УДК 378.147
DOI https://doi.org/10.32782/1992-5786.2025.102.2

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THE IMPACT OF GLOBALISATION AND DIGITALISATION ON CHANGING PERCEPTIONS OF GIFTEDNESS IN THE 21ST CENTURY

The twenty-first century has witnessed profound transformations in education driven by globalisation and digitalisation, prompting a fundamental re-evaluation of the concept of giftedness. Traditionally defined through psychometric measures and associated with innate cognitive superiority, giftedness has long reflected elitist and Western-centric paradigms. However, contemporary scholarship increasingly views giftedness as a dynamic, context-dependent, and socially embedded construct. This article explores how global interconnectedness and technological advancement have reshaped theoretical, ethical, and pedagogical understandings of human potential in the modern era.

Drawing upon interdisciplinary perspectives from cognitive science, cultural psychology, and digital pedagogy, the study argues that globalisation has expanded the cultural and ethical dimensions of giftedness, revealing its dependence on social values, opportunity structures, and intercultural diversity. Concurrently, digitalisation has transformed the developmental ecology of talent by enabling new modes of collaboration, creativity, and distributed intelligence across digital platforms. These processes collectively challenge reductionist notions of individual brilliance and promote a systemic view of giftedness as emerging from networks of human and technological interaction.

The analysis highlights a conceptual evolution from fixed ability to dynamic potential, integrating cognitive, emotional, ethical, and technological dimensions of intelligence. It identifies three interrelated features of giftedness in the twenty-first century: contextual intelligence shaped by global diversity; collaborative and distributed creativity facilitated by digital environments; and ethical responsibility oriented towards social and ecological well-being. By synthesising global and digital perspectives, the article proposes a holistic framework that redefines giftedness as inclusive, participatory, and morally grounded. It concludes that the future of gifted education lies in fostering creativity, empathy, and ethical innovation through equitable and technology-enhanced learning environments that empower all learners to realise their potential as contributors to a shared global future.

Key words: *giftedness; globalization; digitalization; dynamic potential; distributed intelligence; educational paradigm; ethical dimension.*

Problem statement. The twenty-first century has witnessed an unprecedented acceleration of social, economic, and technological change. Processes of globalisation and digitalisation have transformed not only how individuals live, work, and communicate but also how they learn, think, and conceptualise human potential [19, p. 690]. Within this shifting context, the notion of giftedness–long regarded as an innate, measurable, and largely immutable quality–has become the subject of renewed theoretical scrutiny [8, p. 15]. Scholars across the fields of psychology, pedagogy, and cognitive science increasingly recognise that giftedness is not a fixed attribute located within the individual, but a dynamic construct emerging through interaction among personal, cultural, and technological systems [11, p. 12; 19, p. 693]. This reconceptualisation aligns with broader educational transformations that emphasise lifelong learning, creativity, global citizenship, and digital competence as key competences for contemporary societies [21, p. 3].

Globalisation and digitalisation have profoundly influenced the aims and values of modern education. As national boundaries become more permeable to the exchange of knowledge, talent, and innovation, educational institutions are confronted with the challenge of preparing learners for participation in a rapidly evolving, interconnected world [13, p. 2]. The Organisation for Economic Co-operation and Development observes that success in such an environment requires not only cognitive excellence but also intercultural understanding, ethical awareness, and the ability to collaborate across digital platforms [21, p. 7]. These competencies expand the conventional boundaries of what has historically been considered giftedness, demanding new ways to recognise and nurture diverse forms of talent [14, p. 45].

Analysis of Recent Research and Publications. The concept of giftedness has undergone a profound theoretical evolution throughout the twentieth and twenty-first centuries. Early investigations by Francis

Galton and Lewis Terman conceptualised giftedness as an inherited intellectual capacity measurable through psychometric instruments [1, p. 45; 3, p. 12]. These early studies reflected the positivist assumptions of their time, linking giftedness to biological determinism and emphasising intelligence quotient (IQ) as the principal indicator of exceptional potential [2, p. 197]. However, subsequent educational and psychological research began to challenge this reductionist approach.

