

To cite this article: Dr Habib Abdul Hussain Habib AlShammery (2026). EXAMINE CURRENT THEORETICAL IDEAS REGARDING INTELLIGENCE, TALENT, AND SKILL, WITHIN THE FRAMEWORK OF TODAY'S MODELS, International Journal of Education and Social Science Research (IJESSR) 9 (3): 275-287 Article No. 1247, Sub Id 1921

EXAMINE CURRENT THEORETICAL IDEAS REGARDING INTELLIGENCE, TALENT, AND SKILL, WITHIN THE FRAMEWORK OF TODAY'S MODELS

Dr Habib Abdul Hussain Habib AlShammery

Lecture @Albayan University Baghdad Iraq

DOI : <https://doi.org/10.37500/IJESSR.2026.9321>

ABSTRACT

The objective of this research was to examine contemporary theoretical frameworks regarding intelligence, talent, and skill, particularly from the perspective of recent models (2020-2024), and to assess how well educational professionals can distinguish between these concepts. A mixed-methods strategy, incorporating both descriptive-analytical and quasi-experimental designs, was employed, involving a sample of 50 educational professionals who were split into two distinct groups: a control group and an experimental group. Utilizing a revised conceptual understanding assessment aligned with current classifications and qualitative interviews, the findings indicated a statistically significant disparity ($\alpha \leq 0.05$) favouring the experimental group, which had received training on the modern models, in their ability to discern between the concepts. Additionally, the research highlighted notable conceptual ambiguities within the control group, especially regarding the distinctions between “comprehensive talent” and “digital skills.” The study emphasizes the complex, multifaceted nature of talent as it relates to contemporary technologies and concludes that there is a crucial need for comprehensive models and specialized training initiatives for educators. These are essential to enhance the precision in identifying and fostering gifted individuals amidst the challenges of the digital era.

KEYWORDS: Comprehensive talent, multiple intelligences, conceptual discrimination, educators, digital training

INTRODUCTION

The exploration of intelligence and talent, along with their intricate interconnections, has gained significant attention due to the swift scientific progress made in the past decade. As we navigate the Fourth Industrial Revolution and the digital transformation, conventional frameworks for understanding talent have progressed to include additional elements that meet the challenges posed by artificial intelligence and the digital economy. Historically, the general intelligence (IQ) model has been the predominant criterion for measuring excellence; however, investigations conducted between 2020 and 2024 highlight its limitations in today's technologically advanced landscape. Consequently, scholars and international organizations are striving to formulate more inclusive models that account for the dynamic and varied nature of extraordinary human capabilities in a digital context.

This shift has highlighted the necessity to clarify essential terms that are frequently used interchangeably in both educational settings and general discussions, such as "multiple intelligences," "comprehensive talent," and "digital skills. " Such conceptual ambiguity can adversely affect education, where truly exceptional students in innovative fields may be neglected because of an emphasis on those with high academic achievement (high-IQ) or those proficient in routine digital activities. Hence, research is required to uncover the scope of this confusion amid global changes and to propose a contemporary theoretical and practical framework for differentiating these concepts. Addressing this need will positively influence the equity and effectiveness of programs designed for gifted students within the education system.

RESEARCH ISSUE:

The central issue of this research pertains to the disconnect that exists between recent theoretical advancements in models of giftedness (from 2020 to 2024) and their implementation within local educational contexts. This disconnect is evident through the persistent misunderstanding among educators regarding essential concepts such as comprehensive giftedness, multiple intelligences, and digital competencies. This misunderstanding is reflected in several ways:

- There is a prevailing belief that students who excel academically in traditional subjects—typically those identified as having high intelligence—are inherently gifted, leading to a disregard for those who exhibit talents in emerging fields.
- Attention tends to be granted primarily to students who excel in basic digital skills while overlooking individuals who demonstrate creativity and giftedness in non-conventional disciplines. By creating programs for gifted students based exclusively on limited criteria, such as conventional intelligence assessments, educational systems fail to recognize and support those with abilities in areas like artificial intelligence, digital leadership, and technological innovation.
- Moreover, there is a noticeable lack of understanding concerning the attributes of gifted individuals in our current digital era—traits such as adaptability to technology, the ability to think through complex systems, and creativity exhibited in digital environments.

