muscle tone, emotion, body schema, spatial-temporal orientation, and motor skills are integrated. It uses a primarily “bottom-up” approach, strengthening the foundational capacities (tonic regulation, balance, perceptual-motor processes) on which all motor functions rest. Occupational therapy, by contrast, focuses on participation in meaningful daily activity and uses more “top-down” methods that work directly on functional tasks through technical aids and task adaptation. Today, integrative bottom-up and top-down models are the recommended standard (Frazão et al., 2022). The two professions collaborate routinely in pediatrics, neurology, and mental health, where body, cognition, emotion, and social participation are intertwined.

KG: Can you walk us through the psychomotor assessment process and how it informs the therapeutic plan?

SAB: The psychomotor assessment combines quantitative and qualitative data: standardized tests measuring specific skills, alongside non-standardized observations of psychomotor development. The tools depend on the child's age and the function being examined—tonic regulation, motor maturity, relational capacity, and so on. The aim is to objectify deviation from the norm. The resulting psychomotor diagnosis is presented to the family in a complete report and becomes the basis for a therapeutic project with short-, medium-, and long-term objectives. Because the body is the main tool of intervention, treatment combines sensorimotor, perceptive-motor, relaxation, expressive-creative, and digital techniques. Psychomotor therapists routinely work alongside physical therapists, speech therapists, and occupational therapists within multidisciplinary teams (Alonso-Bekier, 2025; Soubiran & Coste, 1975).

KG: In which countries is psychomotor therapy a recognized profession?

SAB: Beyond France, psychomotricity is well established across much of Europe, Latin America, and Québec, Canada, and is emerging in Asia and Africa primarily through rehabilitation and early childhood systems shaped by European theoretical traditions. The United States does not have a formal psychomotor therapy profession; aspects of the discipline are distributed across physical therapy, occupational therapy, speech-language pathology, and school psychology. This fragmentation has particular consequences for gifted and twice-exceptional learners, whose uneven motor, emotional, or regulatory profiles may be misunderstood when supports focus on cognition while overlooking bodily regulation and integration.

KG: Your research focuses in part on gifted children with uneven or asynchronous profiles. What psychomotor characteristics do you often observe in these children?

SAB: Children with high intellectual potential (HPI), particularly those with heterogeneous cognitive profiles, often present a distinctive psychomotor profile reflecting what Terrassier (1979) termed “dyssynchrony”—a gap between advanced intellectual development and affective, relational, and psychomotor development. Because psychomotor maturation does not keep pace with intellectual precocity, the body can become a source of frustration rather than a tool for learning.

In her doctoral study of 83 HPI children, Saint-Cast (2013) identified seven distinct psychomotor factors (see Table 1). Gifted children with asynchronous cognitive profiles—those showing significant disparities across cognitive capacities—were at significantly greater risk for psychomotor disorders than those with homogeneous profiles. The gap between intellectual and bodily tools, indicated by neuroimaging studies, helps explain why these children frequently present with learning difficulties rooted in psychomotor functions. That’s why I focused my work on developing a psychomotor protocol. Preliminary findings of patient progress treated with this protocol indicate that psychomotor therapy may be effective for this population.

Table 1
Psychomotor characteristics observed in gifted children with asynchronous profiles

Psychomotor Area	Common Characteristics
Dyspraxia	Difficulties with motor planning, coordination, and execution of complex actions
Tonic–emotional reactivity	Heightened physical responses to emotional stimuli, often accompanied by anxiety or attentional instability
Emotional–motor dysregulation	Reduced motor control during periods of emotional stress or dysregulation
Spatial organization difficulties	Challenges with spatial orientation despite relatively preserved graphic or academic abilities
Visual praxis difficulties	Problems copying shapes, organizing written work, or coordinating visual and motor information
Temporal and graphic difficulties	Difficulties with timing, sequencing, handwriting fluency, and graphic control
Body-awareness disturbances	Weak or inconsistent body schema and bodily self-awareness

Note. Adapted from Saint-Cast (2013)

KG: Why might gifted or twice-exceptional children be particularly vulnerable to psychomotor difficulties?

SAB: The vulnerability is rooted in dyssynchrony itself: the HPI child's awareness of and connection to their physical self often does not match the richness of their intellectual development. Handwriting is typically one of the most resistant learning tasks for these children. The young HPI child—physically energetic and brilliant orally—may master most academic tasks easily but struggle with the motor demands of writing, leading to anxious reactions, muscle tension, and irregular, labored handwriting (Desvaux et al., 2023a).

Preliminary neuroimaging evidence suggests that the brains of HPI children with asynchronous profiles function differently from those with homogeneous profiles (Nusbaum et al., 2017). Studies reveal heightened activation in parietal (visual-spatial) and sensory regions, while prefrontal regions responsible for reasoning and temporal planning are less active (Desvaux et al., 2023b). Despite their intellectual gifts, these children may struggle with the executive functions underlying organized motor action, attention regulation, and sequential task completion. The sensorimotor loop on which psychomotor function depends requires sustained attention, and HPI children—particularly those with asynchronous profiles or twice-exceptionalities—are at increased risk for attention difficulties correlated with profile type (Habib, 2023). The distinction between the highly active exploration typical of a curious child and a condition such as ADHD is sometimes subtle and requires careful clinical observation. That's why when psychomotor difficulties co-occur with attentional and emotional sensitivity, these children are frequently misidentified as ADHD or as having behavioral problems—when the underlying issue may instead involve psychomotor–cognitive dyssynchrony that requires specialized assessment and intervention.

KG: How does motor, emotional, and cognitive regulation interact in these learners from a psychomotor perspective?

SAB: In psychomotor therapy, physical activity, emotion, and mental representation are fundamentally interconnected, with muscle tone serving as the primary language of affectivity. Consider how an infant communicates: a content baby relaxes when held, while a distressed baby stiffens. The caregiver reads and responds to these tonic signals—the “tonic dialogue”—and the alternation between hypertonia and hypotonia establishes the foundation for proprioception, body schema, and ultimately all higher-order learning.

For gifted children who might be less attuned to their bodies or less coordinated, this foundation is disrupted. The child may struggle to manage timed tasks, organize thought through gesture and spatial orientation, and direct attention—because the psychomotor substrate that supports these capacities has not been sufficiently built through bodily experience. The major psychomotor functions—body schema, laterality, spatial and temporal orientation, coordination, and tone–emotion regulation—are interconnected and jointly support reading, writing, and mathematical reasoning. When any is disturbed, consequences extend across learning domains. This is why an integrative body–mind approach is particularly suited to the complex profiles of gifted and twice-exceptional learners.

KG: What changes have you observed in students beyond motor skills—for example, in confidence, emotional regulation, and school functioning?

SAB: Beyond motor and graphic gains, my research and clinical experience consistently show that psychomotor intervention contributes to emotional regulation, self-efficacy, and therapeutic engagement—outcomes increasingly recognized as critical determinants of participation and quality of life. When children begin to experience their bodies as capable and responsive rather than as sources of failure, there is often a marked shift in confidence and willingness to engage with academic tasks, particularly writing. Evidence supports psychomotor rehabilitation as effective for improving motor functioning and associated psychosocial outcomes across developmental populations, particularly when interventions are structured, goal-oriented, and embedded in multidisciplinary care (Alonso-Bekier, 2026; Tallet, 2018). For gifted children whose developmental difficulties can mask their intellectual strengths, the psychomotor approach addresses the embodied dimensions of learning that purely cognitive or academic interventions may overlook.

KG: What do your findings suggest about how schools might better support twice-exceptional learners?

SAB: Gifted and twice-exceptional children with dyssynchronous profiles may present psychomotor difficulties in expressing themselves differently from those in the general population. Schools focused exclusively on enrichment or academic acceleration may miss the bodily and regulatory dimensions of these children's experiences. A psychomotor evaluation should be considered whenever a gifted child presents with unexplained handwriting difficulties, motor clumsiness, attention regulation challenges, or emotional dysregulation disproportionate to academic demands. Twice-exceptional learners need coordinated, multidisciplinary support that addresses both their intellectual strengths and their psychomotor needs. This seems especially important because, in my experience, much of this dyssynchrony appears to be less an inherent trait than something that emerges as children enter school — an idea that echoes Terrassier's (1979) distinction between internal dyssynchrony and social dyssynchrony — which suggests that the environment plays a central role in whether a child's potential is expressed harmoniously. One caution, however: this evidence base is still developing and largely European, so controlled, cross-cultural studies are needed to confirm which supports transfer across educational systems.

KG: How can educators collaborate effectively with psychomotor therapists when this role exists?

SAB: Collaboration is most effective when grounded in shared observation and communication. In France, psychomotor therapists routinely provide assessment reports, recommend classroom accommodations, and help teachers understand the bodily and regulatory dimensions of a child's learning profile, while educators contribute classroom observations that enrich the assessment and tailor the intervention. In countries without psychomotor therapists, the framework can still inform practice: attending to how a child sits, holds a pencil, organizes their workspace, manages transitions, and regulates their body during learning tasks provides valuable information that complements cognitive and academic assessments.

KG: If you could share one key message with gifted educators internationally, what would it be?