In the mid-twentieth century, Leta Hollingworth's work on social and emotional adjustment among highly gifted children highlighted the environmental and affective dimensions of talent development [4, p. 33]. Her studies marked a transition toward understanding giftedness as a phenomenon influenced by both intrinsic and extrinsic factors. Later, Joseph Renzulli's "Three-Ring Conception of Giftedness" redefined gifted potential as the interaction among above-average ability, task commitment, and creativity [5, p. 182]. Renzulli's model paved the way for multidimensional theories that expanded beyond traditional psychometric boundaries.

The most significant theoretical shifts occurred with the advent of cognitive and constructivist paradigms. Howard Gardner's theory of multiple intelligences proposed that human ability encompasses diverse domains–linguistic, logical, spatial, musical, interpersonal, and intrapersonal–each representing a valid form of giftedness [6, p. 27]. Similarly, Robert Sternberg's triarchic theory reconceptualised intelligence as analytical, creative, and practical, arguing that educational systems must nurture all three dimensions [7, p. 49]. These frameworks collectively reframed giftedness as a pluralistic construct, grounded in contextual and cultural diversity [8, p. 22].

In recent decades, researchers such as Ambrose and Sternberg [9, p. 5], Subotnik, Olszewski-Kubilius, and Worrell [11, p. 9], and Persson [14, p. 47] have deepened this discourse, emphasising the sociocultural and ethical implications of identifying and educating gifted individuals. Ambrose [19, p. 691] highlights that the conceptual evolution of giftedness is inseparable from the broader transformations of the twenty-first century–globalisation, digitalisation, and the rise of interdisciplinary perspectives. These factors have contributed to an expanded understanding of giftedness as context-dependent, relational, and continuously developing throughout life [10, p. 14; 12, p. 2].

Need for Re-examination. The growing complexity underscores the need for a transdisciplinary, globally informed approach to understanding giftedness. It calls for a model that integrates insights from neuroscience, cultural studies, and educational technology to reveal how cognitive potential is shaped by its surrounding environment. Such a systems-oriented view reflects a paradigm shift from static to dynamic perspectives on talent, where giftedness emerges from the continuous interplay between the individual and the sociocultural and technological milieu. The contemporary emphasis on collaboration, empathy, and ethical reasoning further supports this view, positioning giftedness as a relational rather than purely personal phenomenon.

Aim of the article. This article aims to examine how the processes of globalisation and digitalisation have transformed the conceptual landscape of giftedness in the twenty-first century. The central argument is that the convergence of global and digital transformations necessitates a paradigmatic shift–from static, psychometric definitions of giftedness to inclusive, developmental, and systems-oriented frameworks.

The purpose of this study is fourfold. First, it seeks to trace the historical evolution of the concept of giftedness from positivist and individualist origins to multidimensional and context-sensitive. Second, it aims to analyse the influence of globalisation on educational theories and policies related to giftedness, with particular attention to cultural diversity and equity in talent development. Third, it intends to investigate the role of digitalisation in reshaping cognitive processes, learning environments, and definitions of giftedness through hybrid human–machine interactions. Finally, it seeks to synthesise these dimensions within an interdisciplinary framework that integrates insights from neuroscience, cultural psychology, and educational technology.

The overarching goal is to formulate a coherent model of giftedness as *dynamic potential*–an emergent capacity realised through the continuous interplay of personal, social, and technological systems. This approach not only advances theoretical understanding but also informs educational policy and practice, aligning talent development with the ethical imperatives of global citizenship and digital responsibility.

