

Article

Reframing Gifted Education: From Sorting Students to Cultivating Classroom-Based Opportunities

Del Siegle ^{1,*}  and Talbot S. Hook ² 

¹ Department of Educational Psychology, Faculty of Giftedness, Creativity, and Talent Development, University of Connecticut, Storrs, CT 06269, USA

² Department of Educational Psychology, Faculty of Gifted and Creative Education, University of Georgia, Athens, GA 30602, USA; talbot.hook@uga.edu

* Correspondence: del.siegle@uconn.edu

Abstract

This article argues that gifted education is at a critical turning point, shaped by persistent conceptual fragmentation and the limitations of identification-centered systems. Despite decades of refinement, identification practices remain inconsistent, inequitable, and weakly aligned with the educational experiences they are intended to support. At the same time, the field continues to be divided between competing paradigms, most notably the Gifted Child Paradigm and the Talent Development Paradigm, resulting in incoherence in research, policy, and practice. Drawing on recent empirical and theoretical work, this article contends that these dual challenges undermine the effectiveness and equity of gifted and creative programming. In response, this article advances a reconceptualization of gifted education grounded in the talent development framework, which views ability as dynamic and emergent rather than fixed. Central to this vision is the Three Legs of Talent Development model, which emphasizes (a) access to advanced content, (b) intellectually stimulating instruction characterized by depth and complexity, and (c) interest-based authentic learning opportunities. Importantly, this framework situates the majority of gifted education services within the general classroom, positioning classroom instruction as the primary site for talent development rather than relying on separate or pull-out programs. Together, these elements form an integrated, system-level approach that shifts the focus from identifying gifted individuals to designing opportunity-rich, classroom-based environments that cultivate talent broadly.

Keywords: talent development; gifted education; advanced content; intellectual stimulation; interest-based learning



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1. Introduction

Gifted education stands at a crossroads. For decades, the field has been shaped by debates over identification: who is gifted, how giftedness should be defined, and which measures best determine eligibility for services. Yet, despite increasingly sophisticated identification systems, fundamental challenges persist. Identification remains inconsistent, inequitable, and often disconnected from the educational experiences it is intended to support. At the same time, research reveals conceptual divides within the field itself, with scholars and practitioners often operating from differing paradigmatic assumptions about the nature of giftedness and the purpose of gifted education (Hook, 2025).

These dual challenges of paradigmatic fragmentation and systemic instability in identification have profound implications for the future of gifted and creative programming.

When the field lacks a shared conceptual foundation, and when its primary mechanism for delivering services is questionable, it becomes difficult to design coherent, equitable, and effective learning environments. The result is a system in which students are often sorted into categories but are not provided with experiences that meaningfully develop their potential (Gubbins et al., 2021).

Recent scholarship reflects an accelerating shift away from static, trait-based conceptions of giftedness toward developmental frameworks that conceptualize talent as emerging through interactions among ability, opportunity, context, and psychosocial factors (Cristina et al., 2025; Gil, 2025; Olszewski-Kubilius, 2024). At the same time, empirical findings demonstrate that identification systems are inherently unstable and cannot proportionately represent diverse populations (Long et al., 2026; Peters, 2021; Siegle et al., 2026b). Together, these insights point toward a necessary reorientation of the field.

The purpose of this article is to articulate a vision for the future of gifted and creative programming that addresses both conceptual fragmentation and current limitations. Drawing on recent work on paradigmatic beliefs and on a talent development framework centered on the Three Legs of Talent Development (Siegle, 2024a, 2024b), this paper argues that the future of the field lies not in refining identification systems, but in designing opportunity-rich learning environments more broadly that cultivate talent broadly and equitably.

2. Paradigm Fragmentation and Its Consequences

A key challenge in gifted education is the lack of consensus regarding its foundational assumptions (Ambrose et al., 2010; Borland, 2005; McBee et al., 2012; Siegle et al., 2024; Worrell et al., 2019). Scholars have long noted that the field is characterized by competing paradigms about what giftedness is, why it matters, and how it should be addressed educationally (Dai & Chen, 2013; Hook, 2025; Lo & Porath, 2017). Mirroring the fragmentation in foundational assumptions, there is also a lack of clarity as to the goals of gifted education (Hook & Boldt, 2025). These issues compound one another, making progress within the field of gifted education difficult. Broadly speaking, two paradigmatic orientations have dominated discourse: the Gifted Child Paradigm (GCP) and the Talent Development Paradigm (TDP).