SAB: My key message would be this: the body matters in gifted education. The psychomotor system—body schema, tone, spatial-temporal orientation, motor coordination, and emotional regulation through the body—forms the foundation upon which all learning is built. When gifted children struggle, particularly those with dyssynchrony, the source of difficulty often lies not in their intellect but in the embodied processes that support learning. Psychomotor therapy offers a rigorous, evidence-informed approach to identifying and addressing these difficulties. I hope this conversation will encourage international educators and researchers to embrace the richness of psychomotor therapy and explore how a body–mind approach might enrich their work with gifted children.

Author Biographies



Séverine Alonso-Bekier, PhD, is a psychomotor therapist and researcher. She serves as a trainer and pedagogical manager at the Institut Supérieur de Rééducation Psychomotrice (ISRP, France). Her research focuses on neurodevelopment and high intellectual potential, with particular attention to twice-exceptional learners.



Keri M. Guilbault, EdD, is a Professor at the Johns Hopkins University School of Education in the USA. She studies high intellectual potential, twice-exceptionality, and neurodiversity in educational and organizational systems.

References

- Alonso-Bekier, S. (2025). Psychomotor therapy as a privileged approach in rehabilitation to support child development: Benefits and means of action. *Central Asian Bulletin of Medical Rehabilitation*, 4(6), 12–19.
- Alonso-Bekier, S. (2026). Difficultés psychomotrices chez l'enfant HPI : Vers une approche intégrative du corps et de l'esprit [Psychomotor difficulties in gifted children: Towards an integrative approach to body and mind]. *Soins Psychiatrie*, 364. <https://doi.org/10.1016/j.spsy.2026.03.006>
- Desvaux, T., Danna, J., Connan, J.-F., Zamora, R., Velay, J.-L., & Frey, A. (2023a). Existe-t-il des spécificités de l'écriture manuscrite chez l'enfant à haut potentiel intellectuel (HPI) non dysgraphique? [Are there any specific characteristics of handwriting in intellectually gifted children who do not have dysgraphia?]. *Approche Neuropsychologique des Apprentissages chez l'Enfant*, 186, 1–11.
- Desvaux, T., Danna, J., Velay, J.-L., & Frey, A. (2023b). From gifted to high potential and twice exceptional: A state-of-the-art meta-review. *Applied Neuropsychology: Child*. Advance online publication. <https://doi.org/10.1080/21622965.2023.2252950>
- Frazão, A., Santos, S., Rodrigues, A., Brandão, T., Simões, C., & Lebre, P. (2022). Consensus on the best practice guidelines for psychomotor intervention in preschool children with autism spectrum disorder. *Children*, 9(11), 1778. <https://doi.org/10.3390/children9111778>
- Habib, M. (2023). *Le génie des Dys* [The genius of dys]. Auxerre, France: Éditions Sciences Humaines.
- Nusbaum, S., Hannoun, S., Kocevar, G., Stamile, C., Fournier, P., Revol, O., & Sappey-Marini, D. (2017). Hemispheric differences in white matter microstructure between two profiles of children with high intelligence quotient vs. controls: A tract-based spatial statistics study. *Frontiers in Neuroscience*, 11, 173. <https://doi.org/10.3389/fnins.2017.00173>
- Saint-Cast, A. (2013). *Étude de profils psychomoteurs d'enfants à hauts potentiels intellectuels en difficulté d'apprentissage à l'école primaire française* [Study of the psychomotor profiles of intellectually gifted children with learning difficulties in French primary school] (Doctoral dissertation, Université de Sherbrooke). Retrieved from <https://savoirs.usherbrooke.ca/handle/11143/6391>
- Soubiran, G.-B., & Coste, J.-C. (1975). *Psychomotricité et relaxation psychosomatique* [Psychomotricity and psychosomatic relaxation]. Paris, France: Doin.
- Tallet, J. (2018). Apport des recherches sur la plasticité cérébrale pour comprendre les effets de la rééducation psychomotrice : évidences et réflexions [The contribution of research on brain plasticity to understanding the effects of psychomotor therapy: Evidence and reflections]. *Approche Neuropsychologique des Apprentissages chez l'Enfant*, 153, 1–12.
- Terrassier, J.-C. (1979). Le syndrome de dyssynchronie [The dyssynchrony syndrome]. *Neuropsychiatrie de l'Enfance et de l'Adolescence*, 27(10–11), 445–450.



GENERATIVE ARTIFICIAL INTELLIGENCE APPLICATIONS IN GIFTED EDUCATION: NEW FRONTIERS FOR SUPPORTING GIFTED AND TWICE-/MULTI-EXCEPTIONAL LEARNERS

Dr Michelle Ronksley-Pavia

School of Education and Professional Studies, and Griffith Institute for Educational Research, Griffith University, Queensland, Australia

Neurodiversity Meets the Age of Generative Artificial Intelligence

Across classrooms worldwide, teachers struggle to meet the needs of gifted learners, and this challenge is compounded considerably for twice-exceptional and multi-exceptional students, those who are both gifted and have one or more co-occurring disabilities (e.g., autism, attention deficit hyperactivity disorder (ADHD), dyslexia, dysgraphia) (Foley-Nicpon et al., 2011; Reis et al., 2014; Ronksley-Pavia, 2015; Ronksley-Pavia & Clark, 2025). With prevalence estimates ranging from 7% to 36% for twice-exceptional learners, and 10%-15% for gifted learners, collectively they remain an underserved and educationally disadvantaged diverse population (Cheek et al., 2023; Gagné, 2019, 2021; Ronksley-Pavia, 2020). Multi-exceptional learners bring extraordinary combinations of strengths and challenges, and educational systems are rarely designed to accommodate the paradoxical complexity of their profiles.

Traditional pedagogy does not often support teachers to safely experiment with instructional approaches and accommodations before classroom implementation. That is where generative artificial intelligence (GenAI) can potentially offer something new; spaces to rehearse pedagogy in low-stakes, ethical ways (Ronksley-Pavia, 2025a, 2025b, 2026; Ronksley-Pavia et al., 2025). However, it is important to remain vigilant about bias, privacy, and ethical considerations, including that many popular GenAI models have been trained predominantly on Western-centric data and may not adequately reflect international educational contexts. These models can also produce outputs that can be factually inaccurate, a phenomenon known as hallucination, which underscores the importance of critical human oversight throughout any GenAI-supported process (Adams et al., 2023; Holmes & Porayska-Pomsta, 2023). Additionally, the environmental costs of GenAI use, including energy consumption and water usage, represent an important broader consideration for educators and institutions making decisions about AI adoption (Yañez-Barnuevo, 2025).

The Study: Experimenting with GenAI for Personalised Learning

The research reported here, published in the Journal of Advanced Academics (Ronksley-Pavia, 2025a; Ronksley-Pavia et al., 2025) and presented at the World Giftedness Centre International Conference (Ronksley-Pavia, 2025b), was a collaboration between two neurodivergent researchers and one neurotypical researcher, combining lived experience and academic expertise. The study conducted a series of iterative, small-scale experiments to explore how educators might use GenAI to rehearse pedagogy; that is, to trying out instructional approaches using synthetic gifted learner profiles before applying them in real classrooms. The study also examined how bias and cultural assumptions, may shape GenAI-generated responses.

Two guiding research questions shaped the work:

1. How can GenAI interpret and respond to synthetic, evidence-informed learner profiles of twice- and multi-exceptional students?
2. How closely do its recommendations align with strengths-based, evidence-supported practices from the literature?

The GenAI Platforms

Three GenAI platforms were used across the research, each selected for different capabilities:

- Claude (Anthropic): Chosen for analytical reasoning and contextual sensitivity
- ChatGPT (OpenAI): Valued for iterative refinement and conversational adaptability
- NotebookLM (Google): Used for its capacity to analyse user-supplied documents

Each researcher worked with their preferred GenAI platform. All inputs were composites of real-world data collected over decades of research work with gifted and twice-/multi-exceptional learners, all with prior ethical approvals and fully de-identified; no personal or confidential data were entered at any point, ensuring ethical compliance and data privacy throughout. NotebookLM ultimately showed least able to generate useful composite profiles, producing generic responses that did not adequately reflect the real-world complexity of multi-exceptionality, and its outputs were eventually discarded.

Establishing the Evidence-Based Benchmark: Strengths-Based Approaches

Before generating GenAI recommendations, the research team conducted a preliminary literature review to establish an evidence-based benchmark for evaluating any GenAI recommendations against published research. Four elements of strengths-based differentiation were identified as core to supporting twice-exceptional learners across content, process, product and learning environment (Table 1).

Table 1

Literature-Identified Elements of Strengths-Based Differentiation for Gifted and Twice-Exceptional Learners

Element	Key Focus	Examples for Gifted and Twice-Exceptional Learners
Content	What is taught	Compacted curriculum; advanced materials; interest-based extensions; pre-assessment to align challenge with readiness
Process	How students learn	Flexible pacing; multimodal instruction; scaffolded supports; choice in engagement mode
Product	How learning is demonstrated	Digital portfolios; creative projects; alternative assessment; strength-based sharing
Learning Environment	Conditions for learning	Sensory accommodations; flexible seating; visual cues; executive-function supports

Note. Compiled from the preliminary literature review (see Ronksley-Pavia et al., 2025 for full details).