Results of the research. The notion of giftedness has long been a contested and evolving concept within educational and psychological discourse. Historically, the identification of gifted individuals was grounded in the assumption that superior cognitive ability was both measurable and largely hereditary. Early twentieth-century approaches, shaped by the pioneering work of psychologists such as Lewis Terman and Charles Spearman, reflected the prevailing positivist belief in intelligence as a quantifiable and stable trait [1, p. 45; 3, p. 78]. The development of intelligence testing, most notably through the Stanford–Binet scales, positioned giftedness as a property that could be statistically identified, ranked, and compared [2, p. 64]. Giftedness was thus conceptualised as an innate, individual characteristic, typically associated with high IQ scores and exceptional academic performance.

While the psychometric tradition dominated for decades, it was not without its critics. By the mid-twentieth century, scholars began to recognise that intellectual potential could not be fully captured by standardised testing alone [4, p. 112]. Emerging evidence from developmental psychology and educational research indicated that creativity, motivation, and environmental influences also played vital roles in exceptional achievement [6, p. 27]. Joseph Renzulli's *Three-Ring Conception of Giftedness* marked a significant turning point, proposing that giftedness arises from the intersection of above-average ability, creativity, and task commitment [7, p. 132]. This model challenged the reductionist association between giftedness and IQ by introducing affective and motivational dimensions into the construct. Similarly, Howard Gardner's theory of *Multiple Intelligences* expanded the definition of giftedness beyond linguistic and logical–mathematical skills to encompass spatial, musical, interpersonal, and intrapersonal intelligences [5, p. 21; 8, p. 244]. These perspectives collectively contributed to a more pluralistic and humanistic understanding of talent, paving the way for inclusive approaches to identification and education [9, p. 5].

The shift from psychometric to multifactorial models also reflected broader changes in educational philosophy. The mid-to-late twentieth century witnessed a growing recognition of diversity and equity in schooling, leading to the acknowledgment that giftedness could manifest differently across cultures, genders, and social contexts [12, p. 18]. Researchers began to explore how opportunity structures, cultural expectations, and educational systems shape the expression of talent. As Mazzoli Smith later argued, the notion of giftedness is inherently embedded in cultural and institutional frameworks that privilege certain forms of knowledge and performance over others [13, p. 78]. Consequently, gifted education has increasingly moved toward identifying and supporting potential rather than merely rewarding measurable achievement [10, p. 15; 14, p. 48].

The late twentieth and early twenty-first centuries saw the rise of sociocultural and contextual theories that reconceptualised giftedness as a dynamic interaction between individual abilities and environmental factors [9, p. 6]. The work of Robert Sternberg and David Ambrose has been particularly influential in this shift. Sternberg's *Triarchic Theory of Intelligence* and later *Theory of Successful Intelligence* proposed that gifted performance involves analytical, creative, and practical dimensions that operate synergistically within specific contexts [15, p. 41; 19, p. 690]. Ambrose and Sternberg further emphasised the importance of ethical and cultural intelligence, arguing that giftedness must be evaluated not only by cognitive outputs but also by the social value and moral implications of its expression [19, p. 693]. This perspective broadened the moral and societal purpose of gifted education, aligning it with global educational goals that promote social responsibility and innovation for collective benefit [21, p. 12].

Ambrose's more recent work continues this trajectory by incorporating interdisciplinary insights from neuroscience, cultural psychology, and systems theory [19, p. 696]. He contends that giftedness cannot be understood in isolation from contextual influences such as cultural norms, socioeconomic conditions, and digital technologies [17, p. 210]. This ecological approach positions giftedness as an emergent property of complex systems, influenced by the dynamic interplay between the individual and the environment [18, p. 54]. It also anticipates the increasing significance of globalisation and digitalisation in redefining how talent is identified and nurtured in educational settings [11, p. 9; 22, p. 97].