The GCP conceptualizes giftedness as a relatively stable, often innate trait, typically associated with high intelligence and accompanied by distinct cognitive and socio-emotional characteristics. Within this paradigm, the central task of gifted education is to identify gifted individuals and provide specialized services tailored to their needs (Dai & Chen, 2013; Hook, 2025). In contrast, the TDP views giftedness as a developmental process, emphasizing the role of environment, opportunity, and sustained engagement in transforming potential into expertise (Renzulli, 2012; Subotnik et al., 2012). From this perspective, the purpose of gifted education is not simply to identify talent, but to cultivate it over time.

Recent empirical work examining stakeholder beliefs suggests that the field is not unified around either paradigm (Hook, 2025). Instead, it consists of at least three distinct groups: individuals who align more strongly with the GCP (more often embraced by practitioners), those who align with the TDP (more often embraced by researchers), and a large group whose beliefs span both paradigms. This third group, which comprises the majority of participants in recent analyses, simultaneously endorses ideas such as the developmental nature of talent and the existence of distinctive gifted characteristics. This latter perspective informs our thinking.

These paradigm fragmentations have important implications. When practitioners and researchers operate from different paradigmatic assumptions, they may interpret the same research findings in divergent ways, prioritize different educational goals, and advocate

for different forms of programming. For example, a practitioner who views giftedness as a fixed trait may prioritize early identification and grouping (see [Schroth & Helfer, 2009](#)), while a researcher aligned with talent development may emphasize expanding access to opportunities (see [Renzulli & Reis, 2014](#)).

These differences are not merely theoretical; they shape what happens in classrooms. Beliefs influence decisions about curriculum, instruction, and student grouping ([Pajares, 1996](#); [Szymanski et al., 2018](#); [Wilson, 1990](#)). When stakeholders hold differing conceptions of giftedness, programming often lacks coherence because identification, curriculum, and service decisions are guided by competing assumptions ([A. Y. Carpenter, 2019](#); [Schroth & Helfer, 2008, 2009](#); [VanTassel-Baska & Brown, 2022](#)). This incoherence is compounded when identification systems, which vary considerably in their criteria and outcomes, become the primary mechanism for determining access to services rather than aligning services with students' demonstrated educational needs ([Gubbins et al., 2021](#)). For example, a student may qualify and receive services in one district, but not qualify for services in another district that operates with a different identification system. Additionally, a student may be identified for a strength in one talent area (e.g., math), but receive services in another (e.g., creative thinking).

3. The Limits of Identification as a Foundation for Programming

The centrality of identification in gifted education rests on the assumption that giftedness can be measured, that such measurement can guide educational decision-making, and that the results of measurement (which end in a gifted label) are permanent (see [Sternberg et al., 2021](#)). However, empirical evidence increasingly challenges this assumption.

One major issue is variability in identification systems. Changes in measures, norms, cutoffs, and decision rules can produce dramatically different groups of identified students ([Long et al., 2026](#)). Systems that appear similar in design may identify entirely different individuals, highlighting that identification is not an objective process but a function of methodological choices ([McBee et al., 2014](#)).

Closely related to variability is the issue of persistent inequity. Students from historically underserved groups remain underrepresented in gifted programs ([Ford, 2014](#); [Peters et al., 2019](#)), even when controlling for achievement ([Siegle et al., 2026b](#)). No identification system has been shown to produce proportional representation across demographic groups, suggesting that inequity is not a flaw of specific systems, but a structural feature of society and identification itself ([Peters et al., 2023](#)).

Another limitation concerns measurement inconsistency. Teacher ratings, in particular, are influenced by rater effects, with a substantial portion of variance attributable to the teacher rather than the student ([McCoach et al., 2024](#)).