Two further evidence-based approaches were identified through the preliminary literature review (Table 2). The first, a range of acceleration approaches (e.g., whole grade-skipping, single-subject acceleration, curriculum compacting, advanced placement courses), all based on readiness not age. The second, a variety of grouping practices (e.g., interest-based, readiness, and learning-profile groupings), that were dynamic not fixed, and ideally responsive to the social-emotional as well as intellectual needs of gifted and twice-exceptional learners.

Table 2

Literature-Identified Strengths-Based Approaches for Acceleration and Grouping Practices for Supporting Gifted and Twice-Exceptional Learners

Dimension	Key Components
Acceleration Approaches	
• Grade acceleration • Subject acceleration • Content acceleration • Curriculum compacting	• Subject-based acceleration • Early entrance options • Independent study pathways • Mentorship programs • Structured acceleration planning
Grouping Practices	
• Interest-based grouping • Learning profile grouping • Cluster grouping	• Readiness grouping • Project collaborations • Peer connections • Cross-grade interest groups • Pre-assessment informed grouping • Regular regrouping processes

Note. Compiled from the preliminary literature review (see Ronksley-Pavia et al., 2025 for full details).

Constructing Synthetic Learner Profiles

To explore GenAI's potential without compromising student privacy, the research team developed synthetic learner profiles, these were fictional, yet evidence-informed composites based on real-world, de-identified data (Ronksley-Pavia et al., 2025). Each researcher used a different GenAI platform to construct these profiles, capturing the interplay of giftedness and multiple disabilities. The team also observed patterns of cultural bias in the profile development process; the platforms frequently embedded North American school contexts, North American diagnostic language, and naming conventions that reflected potential ethnic and gender assumptions. Recognising and addressing those biases became a deliberate and important part of the approach.

An iterative prompting process was used to refine each profile across multiple phases, from initial profile creation, through expanding diagnostic timelines, developing subject-specific strategies, refining those strategies for greater specificity, and finally grounding them in the research evidence base (see the iterative prompting framework in the published article) (Ronksley-Pavia et al., 2025). Six credible synthetic learner profiles were ultimately generated, from which two were selected for detailed analysis: Ava Chen and Ethan Rodriguez (Table 3).

Table 3
Final GenAI-Assisted Synthetic Multi-Exceptional Learner Profiles

Ava Chen (ChatGPT)	Ethan Rodriguez (Claude)
Age: 14 Grade 8	Age: 11 Grade 6
Giftedness: Exceptional in mathematics; excels in visual-spatial and fluid reasoning; strong abstract problem-solving	Giftedness: Excels in perceptual reasoning (99.9th percentile); strong verbal skills; advanced logical reasoning
Disabilities: Dyslexia, ASD, Sensory Processing Disorder	Disabilities: ASD (Level 1), Sensory Processing Disorder, Dysgraphia
Challenges: Reading, writing, sensory overload, social interaction	Challenges: Slower task completion, fine motor difficulties, sensory regulation, social communication
Pedagogy: Structured learning; supports must scaffold written output; talent development needs strengthening	Pedagogy: Integrated STEM learning; scaffolded written expression; high cognitive engagement with adjustments

Note. Both profiles are entirely fictional; all data are synthetic and de-identified (Ronksley-Pavia et al., 2025).

One of the most notable aspects of the profile generation process was how quickly each GenAI platform began to fill in social and emotional dimensions that had not been explicitly prompted. For example, Claude inferred that Ethan sought structured environments to reduce sensory load, while ChatGPT suggested Ava used humour to mask anxiety about performance. However, this capacity to surface plausible individual traits should be distinguished from the generation of robust social-emotional pedagogical supports, which emerged as one of the weakest areas across both platforms when recommendations were evaluated against the evidence base. These nuances also raised an opportunity and a caution; that GenAI can surface patterns that teachers intuitively recognise, but it can also impose stereotypes if left unchecked.

Claude also generated a plausible synthetic Wechsler Intelligence Scale for Children, Fifth Edition (WISC-V) profile for Ethan, complete with index scores and a developmental diagnosis timeline (Table 3). These appeared highly plausible, yet were entirely AI-generated, a finding that demonstrates both capability and potential risk. GenAI can simulate data that look authentic, and such outputs can blur ethical boundaries if misinterpreted as factual. It cannot be emphasised strongly enough, real student data should never be entered into GenAI platforms, and synthetic outputs should be treated as fictional teaching tools.

Table 3
Claude-Generated Synthetic WISC-V Profile for Ethan Rodriguez

WISC-V Index	Score	Percentile	Category
Full Scale IQ	135	99th	Very Superior
Verbal Comprehension	131	98th	Superior
Perceptual Reasoning	150	99.9th	Very Superior
Working Memory	110	75th	High Average
Processing Speed	81	10th	Low Average

Note. Entirely AI-generated synthetic data; not representative of any real individual.

How Well Did GenAI Recommendations Align with Evidence-Based Practice?

With the synthetic profiles established, each GenAI platform was prompted to generate strengths-based pedagogical strategies for supporting the learners across multiple curriculum areas, including history, literacy, and numeracy. These recommendations were then systematically compared against the findings of the preliminary literature review (Table 4).

Table 4
Comparison of GenAI Recommendations with Evidence-Based, Strengths-Focused Approaches

Differentiation Element	Ethan (Claude)	Ava (ChatGPT)	Alignment with Literature Approaches
Content	STEM integration in historical analysis; mathematical modelling	Visual aids, timelines, maps for accessibility	Strong
Process	Digital tools; programming-based analysis	Multimodal presentation; audio texts	Good
Product	Alternative assessment; technology-enhanced presentations	Multiple formats for demonstrating learning	Strong
Learning Environment	Structured workspace; sensory considerations; clear routines	Modified environment; quiet spaces	Strong

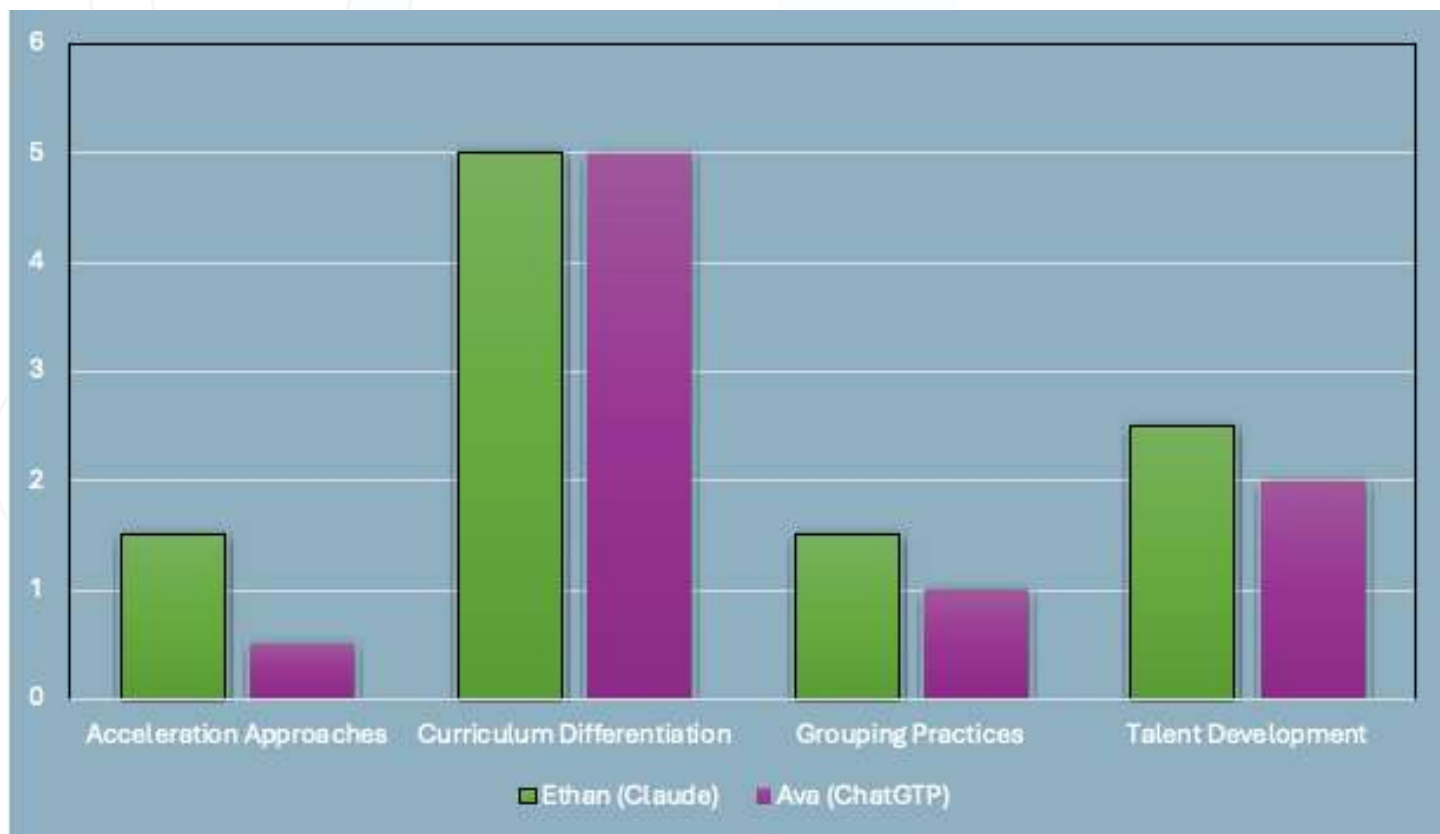
Note. Alignment assessed against the preliminary literature review benchmark (see Ronksley-Pavia et al., 2025 for further details).