Despite this diversification, the legacy of traditional paradigms continues to influence educational practice and policy. Standardised testing remains a dominant tool in many countries for identifying gifted learners, often perpetuating inequities based on socioeconomic status, language background, and access to resources [12, p. 18]. Critics argue that such approaches reinforce elitist structures by privileging academic forms of giftedness that align with Western, middle-class values [13, p. 79]. In addition, the emphasis on measurable outcomes has been criticised for narrowing the definition of success and discouraging alternative expressions of talent, such as leadership, emotional intelligence, and moral reasoning [20, p. 38].

These critiques highlight the ongoing tension between equity and excellence in gifted education. As globalisation and digitalisation reshape educational systems, there is a growing imperative to revisit the theoretical foundations of giftedness to ensure that they reflect the diverse, interconnected, and technologically mediated realities of contemporary life [19, p. 697]. The transition from fixed, IQ-based definitions to dynamic, context-sensitive models represents not only a conceptual shift but also an ethical one–toward recognising giftedness as a shared human potential rather than a rare attribute of the few [21, p. 14].

The convergence of globalisation and digitalisation produces a new, integrated paradigm for understanding giftedness–one that views human potential as inherently relational, adaptive, and evolving. This paradigm can be summarised in three interdependent dimensions:

Contextual intelligence, reflecting the influence of cultural, ethical, and situational factors on gifted behaviour;

Collaborative and distributed creativity, emphasising the role of digital and social networks in generating innovation;

Ethical responsibility, underscoring the importance of moral and civic engagement as integral to giftedness in a global society.

Together, these dimensions represent a redefinition of giftedness as *dynamic potential*: a form of intelligence that develops through continuous interaction among individual capabilities, social systems, and technological mediations. This synthesis aligns with Ambrose's call for an "interdisciplinary ecology of giftedness" that integrates insights from neuroscience, digital learning, and cultural psychology. It challenges educators and policymakers to design environments that enable all learners–not only the traditionally identified few–to realise their potential through creativity, collaboration, and moral agency.

The theoretical reorientation of giftedness towards dynamic potential necessitates a move beyond disciplinary boundaries. Traditional psychological frameworks, while valuable in describing cognitive variation, often fail to account for the complex socio-cultural and technological ecologies in which giftedness develops. Ambrose and Dai argue for an *interdisciplinary ecology of giftedness*–a model that synthesises insights from cognitive science, cultural studies, digital education, and ethics. Such a framework would conceptualise giftedness not as a fixed trait, but as an emergent process embedded within systems of interaction and meaning-making.

Conclusions. The evolution of giftedness in the context of globalisation and digitalisation represents one of the most significant conceptual shifts in educational thought of the twenty-first century. Once defined primarily through psychometric measures and static notions of innate ability, giftedness is now understood as a dynamic, multidimensional, and contextually embedded construct. This redefinition acknowledges the interplay between cognitive potential, cultural diversity, and technological mediation in shaping how human talent is identified, nurtured, and expressed. The changing landscape of global education demands that theories of giftedness adapt to the realities of interconnectedness, inclusivity, and rapid innovation.

The historical trajectory of giftedness reveals a gradual departure from essentialist assumptions towards more holistic and ecological models. The early twentieth-century focus on IQ and measurable intelligence has been supplanted by frameworks that recognise creativity, motivation, and social responsibility as integral dimensions of giftedness. This conceptual broadening reflects broader transformations in education–from industrial-era standardisation to post-industrial emphasis on innovation and collaboration. The rise of globalisation has further complicated and enriched this picture, exposing educators to diverse cultural perspectives that challenge the universality of Western models. Giftedness is now increasingly interpreted as a culturally relative and ethically situated phenomenon that reflects the values and aspirations of different societies.

Digitalisation adds another layer to this evolution. As artificial intelligence, virtual collaboration, and online learning reshape the cognitive and social environment, giftedness has become distributed across human and technological networks. The digital era calls for the cultivation of adaptive, interdisciplinary, and ethically informed intelligences capable of navigating uncertainty and complexity. In this context, giftedness no longer resides within isolated individuals but emerges from the creative interaction of learners, communities, and technologies. This transformation challenges educators to design learning environments that value process over product, potential over performance, and collaboration over competition.