Most critically, identification is often poorly aligned with services. Students may be identified based on strengths in specific domains but receive generalized enrichment experiences that do not build on those strengths ([Gubbins et al., 2021](#); [Siegle et al., 2025](#)). This disconnect undermines the very purpose of identification, as it fails to ensure that students receive appropriate learning opportunities. If identification cannot reliably determine who should receive services, and if those services are not consistently aligned with student needs, then the field must reconsider its reliance on identification as its organizing principle.

4. Reframing Gifted Education as Talent Development

In contrast to identification-centered approaches, the talent development framework offers a more coherent and empirically supported foundation for the future of gifted education. This perspective conceptualizes giftedness not as a fixed attribute, but as a trajectory of development shaped by opportunity, effort, and environment ([Subotnik et al., 2012](#)).

Within this framework, early indicators of ability are viewed as potential, not destiny. The realization of talent depends on sustained access to advanced content, high-quality instruction, and opportunities for meaningful engagement. This aligns with Renzulli's (1998) view of giftedness as the interaction of ability, creativity, and task commitment, occurring under specific conditions and contexts.

A key implication of this perspective is that talent cannot be fully observed without opportunity (Baykoç et al., 2014; Gavin et al., 2025). Students who are not initially identified as gifted may demonstrate high levels of performance when provided with appropriate support. Conversely, students who are identified may fail to develop their potential if they are not given meaningful opportunities to grow. Therefore, talent development is a two-step process of providing opportunities for talents to surface and then providing services to develop those talents.

Thus, the focus shifts from asking "Who is gifted?" to asking "How can we create conditions that allow talent to develop?" This shift has profound implications for programming, as it requires moving away from selective systems toward inclusive, opportunity-based models. This emphasis on opportunity-rich learning environments is consistent with recent international scholarship on talent development systems. Rather than evaluating countries primarily by how they identify gifted students or the number of specialized programs they provide, Ziegler and Stoeger (2024) argue that nations should be judged by the extent to which they create environments that systematically support the development of expertise and eminence. Their framework proposes that effective talent-support systems provide coordinated networks of high-quality learning environments, equitable access to advanced opportunities, and the educational resources necessary for sustained talent development. They further contend that excellence emerges not simply from identifying exceptional individuals, but from designing environments that cultivate exceptional performance. This systems-level perspective reinforces the argument advanced here that the future of gifted education lies less in refining identification systems and more in creating classroom and school environments that provide all students with opportunities for advanced learning, intellectual challenge, and authentic engagement.

5. The Three Legs of Talent Development as a Systemic Model

If gifted education is to move beyond identification-driven systems, it must redesign the environments in which learning occurs. A talent development approach demands a shift from categorizing students to constructing conditions that allow potential to emerge. The Three Legs of Talent Development offer a coherent and actionable framework for this shift by translating the principles of talent development into system-level design features.

At its core, this model conceptualizes talent development not as a program delivered to a select group of students, but as a structure embedded within the classroom learning environment itself. It rests on three interdependent components: access to advanced content, intellectually stimulating instruction characterized by depth and complexity, and interest-based authentic learning opportunities. Each of these elements plays a distinct role in supporting development, yet none is sufficient on its own. When fully integrated, they create the conditions necessary for sustained engagement, growth, and creative production across domains.

Importantly, this framework aligns with broader developmental and motivational perspectives on achievement. By ensuring that students experience appropriate challenge, meaningful work, and supportive environments, the Three Legs simultaneously strengthen students' beliefs in their own competence, the value they attach to learning, and their perceptions of support, all of which influence whether they demonstrate an achievement

orientation attitude (Siegle et al., 2017; Siegle & McCoach, 2005) through which they engage deeply, persist, and ultimately produce original and meaningful work.

6. Advanced Content: Sustaining Intellectual and Creative Growth

The first leg of access to advanced content provides the essential foundation for talent development. Students who demonstrate readiness for accelerated learning require consistent exposure to material that extends beyond what they already know (Reis et al., 2016; Tomlinson et al., 2003). Without such opportunities, learning stagnates, and motivation often declines. Advanced content, therefore, is not simply about increasing pace; it is about ensuring continuous intellectual progression and engagement with increasingly sophisticated ideas, practices, and challenges.