Both platforms demonstrated strong alignment with content differentiation, proposing enriched STEM tasks, inquiry-based projects, and interest-driven extension, which supported each synthetic learners profile. Alignment was good for process differentiation and strong for product variation and environmental modifications. However, across both learner profiles, the weakest areas were social-emotional and acceleration recommendations. In terms of social-emotional support, neither platform reliably addressed the affective complexity characteristic of twice-exceptional learners, including heightened sensitivity, perfectionism, asynchronous development, and the social challenges that can sometimes accompany both giftedness and disability, unless these dimensions were explicitly named in the prompt.

Acceleration was similarly underdeveloped, with both platforms tending to default to modification and scaffolding not other aspects for talent development and extension (Ronksley-Pavia et al., 2025). Figure 1 shows the strengths and weaknesses of both GenAI platforms in terms of recommendations made for each synthetic learner profile. Overall, the GenAI platforms potential as starting points for differentiation planning, performing well as idea generators while remaining dependent on human professional judgement to address the contextual and affective complexity that characterises gifted and twice-exceptional learners.

Figure 1

Strengths and Weaknesses of the GenAI Recommendations for each Synthetic Profile



Note: 5-point scale with 0 indicating limited alignment and 5 indicating full alignment with literature evidence-base (see Ronksley-Pavia et al., 2025)

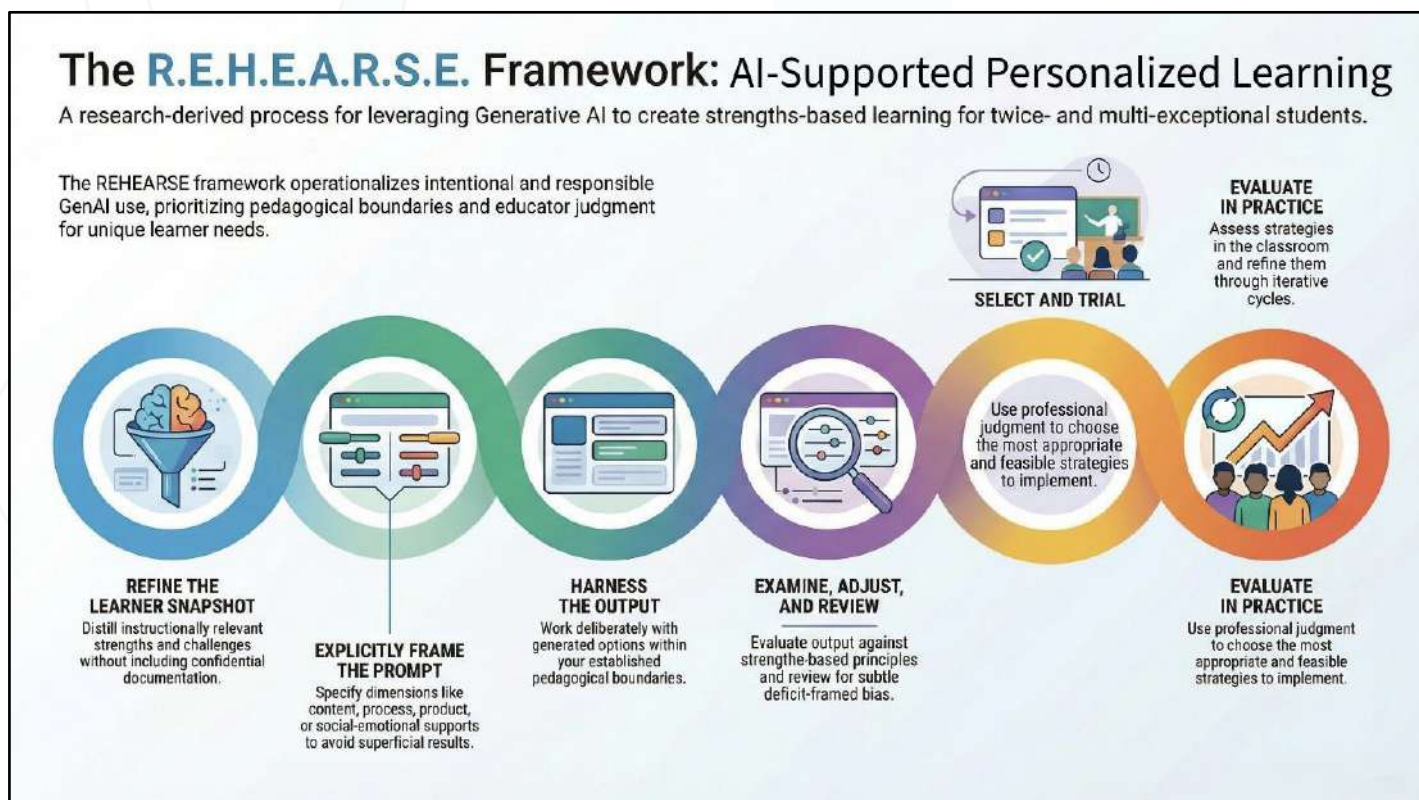
Pedagogical Rehearsal: A New Professional Learning Model

The central practical outcome of this research was termed pedagogical rehearsal, where teachers could potentially use synthetic learner profiles to trial and refine instructional strategies before classroom implementation (Ronksley-Pavia et al., 2025). In the small-scale experiments that were conducted, exploration was across history, literacy, and numeracy. Teachers could, in principle, design differentiated tasks and then use GenAI prompts to anticipate how a learner like Ava or Ethan might be supported based on their learning requirements. Pedagogical rehearsal in this way is conceptualised as representing a model of human–AI collaboration, where the GenAI generates possibilities, and teachers exercise professional judgement, ethically and safely adapting approaches for real learners in real classrooms.

Although teachers did not directly trial rehearsals in the experiments, the implications are clear for future practice. This approach could offer educators working with gifted and twice-/multi-exceptional learners a relatively risk-free, reflective space to explore strengths-based approaches, foreground any assumptions about student potential, and trial pedagogical responses to learner complexity, all before entering the real classroom. Importantly, this research is about leveraging GenAI to extend professional understandings, insight, and practice. GenAI may act as a reflective collaborator in inclusive pedagogy, supporting educators to better understand the cognitive diversity they encounter every day. Interestingly, this work led to the development of a structured framework for practitioners, presented as a keynote showcasing the work in progress at the 2026 2e Online Conference at the College of William & Mary, (USA) called the REHEARSE model (Figure 2).

Figure 2

The REHEARSE Framework for AI-Supported Personalised Learning (Ronksley-Pavia, 2026)



As the multiple small-scale experiments using synthetic twice-exceptional learner profiles progressed, a consistent pattern emerged, where the most productive sessions appeared to be those where GenAI outputs aligned most closely with strengths-based, talent-focused approaches. When that sequence was not observed, the quality of alignment declined. Over time, these more productive sessions appeared to share a common structure, and where that structure was absent, alignment with strengths-based practice was noticeably weaker. That structure gradually became clearer, crystallising into what is now formalised as the REHEARSE framework (Figure 2), a research-derived approach to leveraging GenAI in ways that may explicitly align with personalised, strengths-based learning for twice-/multi-exceptional students. Although a work-in-progress, the REHEARSE framework presents a structured approach to addressing specific gaps in alignment identified through the experimental research.

Precise articulation of talent domains and challenges in the learner snapshot (learner profile) is foundational for applying the REHEARSE framework in practice; vague inputs produced generic outputs. Explicitly framing the prompt is the most critical step, since evidence-based, strengths-based approaches, such as acceleration, grouping, and social-emotional supports, were consistently underdeveloped GenAI outputs unless directly specified (Ronksley-Pavia et al., 2025). Generated outputs should then be used as raw material; not just accepted at face value, these need to be examined against strengths-based practices, and adjusted where deficit framing, insufficient depth, or missing dimensions are identified. Numerous iterations (e.g., re-prompting, refining prompts) should be the norm. Selecting and trialling remain acts of professional judgement; the educator, not the GenAI platform, decides what is appropriate and feasible for each student.

Evaluating strategies in practice assists in ensuring that pedagogical rehearsal does not remain theoretical, which is particularly important given that gifted and twice-/multi-exceptional learner profiles are dynamic not fixed. Like the GenAI platforms it is used with, the REHEARSE framework is itself an evolving work, offered here as a starting point for educators wishing to experiment with structured, strengths-based rehearsal in their own contexts, and as such it is expected to evolve as research and practice continue to develop together.