The conceptual synthesis proposed in this article–the view of giftedness as *dynamic potential*–offers a framework for aligning theory, policy, and practice with the demands of globalised and digitalised education. It underscores three interrelated principles. First, giftedness must be understood as *contextual*, shaped by cultural, social, and technological conditions that influence both its identification and development. Second, it must be viewed as *collaborative and distributed*, emerging through collective creativity and interaction within digital ecosystems. Third, it must be *ethical and humanistic*, guided by the moral imperative to apply knowledge and innovation for the common good. These principles reflect the convergence of cognitive, cultural, and moral intelligence as defining features of twenty-first-century giftedness.

In conclusion, as education continues to evolve under the pressures and possibilities of globalisation and digitalisation, the challenge for scholars and practitioners is to sustain a vision of giftedness that is both innovative and humane. The future of gifted education lies not in refining old hierarchies of intelligence but in nurturing ecosystems of talent that celebrate diversity, promote social responsibility, and harness technology for collective flourishing. Giftedness in the twenty-first century must therefore be understood not as a privilege of the few, but as the potential of the many–an evolving expression of human adaptability, imagination, and ethical purpose in an interconnected world.

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Скирда А. Вплив глобалізації та цифровізації на зміну сприйняття обдарованості у 21 столітті

У XXI столітті освітні процеси зазнали глибоких трансформацій під впливом глобалізації та диджиталізації, що зумовило необхідність фундаментального переосмислення поняття обдарованості. Традиційно обдарованість визначалась за психометричними показниками та асоціювалась із вродженою когнітивною перевагою, відображаючи елітарні та західноцентричні парадигми. Натомість сучасна наукова думка дедалі частіше розглядає обдарованість як динамічну, контекстуально зумовлену та соціально вбудовану конструкцію. У статті досліджується, яким чином процеси глобальної взаємопов'язаності та технологічного поступу переосмислюють теоретичні, етичні та педагогічні уявлення про людський потенціал у сучасну епоху. Спираючись на міждисциплінарні підходи когнітивної науки, культурної психології та цифрової педагогіки, автор доводить, що глобалізація розширює культурні й етичні виміри обдарованості, виявляючи її залежність від соціальних цінностей, структур можливостей і міжкультурного різноманіття. Водночас диджиталізація змінює середовище розвитку здібностей, відкриваючи нові форми співпраці, креативності та розподіленого інтелекту в цифрових просторах. Сукупність цих процесів кидає виклик редукціоністським уявленням про індивідуальний геній і сприяє формуванню системного бачення обдарованості як результату взаємодії людини та технологій. У статті окреслено концептуальну еволюцію – від розуміння обдарованості як фіксованої

здібності до її трактування як динамічного потенціалу, що інтегрує когнітивні, емоційні, етичні та технологічні складники інтелекту. Виокремлено три ключові риси обдарованості XXI століття: контекстуальний інтелект, сформований глобальним різноманіттям; колаборативну та розподілену креативність, посилену цифровим середовищем; етичну відповідальність, спрямовану на соціальне та екологічне благо. Здійснений аналіз дозволяє запропонувати цілісну концептуальну модель, що визначає обдарованість як інклюзивне, партнерське та морально орієнтоване явище. Автор робить висновок, що майбутнє освіти обдарованих полягає у розвитку креативності, емпатії та етичних інновацій через справедливі, технологічно підтримані освітні середовища, які сприяють розкриттю потенціалу кожного здобувача освіти як активного учасника спільного глобального майбутнього.

Ключові слова: *обдарованість; глобалізація; диджиталізація; динамічний потенціал; розподілений інтелект; освітня парадигма; етичний вимір.*

Дата першого надходження рукопису до видання: 20.10.2025
Дата прийнятого до друку рукопису після рецензування: 24.11.2025
Дата публікації: 26.12.2025