In practice, this requires an adjustment of how schools provide access to curriculum. Rather than treating advanced coursework as a reward contingent on identification as being gifted, schools can design flexible pathways that allow students to move into more challenging material as soon as they demonstrate readiness. This may take the form of curriculum compacting, subject-specific acceleration, whole-grade acceleration, or early access to advanced coursework, but the underlying principle remains the same: Students should not be required to “relearn” content they have already mastered. When systems are responsive in this way, they create conditions in which growth is continuous rather than episodic.

At the classroom level, implementing advanced content often begins with recognizing variation in student readiness with curriculum compacting. Curriculum compacting is a flexible, research-based instructional approach that allows high-ability students to bypass content they have already mastered and replace it with more challenging and appropriate learning experiences (Reis et al., 2016). Pre-assessment is essential to identify students who have already mastered key concepts, allowing teachers to replace repetitive instruction with more advanced tasks. These tasks might include increasing the cognitive demand of tasks using higher levels of Webb’s Depth of Knowledge (DOK; Webb, 2002), replacing content with enrichment activities, or providing instruction using higher-grade-level standards (J. A. Carpenter et al., 2024). In creative domains, advanced content may involve exposure not only to advanced techniques but also to novel ideas, unresolved problems, and emerging perspectives, all of which are critical catalysts for creative thinking.

With respect to acceleration options (Assouline et al., 2015), some students benefit from moving to the next grade level for instruction in a single subject. This approach allows them to access appropriately challenging material without requiring the classroom teacher to compact an entire year’s curriculum. In less common cases, whole-grade acceleration may be appropriate (Colangelo et al., 2004). These students are typically already performing at least two grade levels above their current placement and demonstrate the cognitive ability to learn at an accelerated pace.

Despite strong evidence supporting acceleration and advanced learning opportunities (Colangelo et al., 2004; Steenbergen-Hu & Moon, 2011), access remains uneven, often due to concerns about social-emotional development or logistical constraints. However, research consistently shows that when implemented thoughtfully, acceleration supports both academic growth and well-being (Colangelo et al., 2010). Thus, one of the central challenges for the field is not determining whether advanced content is beneficial but ensuring that systems are designed to provide it equitably and consistently.

Beyond its academic benefits, access to advanced content plays a critical role in fostering creativity. Creative work depends on a deep and flexible understanding of a domain; without sufficient content knowledge, students lack the raw materials needed to

generate new ideas (Amabile, 2012). When students encounter appropriately challenging material, they begin to see connections, identify gaps, and ask new questions, which are processes that are foundational to creative insight (Sawyer & Henriksen, 2024). At the same time, experiencing success in meeting appropriately challenging tasks strengthens students' self-efficacy and reinforces their willingness to engage with increasingly difficult, uncertain, and complex problems (Bandura, 1986). This willingness to persist in the face of uncertainty is a defining characteristic of creative work, which frequently requires sustained exploration of ambiguous problems before novel solutions emerge (Csikszentmihalyi, 1990).

7. Intellectually Stimulating Instruction: Cultivating Depth, Complexity, and Creativity

Although access to advanced content is necessary, it does not guarantee meaningful learning. The second leg of talent development, intellectually stimulating instruction, determines how effectively that content is transformed into understanding, skill, and creative capacity. Instruction that emphasizes depth and complexity encourages students to engage with ideas at a level that goes beyond surface comprehension, fostering higher-order thinking and intellectual independence (Kaplan, 2006).

In many classrooms, even advanced content is presented in ways that are procedural or repetitive, limiting opportunities for deep engagement. In contrast, intellectually stimulating instruction invites students to explore patterns, relationships, and multiple perspectives (Kaplan, 2009). It encourages them to ask questions, test ideas, and make connections across domains. In doing so, it positions students not as passive recipients of knowledge, but as active participants in its construction, and ultimately, as producers of new knowledge and ideas. For example, simply placing an advanced student at a higher grade level that is not engaging or intellectually stimulating is unlikely to encourage meaningful development.