Rethinking Possibilities in Gifted Education and Talent Development

GenAI has potential to disrupt education and to create innovative approaches for both educators and researchers to reconsider what is possible in gifted education (Ronksley-Pavia, 2025b, 2026; Ronksley-Pavia & Bigum, 2024; Siegle, 2024). It exposes the productive tension between innovation and ethics; between what these platforms can do and what they should do. Within those constraints lie significant opportunities, what might be conceptualised as the unknown unknowns that can inspire new thinking about talent development, equity, and inclusion (Ronksley-Pavia, 2025a, 2025b; Ronksley-Pavia et al., 2025; Ronksley-Pavia & Bigum, 2024).

Recognising bias, respecting privacy, and foregrounding ethics can lead to more deliberate, human-centred, and perhaps more effective GenAI applications. For the field of gifted education, this moment is a frontier moment (Ninaus & Sailer, 2022), perhaps comparable to the paradigm shift that occurred when talent development, not just identification alone, became the central focus of the field (Subotnik et al., 2011). The challenge may not be whether to use GenAI, but how to use it wisely, as a mirror for pedagogical assumptions? As a catalyst for redesigning systems that still too often privilege conformity over creativity?

As researchers and educators in gifted education, our role should be to purposefully and knowledgeably shape how GenAI is used, to assist in ensuring, as much as possible, it supports equity, inclusion, sustainability, and talent development. The question being explored should ultimately be what can educators learn and do through using GenAI that better supports gifted learners? That, ultimately, is where the frontier lies.

References

- Adams, C., Pente, P., Lernermeier, G., & Rockwell, G. (2023). Ethical principles for artificial intelligence in K-12 education. *Computers and Education: Artificial Intelligence*, 4(2023), 1-10. <https://doi.org/10.1016/j.caeai.2023.100131>
- Cheek, C. L., Garcia, J. L., Mehta, P. D., Francis, D. J., & Grigorenko, E. L. (2023). The Exceptionality of Twice-Exceptionality: Examining Combined Prevalence of Giftedness and Disability Using Multivariate Statistical Simulation. *Exceptional Children*, 90(1), 43–56. <https://doi.org/10.1177/00144029221150929>
- Foley-Nicpon, M., Allmon, A., Sieck, B., & Stinson, R. D. (2011). Empirical investigation of twice-exceptionality: Where have we been and where are we going? *Gifted Child Quarterly*, 55(1), 3–17. <https://doi.org/10.1177/0016986210382575>
- Gagné, F. (2019). Implementing the DMGT's Constructs of Giftedness and Talent: What, Why and How? In S. R. Smith (Ed.), *Handbook of Giftedness and Talent Development in the Asia-Pacific* (pp. 71–99). Springer.
- Gagné, F. (2021). Differentiating Giftedness from Talent: *The DMGT Perspective on Talent Development*. Routledge.
- Holmes, W., & Porayska-Pomsta, K. (Eds.). (2023). *The Ethics of Artificial Intelligence in Education Practices, Challenges, and Debates*. Routledge.
- Ninaus, M., & Sailer, M. (2022). Closing the Loop – The Human Role in Artificial Intelligence for Education. *Frontiers in Psychology*, 13(956798), 1-7. <https://doi.org/10.3389/fpsyg.2022.956798>
- Reis, S. M., Baum, S. M., & Burke, E. (2014). An Operational Definition of Twice- Exceptional Learners: Implications and Applications. *Gifted Child Quarterly*, 58(3), 217–230. <https://doi.org/10.1177/0016986214534976>
- Ronksley-Pavia, M. (2015). A Model of Twice-Exceptionality: Explaining and Defining the Apparent Paradoxical Combination of Disability and Giftedness in Childhood. *Journal for the Education of the Gifted*, 38(3), 318–340. <https://doi.org/10.1177/0162353215592499>
- Ronksley-Pavia, M. (2020). Twice-exceptionality in Australia: Prevalence estimates. *Australasian Journal of Gifted Education*, 29(2), 17–29. <https://doi.org/10.21505/ajge.2020.0013>
- Ronksley-Pavia, M. (2025a). The Use of GenAI to Support Neurodivergent Individuals. Queensland Association for Gifted and Talented Children (QAGTC) State Conference.
- Ronksley-Pavia, M. (2025b, October 22). Generative AI Applications in Gifted Education. *3rd World Giftedness Center International Conference, Hamdan Bin Rashid Al Maktoum Foundation for Medical and Education Sciences*.
- Ronksley-Pavia, M., & Clark, C. (2025). Compounded Disadvantage: Issues in Addressing the Educational Requirements of Twice-Exceptional Students in Schools. *Education Sciences*, 15(12), 1-33. <https://doi.org/10.3390/EDUCSCI15121593>
- Ronksley-Pavia, M. (2026, February 27). How Generative AI can be Leveraged to Personalize Learning for Twice-/Multi-Exceptional Students. *2026 2E & W&M: Twice Exceptional Online Conference 2026*, Center for Gifted Education.
- Ronksley-Pavia, M., & Bigum, C. (2024). Generative AI in Gifted Education: Beyond Hammers and Nails. *Enlighten*. <https://news.griffith.edu.au/2024/08/05/generative-ai-in-gift-ed-education/>
- Ronksley-Pavia, M., Ronksley-Pavia, S., & Bigum, C. (2025). Experimenting With Generative AI to Create Personalized Learning Experiences for Twice-Exceptional and Multi-Exceptional Neurodivergent Students. *Journal of Advanced Academics*, 36(4), 601–639. <https://doi.org/10.1177/1932202X251346349>
- Siegle, D. (2024). Using Artificial Intelligence (AI) Technology to Support the Three Legs of Talent Development. *Gifted Child Today*, 47(3), 221–227. <https://doi.org/10.1177/10762175241242495>
- Subotnik, R. F., Olszewski-Kubilius, P., & Worrell, F. C. (2011). Rethinking Giftedness and Gifted Education. *Psychological Science in the Public Interest*, 12(1), 3–54. <https://doi.org/10.1177/1529100611418056>
- Yañez-Barnuevo, M. (2025). Data Centers and Water Consumption. Environmental and Energy Syudy Institute (EESI). <https://www.eesi.org/articles/view/data-centers-and-water-consumption#:~:text=Large%20data%20centers%20can%200> (Accessed 30 April 2026).



HIGH ABILITIES IN THE AGE OF ARTIFICIAL INTELLIGENCE: DEVELOPMENT OF SOCIOEMOTIONAL SKILLS IN CHILDHOOD

Paula Irueste

Director of Neuropsychology Service, children's área. UNC Argentina

Introduction

In recent years, the advancement of artificial intelligence (AI) and digital technologies has begun to transform educational settings, learning processes, and modes of interaction among children, teachers, and families (OECD, 2023). However, amid these accelerated changes and countless concerns, one fundamental question remains: how can we support the emotional and social development of children in contexts fully mediated by intelligent technologies?

This question becomes especially relevant for children with High Abilities (HA), a population historically associated primarily with high IQ, cognitive potential, or academic achievement, often leaving their emotional, social, and relational needs in the background.

In this sense, the present article aims to reflect on some fundamental pillars that could support the integration of AI in education, including emotional intelligence, socioemotional education, and the so-called strengths of the heart (Pfeiffer, 2017), understood as resources related to subjective well-being, resilience, self-esteem, empathy, and the construction of meaningful relationships.

High Abilities and Socioemotional Development

HA constitutes a complex and multidimensional phenomenon. Definitions increasingly emphasize a systemic perspective, recognizing the value of context (Algaba-Mesa & Fernández-Marcos, 2021). Advances in neuropsychological research currently highlight the role of executive functions in the optimal expression of intellectual potential.

Sastre-Riba and Viana-Sáenz (2016) argue that processes such as inhibition, cognitive flexibility, and working memory play a central role in the management of intellectual and creative resources in students with HA. Their studies show that more complex giftedness profiles present higher levels of flexibility and cognitive inhibition, aspects closely linked to creativity, adaptation, and emotional self-regulation.

Renzulli (1978) highlighted characteristics such as creativity, perseverance, and preference for independent work, while other authors (Patti et al., 201) have emphasized the emotional intensity and interpersonal sensitivity present in many children with HA.

One of the most relevant concepts for understanding this population is that of “asynchrony,” developed by Terrassier (1979), who described imbalances between intellectual, emotional, and social development. It is common to find children capable of sustaining complex reasoning while still developing emotional tools to manage frustrations, relationships, or everyday conflicts.

Dabrowski (1964) introduced the notion of “overexcitability,” noting that many individuals with high abilities present more intense emotional, sensory, or intellectual responses to certain stimuli.

From sociocultural and systemic perspectives, Ziegler (2017) highlights the influence of the family environment and the learning opportunities offered by educational contexts on the development of potential and creative achievement in students with HA. Besides, Zhang and collaborators (2021) found that parental and teacher responsiveness significantly influences creative motivation, self-confidence, and the development of creative achievement across different cultural contexts.