Implementing such instruction requires deliberate changes in classroom practice. Teachers can design learning experiences that prioritize inquiry over coverage, allowing students to investigate complex questions that do not have single solutions. Inquiry learning is an effective instructional practice (Kaplan, 2002; Muzainah et al., 2023). For example, rather than simply solving mathematical problems, students might be asked to develop and justify their own solution strategies or explore how mathematical concepts apply to real-world scenarios. In humanities classrooms, students might analyze competing interpretations of a text or examine the ethical implications of historical events. In creative domains, instruction might emphasize experimentation, critique, and revision, allowing students to refine original work through iterative processes.

Frameworks that emphasize depth and complexity (Kaplan, 2009; Voss, 2024) provide practical tools for this type of instruction, encouraging teachers to incorporate elements such as patterns, perspectives, and unanswered questions into their lessons. However, the effectiveness of these approaches depends on the extent to which they are embedded consistently within instruction rather than applied sporadically.

Equally important is the role of classroom culture. Intellectually stimulating instruction requires an environment in which risk-taking is encouraged and mistakes are viewed as part of the learning process (Akdağ & Köksal, 2022). Creativity, by its nature, involves uncertainty and the possibility of failure. When students feel safe to explore ideas and grapple with challenges, they are more likely to persist, revise their thinking, and engage in the kind of deep work that leads to both expertise and innovation (Edmondson, 1999).

From a talent development perspective, intellectually stimulating instruction serves multiple functions. It deepens understanding, reveals emerging strengths, and fosters the habits of mind associated with expertise. At the same time, it creates the cognitive

conditions necessary for creativity by encouraging students to generate ideas, evaluate possibilities, and synthesize information in novel ways.

8. Interest-Based Authentic Learning: Connecting Talent to Purpose and Creative Expression

The third leg of talent development, interest-based authentic learning, provides the motivational and contextual foundation for sustained engagement and creative expression. While advanced content and stimulating instruction create opportunities for growth, interest and authenticity determine whether students choose to engage deeply with those opportunities. Interest is strongly associated with engagement and achievement (Siegle et al., 2010, 2026a).

In everyday classroom practice, teachers can incorporate students' interests in manageable ways. For example, teachers might offer choices within assignments, allowing students to select topics, texts, or product formats that align with their interests while still meeting learning objectives. Brief inquiry activities, flexible grouping around shared interests, or opportunities to connect content to real-world examples can also increase relevance and engagement. Small adjustments such as allowing students to pursue a question of personal interest for a short presentation or integrating interest-based examples into lessons can help students see the connection between their passions and academic work, fostering greater motivation and investment in learning.

Students are more likely to invest effort in tasks that they find meaningful and relevant to their lives (Ranellucci & Rosenberg, 2024). Interest-based learning capitalizes on this by allowing students to pursue topics, questions, and forms of expression that align with their passions. When combined with authentic contexts, this approach transforms learning from an abstract exercise into a purposeful activity, increasing both engagement and persistence.

When extended time and resources are available, this can provide students with opportunities for independent or small-group inquiry, in which they investigate questions of personal interest over extended periods of time. These experiences may culminate in products such as research papers, creative works, or presentations to authentic audiences. Models such as Type III enrichment in the Schoolwide Enrichment Model illustrate how student-driven projects can lead to meaningful intellectual and creative outcomes (Renzulli & Reis, 2014).

Authenticity is a critical component of this process (Newmann et al., 1996). When students engage in authentic disciplinary practices, such as conducting research, creating artistic works, or solving meaningful problems, they begin to develop identities as participants in those disciplines rather than as passive recipients of knowledge (Lave & Wenger, 1991). This identity development is a critical component of talent development because it strengthens commitment, purpose, and long-term engagement in a field (Subotnik et al., 2012). At the same time, authentic participation provides opportunities for students to move beyond consuming knowledge to producing original work that reflects their own ideas and perspectives, a hallmark of creative development (Sawyer & Henriksen, 2024).