When exploring the emotional dimension, the review conducted by Algaba-Mesa et al. (2021) presents heterogeneous results. On the one hand, some studies describe HA as a protective and resilience factor; on the other hand, most research reports difficulties related to perfectionism, isolation, anxiety, self-esteem, emotional regulation, and social adjustment. Along these lines, Ferrándiz García et al. (2025) note that exceptional abilities may sometimes be accompanied by internal and external demands associated with high expectations, self-imposed pressure, or difficulties in building peer relationships, making the development of resources such as emotional regulation, cognitive flexibility, and social skills especially relevant.

From these perspectives, HA is understood as a dynamic and multidimensional phenomenon (Tourón, 2020). Understanding that the heterogeneity of characteristics present in this population requires a systemic perspective capable of embracing the complexity of development without fragmenting the potentialities of each child.

Emotional Intelligence as a Central Component of Support

Emotional Intelligence (EI), defined by Salovey and Mayer (1990) as the ability to recognize, understand, and regulate one's own emotions and those of others, constitutes a fundamental component in supporting children with HA.

From this perspective, emotions are not understood as obstacles to learning, but rather as constitutive elements of cognitive, creative, and social processes. Within this model, EI is conceptualized through four basic abilities: the ability to perceive, assess, and express emotions; the ability to understand emotions; the ability to regulate emotions; and the ability to access and generate feelings that facilitate thinking (Fernández-Berrocal & Ruiz Aranda, 2008).

The contributions of Pfeiffer (2017) provide a more global perspective. This author distinguishes between strengths of the mind and strengths of the heart, the latter being especially relevant and understood as those capacities linked to emotional well-being, resilience, and the construction of healthy relationships. From this perspective, EI constitutes an important component, though not the only one, for understanding the emotional well-being of this population. Strengths of the heart additionally emphasize self-esteem, self-efficacy, resilience, empathy, and the ability to establish satisfying interpersonal relationships. These constructs, deeply connected to subjective well-being, directly influence how children perceive themselves, face challenges, tolerate frustration, and develop a sense of belonging within the different contexts they inhabit.

In the province of Córdoba, Argentina, the Neuropsychology Service, children area, (SNPI), directed by Dr. Irueste, has developed different lines of work aimed at deepening aspects related to emotional intelligence, parenting styles, family dynamics, and socioemotional challenges present in this population.

Interest in understanding and supporting socioemotional development in children with HA constitutes one of the distinguishing approaches of the SNPI. From this perspective, community outreach workshops were developed to foster emotional intelligence, creativity, and social skills in children with HA. The results of these experiences (Saco et al., 2020) revealed greater emotional awareness and the application of techniques learned during the workshops, which were generalized to other contexts, as well as an aspect not initially anticipated by the professional team: the subjective value of peer encounters, the feeling of being understood, and the construction of a sense of belonging within a shared space.

Pfeiffer (2020) warns that many children with HA may demonstrate high levels of cognitive performance while simultaneously experiencing feelings of isolation, excessive self-demand, or difficulties in building social relationships. In educational contexts increasingly mediated by artificial intelligence, these strengths of the heart acquire even greater relevance.

While intelligent technologies can expand access to knowledge, automate processes, or enhance cognitive skills, deeply human dimensions such as empathy, interpersonal sensitivity, resilience, and sense of belonging remain irreplaceable for healthy childhood development. Particularly in children with HA, promoting spaces where they can feel understood, valued, and emotionally supported constitutes a fundamental condition for the full development of their potential.

Artificial Intelligence and Education: Opportunities and Challenges

Alongside these experiences, global education is undergoing a profound transformation linked to the growth of Artificial Intelligence (AI). International organizations such as the OECD and UNESCO highlight that AI-based technologies can improve educational quality and equity when used ethically and in pedagogically meaningful ways.

These technologies are based on machine learning models and large-scale neural networks, such as large language models (LLMs), which process enormous volumes of data to predict and generate coherent language sequences.

UNESCO (2023) provides guidelines aimed at understanding and regulating generative artificial intelligence in education and research through a human-centered approach. This includes considering five central points:

- The use of these tools must respond to human needs and improve learning or research compared to non-technological alternatives.
- Their use must stem from the intrinsic motivation of teachers, students, or researchers.
- Control of the process must always remain in human hands.
- Their use must be appropriate to the age, objectives, and type of knowledge or problem being addressed.
- They must promote active interaction with AI, critical thinking, and human responsibility regarding outcomes and their effects.

Maintaining a focus on human agency in knowledge construction and consolidating the pedagogical dimension, UNESCO (2023) highlights the use of AI to provide tutoring for the acquisition of foundational skills at each individual's pace, facilitate higher-order thinking, and support students with special needs through the inclusion of these tools in relation to accessibility to knowledge.

Adaptive tools make it possible to personalize learning, identify specific needs, and offer different pathways to knowledge acquisition. For populations with special educational needs, such as HA, this may represent a valuable opportunity to access intellectual challenges aligned with their interests and learning pace.

Generative AI also opens unprecedented creative possibilities. Students can use it to develop interdisciplinary projects, explore multiple perspectives on a topic, design artistic productions, or deepen complex research. In the case of children with HA, these technologies can become stimulating environments for divergent thinking and creativity.

From this perspective, the mentioned international organizations have emphasized the importance of understanding not only the technical functioning of AI, but also its ethical, pedagogical, and social implications, promoting a human-centered approach that regulates its integration into education and guarantees its safe, equitable, and formative use.

The OECD (2023) warns of various risks:

- The role of educators evolves in this context toward critical professional autonomy.
- AI literacy for teachers should not be limited to technical competence, but should include the ability to evaluate the pedagogical relevance of each tool and ensure that human agency is not undermined.
- The co-creation of digital resources, actively involving families and students, guarantees that technologies are culturally relevant and ethically safe.

UNESCO (2023) proposes a human-centered approach to the integration of artificial intelligence in education and research and emphasizes the need for ethical regulation to ensure the responsible use of generative AI, aimed at strengthening learning, research, and the construction of broad, diverse, and inclusive digital futures.

Conclusions

The incorporation of Artificial Intelligence into education constitutes one of the most significant challenges of our time, especially for the population with HA. Although AI-based tools offer undeniable potential to personalize educational trajectories and enhance creativity, this advancement also challenges and problematizes certain dimensions. As the OECD (2023) warns, accelerated digitalization entails risks of isolation, dependency, and a possible “atrophy” of social skills if technology displaces functions that require personal effort.

The contributions of authors such as Renzulli (1978), Gagné (2015), Ziegler (2017), and Pfeiffer (2017) make it possible to advance toward comprehensive models in which cognitive abilities interact with emotional, motivational, and contextual factors. For children with HA, technological mediation interacts in complex ways with their singular characteristics.

Therefore, any educational innovation must consider that HA is not merely an indicator of academic performance, but rather an emotional architecture that requires comprehensive support capable of mitigating the hidden vulnerability underlying cognitive potential.

In this scenario, it becomes imperative to transcend the simplistic dichotomy of “AI yes or no” and instead understand it as the contemporary context of childhood development, once again placing subjective well-being and childhood itself at the center of the pedagogical process, alongside policies regulating all aspects of its use and implementation.

In the face of automation, strengthening the human dimension of learning becomes an absolute priority. The work of Pfeiffer (2017) on the “strengths of the heart” — empathy, resilience, self-esteem, and social skills — together with Ziegler’s (2017) systemic perspective, emerges as an indispensable preventive component.

Consistent with Pfeiffer’s (2021) perspective, support for HA should be based on relationships of trust and emotional validation that allow students to express their existential concerns and sense of difference without fear of judgment. The experiences developed within the SNPI demonstrate that it is precisely these group-based and experiential spaces that generate significant transformations, reaffirming that technology cannot replicate the subjective value of peer encounters (Saco et al., 2020).

References

- Dabrowski, K. (1964). *Positive disintegration*. Little, Brown.
- Fernández-Berrocal, P., y Extremera Pacheco, N. (2005). La inteligencia emocional y la educación de las emociones. *Revista Electrónica de Investigación Psicoeducativa*, 6 (2), 421 – 436.
- Ferrándiz García, C., Ferrando Prieto, M., Infantes-Paniagua, Á., y Pons Parra, R. M. (2025). *Inteligencia emocional en la alta capacidad intelectual. Síntesis*.
- Gagné, F. (2015). From genes to talent: The DMGT/CMTD perspective. *Revista de Educación*, 368, 12–39.
<https://doi.org/10.4438/1988-592X-RE-2015-368-289>
- Gómez-León, M. I. (2020). La soledad en la alta capacidad intelectual: Factores de riesgo y estrategias de afrontamiento. *Revista de Psicoterapia*, 31(117), 297–311. <https://doi.org/10.33898/rdp.v31i117.364>
- Irueste, P. (2012). Capacidades Intelectuales diferenciales en niños designados por sus docentes como dispersos e hiperactivos. Tesis de doctorado. FCM, UNC.
http://lildbi.fcm.unc.edu.ar/lildbi/tesis/Irueste_paula_gabriela.pdf
- OECD-Education International. (2023). Opportunities, guidelines and guardrails on effective and equitable use of AI in education. OECD Publishing.
- Patti, J., Brackett, M., Ferrándiz, C., y Ferrando, M. (2011). ¿Por qué y cómo mejorar la inteligencia emocional de los alumnos superdotados?. *Revista Electrónica Interuniversitaria de Formación del Profesorado*, 14(3), 145-156.
- Pfeiffer, S. I. (2017). Success in the classroom and in life: Focusing on strengths of the head and strengths of the heart: Focusing on strengths of the head and strengths of the heart. *Gifted Education International*, 33(2), 95-101.
<https://doi.org/10.1177/0261429416640337>
- Pfeiffer, S. I. (2021). Optimizing favorable outcomes when counseling the gifted: A best practices approach. *Gifted Education International*, 37(2), 158–171.
<https://doi.org/10.1177/0261429420969917>
- Renzulli, J. S. (1978). What makes giftedness? Reexamining a definition. *Phi Delta Kappan*, 60(3), 180–184, 261.
- Saco, A., Irueste, P., Gianola, M., y Mazza, P. (2020). Talleres de extensión a la comunidad: Inteligencia emocional y creatividad para niños/as con altas capacidades intelectuales (ACI), en Córdoba, Argentina. *Revista Sudamericana de Educación, Universidad y Sociedad*, 8(1), 111–122.
- Salovey, P. & Mayer, J. D. (1990). Emotional Intelligence. *Imagination, cognition and personality*, 9 (3), 185-211.
- Salovey, P. & Mayer, J. D. (1997). What is emotional intelligence? In P. Salovey D. J. Sluyter (Eds.) *Emotional development and emotional intelligence*. New York: Basic Books.
- Sastre-Riba, S., y Viana-Sáenz, L. (2016). Funciones ejecutivas y alta capacidad intelectual. *Revista de Neurología*, 62(Supl. 1), S65–S71.
- Terrassier, J. C. (1979). “Gifted children and psychopathology. The síndrome of dyssynchrony.” En J. J. Gallagher (Ed.), *Gifted children. Reaching their potential*. Pp. 434-440. Jerusalem: Kollek and Son.
- Tourón, J. (2020). Las Altas Capacidades en el sistema educativo español: reflexiones sobre el concepto y la identificación. *Revista de Investigación Educativa*, 38(1), 15-32. DOI: <http://dx.doi.org/10.6018/rie.38.1.396781>
- UNESCO. (2023). Guidance for generative artificial intelligence in education and research. UNESCO.
<https://unesdoc.unesco.org/ark:/48223/pf0000386693>
- Zhang, Z. S., Hoxha, L., Aljughaiman, A., Arënliu, A., Gomez-Arizaga, M. P., Gucyeter, S., Ponomareva, I., Shi, J., Irueste, P., Rogl, S., Nunez, M., y Ziegler, A. (2021). Social environmental factors and personal motivational factors associated with creative achievement: A cross-cultural perspective. *The Journal of Creative Behavior*, 55(2), 410–432.
- Ziegler, A., Chandler, K. L., Vialle, W., y Stoeger, H. (2017). Exogenous and endogenous learning resources in the Actiotope Model of Giftedness and its significance for gifted education. *Journal for the Education of the Gifted*, 40(4), 310–333. <https://doi.org/10.1177/0162353217734376>.



LAYERED COMMUNICATION IN MULTICULTURAL CLASSROOMS: RETHINKING ABILITY AND GIFTEDNESS IN GLOBAL HIGHER EDUCATION

Meeyoung Kim

Assistant Professor, College of Health Sciences, Physiotherapy Department,
University of Sharjah, UAE

Abstract

Communication in multicultural educational environments is often interpreted through a binary "two-culture" framework. However, in globally mobile educational contexts, communication is shaped by overlapping layers including language proficiency, cultural background, institutional hierarchy, and migration context. This article introduces the concept of layered communication and examines how meaning is negotiated in such environments. Particular attention is given to how these dynamics affect the identification, assessment, and support of gifted learners in multilingual classrooms across the world. The United Arab Emirates serves as one illustrative context among many. A practical framework for culturally responsive gifted education is proposed, grounded in interpretive accuracy and sensitivity to diversity.

A familiar misunderstanding

I once used a phrase in English that felt entirely natural to me in Korean: "Go out and work well today." In my cultural context, it conveyed care and recognition — an acknowledgment of effort and responsibility. In English, however, it was interpreted differently, suggesting a division of roles I had not intended. The same words, two meanings.

This small moment of miscommunication captures a much larger problem in multilingual educational settings worldwide: when the medium of communication is shared but the cultural and linguistic frameworks behind it are not, meaning becomes unstable. For educators anywhere in the world, this instability has real consequences — particularly when the student in question is gifted.

Beyond the two-culture model

Such moments are often understood as differences between two cultural systems, each interpretation internally coherent. In more complex environments, however, this model becomes insufficient.

Speaking without full nuance

When communication occurs in a non-native language, it shifts in subtle ways. Language becomes more efficient, more functional, and reduced in nuance. Emotional tone, cultural reference, and implicit meaning are often compressed. Speakers simplify to ensure clarity; listeners interpret cautiously (Kramsch, 2014).

This reduction in nuance carries particular consequences for gifted learners. Giftedness in language-rich domains — including verbal reasoning, conceptual analysis, and abstract argumentation — may be among the most difficult to recognize across linguistic barriers. A student capable of sophisticated intellectual engagement in their first language may appear hesitant, imprecise, or under-engaged when required to operate in a second or third language. The thinking is present; the vehicle for expressing it is constrained. This pattern can occur in any multilingual classroom, regardless of country or institution.

Intersecting layers of meaning

Meaning in multilingual classrooms is shaped by overlapping dimensions: language proficiency, cultural background, institutional hierarchy, and migration context. These layers are not simply communicative — they are also institutional. Identity, competence, and ability are not only expressed through language; they are recognized or misrecognized through institutional structures. Wenger (1998) argues that meaning and identity are shaped through sustained participation in communities of practice, where norms, roles, and expectations are enacted repeatedly over time. Students who are still negotiating their place within these communities — international students, recent migrants, multilingual learners, or those from non-dominant cultural backgrounds — may perform differently from how they would in environments where they are fully socialized participants. This is not a regional phenomenon. It applies equally to a Korean student in an Australian university, a Syrian refugee in a German school, a first-generation immigrant student in a Canadian classroom, or an Emirati student in an English-medium institution. For gifted students from any of these backgrounds, the gap between capacity and performance can be substantial and consequential.

Hierarchy and interpretation

Hierarchy introduces another layer. Nationality, language fluency, and professional role often carry implicit status in multilingual institutional settings across the world. These factors shape both how people express themselves and how they are interpreted. Hall (2005) demonstrated that hierarchical structures directly influence how individuals communicate, how their contributions are received, and whether their competence is recognized. The same dynamic operates in multilingual classrooms globally.

In hierarchical environments, communication tends to favor clarity over nuance and efficiency over exploration. Students positioned lower in informal hierarchies — whether due to language, nationality, newcomer status, or socioeconomic background — may self-censor or simplify their contributions, not because their thinking is less sophisticated, but because the communicative environment does not support full expression. For gifted learners, who often require intellectual risk-taking and deep exploratory dialogue to perform at their best, this suppression is particularly costly.

Giftedness misread: What educators overlook

Traditional indicators of giftedness — verbal fluency, rapid response, confident participation — are unreliable in multilingual classrooms. Yet these remain the informal signals many educators use when making judgments about student ability (VanTassel-Baska, 2021).

The consequences are well-documented across contexts. Walker (2026) notes that gifted students who do not want to stand out, or who come from migrant backgrounds, are frequently overlooked and denied access to gifted programs. Alodat (2026) demonstrates that refugee learners — who face compound layers of linguistic transition, trauma, and educational disruption — are systematically under-identified by conventional assessment tools. Both cases illustrate a shared and globally recurring problem: when giftedness is assessed through performance signals that are themselves shaped by language and socialization, the assessment reflects access and context more than it reflects ability.

This problem is not confined to any one country or system. Research consistently shows that culturally and linguistically diverse students are underrepresented in gifted programs across North America, Europe, and Australasia, as well as in rapidly internationalizing systems in Asia and the Middle East. The mechanism is the same wherever it occurs: assessment tools designed for culturally stable, language-dominant contexts fail to capture ability that is expressed differently.

Cruess et al. (2014) observed that identity formation — including the consolidation of intellectual identity — occurs through socialization in institutional environments, not through individual disposition alone. A student who is new to a context, or who operates across multiple cultural registers simultaneously, may not yet perform according to institutional expectations regardless of their actual cognitive capacity. Silence may reflect processing. Hesitation may reflect translation. Reduced participation may reflect social calibration rather than disengagement.

Khalili et al. (2013) further distinguished between attitudinal readiness and demonstrated competence. A student may possess strong intellectual ability while remaining unable to demonstrate it through the communicative conventions of a particular classroom. Readiness and performance are not the same thing. This distinction is essential for any educator assessing ability in a multilingual context, anywhere in the world.

Toward layered recognition: A practical framework

Recognizing layered communication requires more than cultural awareness. It requires changes to how educators observe, assess, and support students. The following principles offer a practical starting point applicable across diverse educational contexts.