Schools can support interest-based authentic learning by creating structures that allow for choice and personalization. This might include dedicated time for independent projects, opportunities for mentorship with experts in a field, or partnerships with community organizations that provide real-world contexts for learning. Providing authentic audiences for student work such as exhibitions, performances, or publications further reinforces the value of their efforts and encourages high-quality production (King et al., 2009).

These experiences are particularly powerful from a motivational standpoint. When students perceive their work as meaningful, they are more likely to value it and persist in the face of challenges. Additionally, when environments support students' interests and

provide opportunities for authentic engagement, students develop more positive perceptions of their learning environments, increasing their overall engagement and willingness to take intellectual and creative risks.

9. Integrating the Three Legs: Designing Systems That Cultivate Talent and Creativity

The strength of the Three Legs of Talent Development lies in their integration. Each component addresses a different aspect of learning, but it is their interaction that creates a stable and effective system. Advanced content ensures that students are consistently challenged, intellectually stimulating instruction promotes deep engagement with that content, and interest-based authentic learning connects that engagement to personal meaning and purpose.

When these elements are embedded within the general learning environment, they create systems that are inherently responsive to variation in student readiness, interests, and developmental trajectories. In such systems, students are not restricted by labels or eligibility criteria; instead, they have access to opportunities that allow their abilities and their creativity to emerge and develop over time.

This integrated approach also addresses one of the most persistent challenges in gifted education: the disconnect between identification and services. By focusing on the design of the learning environment rather than the classification of students, the Three Legs framework shifts the emphasis from determining who qualifies for services to ensuring that all students have access to opportunities that support their growth.

In doing so, it offers a pathway toward a more coherent, equitable, and future-oriented model of gifted education that is not an add-on, but a natural and expected outcome of environments designed to cultivate talent through challenge, engagement, and meaningful work.

10. Creativity as the Integrative Mechanism

In the context of future gifted programming, creativity plays a central role in integrating the Three Legs of Talent Development. Creativity is not confined to artistic expression; it is a fundamental process through which individuals generate ideas, solve problems, and produce meaningful work across domains.

Interest-based authentic learning, in particular, serves as a primary vehicle for creative expression. When students engage in projects that reflect their interests, they move beyond consumption of knowledge to production and innovation. These experiences foster not only creativity, but also identity development, as students begin to see themselves as contributors within a domain.

Creativity also emerges through intellectually stimulating instruction, which encourages students to explore multiple perspectives, make connections, and engage in complex problem-solving. In this way, creativity is embedded within the structure of talent development rather than treated as a separate or supplementary goal.

11. Implications for the Future of Programming

The shift toward widescale talent development has several implications for the design of future gifted and creative programming. First, programming must move from categorical to systemic. Rather than creating separate programs for identified students, schools can embed advanced opportunities within general education environments, allowing access to be determined by readiness and interest rather than labels.

Second, the focus must shift from selection to opportunity. Providing broad access to advanced content and authentic learning experiences allows talent to emerge and develop over time.

Third, programming must become responsive and dynamic. Continuous assessment and flexible instructional practices enable educators to adjust to students' evolving needs (Siegle et al., 2026a).

Fourth, teacher preparation must emphasize capacity building. Educators need the skills to design instruction that incorporates depth, complexity, and authenticity, and to recognize diverse expressions of talent.

Finally, research must move toward examining opportunity structures rather than solely identification outcomes. Understanding how different environments support or constrain development will be critical for advancing the field.

12. Conclusions

The future of gifted and creative programming depends on the field's ability to move beyond longstanding conceptual and structural limitations. Paradigmatic fragmentation has created a lack of coherence, while identification-centered systems have proven variable and inequitable. Together, these challenges necessitate a fundamental rethinking of how gifted education is conceptualized and implemented.

The talent development framework, operationalized through the Three Legs model, offers a pathway forward. By focusing on opportunity, engagement, and development, it aligns programming with contemporary understandings of how talent emerges and grows. In doing so, it provides a more inclusive, equitable, and effective approach to nurturing human potential. Ultimately, the question is no longer who is gifted (Borland, 2005), but how educational systems can be designed to support the development of talent and creativity in all students.

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