- 1. Separate language performance from cognitive ability.** Written tasks, visual representations, non-verbal problem-solving, and portfolio-based assessments can reveal thinking that does not surface in spoken participation. When verbal fluency is the primary evidence of ability, gifted multilingual learners will be systematically underestimated regardless of where they are being educated.

2. Extend observation over time. Single-session assessments or early-semester impressions are particularly unreliable for multilingual students. Walker (2026) recommends a longitudinal approach to identification, including a probationary period before finalizing gifted program placement. The same principle applies broadly: ability should be assessed across multiple contexts and time points, not captured in a snapshot.

3. Reframe silence and hesitation. Educators should treat silence as data requiring interpretation, not as evidence of disengagement or limited ability. A student pausing before responding in a second or third language may be engaged in simultaneous linguistic processing, cultural calibration, and conceptual formulation. This is cognitively demanding work, not its absence. Educators working in multilingual contexts globally need explicit training to make this interpretive shift.

4. Address hierarchy explicitly and design supportive environments. Classroom environments that flatten informal status hierarchies — through structured discussion formats, anonymous contributions, multilingual acknowledgment, and explicit valuing of diverse communicative styles — create more equitable conditions for ability to be expressed. Hall (2005) and Wenger (1998) both point to the role of institutional culture in shaping what kinds of participation are recognized and rewarded. The relationship between environment and cognition extends further than is often recognized. Kim (2026) demonstrates that structured routines and predictable learning environments reduce cognitive load and support self-regulated learning — conditions that are particularly important for students already managing the demands of operating across multiple languages and cultural registers simultaneously. Designing classrooms with this in mind benefits all learners but is especially significant for multilingual gifted students whose cognitive resources are already partly allocated to linguistic and cultural navigation. This applies whether the classroom is in Dubai, Dublin, or Dakar.

5. Build culturally responsive identification systems. Alodat (2026) recommends expanding the conception of giftedness to include creativity, leadership, resilience, and problem-solving — capacities that may be more visible in non-traditional assessment formats and that are less dependent on language-dominant performance. These broader indicators are more equitable in multilingual and multicultural contexts across the world.

6. Develop educator sensitivity as a professional competency. Cultural and linguistic sensitivity should not be treated as a soft skill or an add-on. It is a core professional requirement for accurate interpretation of student ability in any internationally diverse setting. Teacher preparation programs and continuing professional development curricula globally should equip educators with frameworks for recognizing layered communication and for distinguishing language limitation from cognitive limitation.

When meaning returns

Meaning does not always move in one direction. In some Arab cultural contexts, the original phrase — "Go out and work well today" — resonates more closely with its intended meaning. Associations between work, responsibility, and care create partial alignment across cultural frames. But similar moments of unexpected resonance occur across many cultural encounters: a concept that travels imperfectly in one direction may find partial alignment from another angle entirely. Meaning does not simply disappear as it travels. It shifts, overlaps, and occasionally re-emerges.

This is a reminder that multilingual classrooms anywhere in the world are not environments of permanent loss. They are environments of dynamic, partial, recoverable meaning — if educators are equipped to work within them.

Conclusion

Communication in global educational environments is shaped by intersecting layers rather than discrete cultural differences. These layers — linguistic, cultural, hierarchical, and institutional — influence how students are understood, evaluated, and positioned. As student populations become increasingly mobile and diverse across every continent, the gap between actual ability and recognized ability in multilingual learners is a problem of growing urgency and global scale.

Closing that gap requires more than sensitivity. It requires structural change: in how ability is assessed, in how participation is interpreted, and in how educators are prepared to work across layers of meaning. As Wenger (1998) argues, identity and competence are built through participation in communities of practice. Educators who shape those communities — in the UAE, in Europe, in East Asia, in the Americas, and everywhere that students cross linguistic and cultural borders to learn — hold the power to include or exclude, to see or to miss, the full range of intelligence present in their classrooms.

Recognizing layered communication does not eliminate misunderstanding. It makes misunderstandings more visible, more interpretable, and more correctable.

References

- Alodat, A. M. (2026). Equitable identification of gifted refugee students: Challenges and pathways. *WorldTalentWeb Newsletter*, 40, 13–19.
- Cruess, R. L., Cruess, S. R., Boudreau, J. D., Snell, L., & Steinert, Y. (2014). Reframing Medical Education to Support Professional Identity Formation. *Academic Medicine*, 89(11), 1446–1451.
<https://doi.org/10.1097/ACM.0000000000000427>
- Gumperz, J. J. (1982). *Discourse Strategies*. Cambridge University Press.
<https://doi.org/10.1017/CBO9780511611834>
- Hall, P. (2005). Interprofessional teamwork: Professional cultures as barriers. *Journal of Interprofessional Care*, 19(sup1), 188–196.
<https://doi.org/10.1080/13561820500081745>
- Khalili, H., Orchard, C., Laschinger, H. K. S., & Farah, R. (2013). An interprofessional socialization framework for developing an interprofessional identity among health professions students. *Journal of Interprofessional Care*, 27(6), 448–453.
<https://doi.org/10.3109/13561820.2013.804042>
- Kim, M. (2026). From parking spots to shoes: Traces of the self in how we learn self-regulation and wellbeing in health professions education. *Health Professions Education Gazette*, 7(2), 20–22.
- Kramsch, C. (2014). Language and Culture. *AILA Review*, 27, 30–55. <https://doi.org/10.1075/aila.27.02kra>
- VanTassel-Baska, J. (2021). A Conception of Giftedness as Domain-Specific Learning: A Dynamism Fueled by Persistence and Passion. In *Conceptions of Giftedness and Talent* (pp. 443–466). Springer International Publishing.
https://doi.org/10.1007/978-3-030-56869-6_25
- Walker, J. (2026). Fostering giftedness in primary education: Challenges, strategies, and the power of branching out topics. *WorldTalentWeb Newsletter*, 40, 7–12.
- Wenger, E. (1998). *Communities of Practice*. Cambridge University Press.
<https://doi.org/10.1017/CBO9780511803932>



CALL FOR ARTICLES

We would like to invite you to write an article for the WorldTalentWeb newsletter. The theme and writing style are open for the author to determine.

Articles could take the shape of an interview with a specialist in the field, a report on research or a recent event, a book or resource review etc. The guidelines for the article are listed below.

Please submit your article to the following email: WorldTalentWeb@ha.ae

Guidelines for submitting an article for the WorldTalentWeb newsletter:

1. A submitted article should be between 800 to 2000 words, not including references.
2. WorldTalentWeb newsletter caters to the international community and thus, all articles should be written in English.
3. American or British spelling is accepted.
4. All non-native English speakers should make sure to check their articles for language accuracy before submitting them.
5. The article should be in Times New Roman font, size 12 pt.
6. Authors should avoid using footnotes.
7. Authors should adhere to the APA style and/or formatting guidelines provided in the APA Manual, 7th Edition.
8. The article should be submitted with embedded photos, and tables, and figures if relevant.
9. The article should be submitted as an email attachment as a Microsoft Word document.
10. Articles should be word-processed and single-spaced with 1 inch (2.54 cm) at the top, bottom, left, and right of every page as per the APA 7th edition requirements.
11. Authors should strictly observe the copyrights-requirements and cite the work of others correctly.
12. Relevant permission should be obtained if photos of people are used. An email giving permission to use photos publicly is sufficient.
13. Authors should include their full name, title, institutional affiliation, and a high-resolution color photo.
14. If an article was published before elsewhere, then only submit a summary of the original document with acknowledgment.
15. Authors are encouraged to use supportive pictures.
16. The editorial team reserves the right to edit articles accepted for publication.



WorldTalentWeb **CALL FOR ADVERTISING CONFERENCES**

Looking to share your conference with the world?

Send a brief description of the conference to:

WorldTalentWeb@ha.ae

(not more than 70 words)

"The WorldTalentWeb newsletter's team is very happy to advertise your conference."



WorldTalentWeb **EDITORIAL BOARD**

Editors:

- Penina Kiss, Catholic Schools Parramatta Diocese
- Jennie Quinn, SCS Australia

Co-editor:

- Dr. Sadiq Abdulwahed Ismail, Hamdan Foundation, Dubai, United Arab Emirates

Advisory Board:

- Prof. Abdullah M. Aljughaiman, King Faisal University, Saudi Arabia
- Csilla Fuszek, The Association of Hungarian Talent Support Organizations (MATHETSZ), Hungary
- Dr. David Rempel, IUBH International University of Applied Sciences, Kenya
- Dr. Jamal AlMehairi, Hamdan Foundation, Dubai, United Arab Emirates
- Prof. John Munro, The University of Melbourne, Australia
- Dr. Khalifa A. Al Suwaidi, Hamdan Foundation, Dubai, United Arab Emirates
- Dr. Paula Olszewski-Kubilius, Northwestern University, US

ISSUE

42



WorldTalentWeb NEWSLETTER

September 2026

A newsletter of the World Giftedness Center

The WorldTalentWeb newsletter is quarterly published by the World Giftedness Center (WGC) of Hamdan bin Rashid Al Maktoum Foundation for Medical and Educational Sciences. Dubai, United Arab Emirates



www.wgc.ae

ISSN
2709 - 0728