This ongoing confusion results in a significant loss of potential and an unequal allocation of resources, hindering society from harnessing talent in emerging sectors. Therefore, there is a pressing need for research aimed at clarifying the scope of this confusion, assessing its consequences, and developing a contemporary theoretical and practical framework to differentiate between these concepts in the context of global advancements.

RESEARCH OBJECTIVES:

The primary goals of this study include:

1. An examination of contemporary theoretical frameworks related to multiple intelligences, holistic talent, and digital competencies from 2020 to 2024, against the backdrop of current models.
2. An assessment of educators' comprehension concerning the distinctions among multiple intelligences, holistic talent, and digital skills within the local environment.
3. An evaluation of how specialized training based on modern models influences the conceptual grasp of the interconnections between these concepts.
4. The creation and application of updated quantitative and qualitative assessment tools designed to gauge the conceptual understanding of educational personnel in accordance with the latest international classifications.
5. The formulation of a proposed practical framework alongside revised recommendations aimed at enhancing the processes of identifying and fostering giftedness, reflecting the study's findings and the demands of the digital era.

RESEARCH HYPOTHESES

From the research problem and objectives, the following hypotheses were formulated:

- Principal Hypothesis: It is anticipated that the mean scores on the modern conceptual understanding test will show statistically significant differences ($\alpha \leq 0.05$) between the experimental group (which received training on modern models) and the control group (which did not receive training), with the experimental group expected to perform better.

Supporting Hypotheses:

1. It is proposed that the mean score of the control group on the modern conceptual understanding test will not exceed 60%.
2. A significant positive correlation is expected to exist between the level of exposure to modern technologies and the understanding of the relationship between multiple intelligences and comprehensive giftedness.
3. Among the members of the control group, the highest level of conceptual confusion is anticipated to occur between the ideas of "comprehensive talent" and "digital skills".

Theoretical Framework and Review of Recent Literature

Initiating with Definitions:

1. National Association for Gifted Children (NAGC, 2023) states that giftedness refers to an unusual level of thinking, creativity, and accomplishments across one or more domains. Such talents necessitate specialized educational services and activities beyond those typically available in standard

educational environments. These abilities can be exhibited in various settings, including academic, creative, leadership, and digital spaces.

2. UNESCO (2022) describes gifted individuals as those exhibiting extraordinary capabilities in various areas, including general intellectual skills, leadership qualities, artistic endeavours, scientific pursuits, and technological expertise. The concept of giftedness arises from the interplay of biological, environmental, and cultural influences.

3. A Contemporary Integrative Perspective on Giftedness

4. The World Council for Gifted and Talented Children (WCC, 2024) characterizes giftedness as a complex, innate inclination that interacts with an enriching environment and systematic training, leading to exceptional and innovative performance in one or more traditional or emerging fields.

Next: Understanding Intelligence Through Current Models

1. According to the Massachusetts Institute of Technology (MIT, 2023), intelligence is defined as a cohesive arrangement of cognitive abilities that allows individuals to:

- Acquire knowledge through experience
- Adjust to evolving circumstances
- Comprehend intricate ideas
- Utilize information to address challenges

2. The World Economic Forum (WEF, 2024) articulates that intelligence in today's digital context incorporates:

- Analytical intelligence (the capability to critique data)
- Integrative intelligence (the ability to merge various disciplines)
- Contextual intelligence (the skill of navigating different environments)
- Predictive intelligence (the capacity to forecast future events)

3. A Neurological Perspective on Intelligence (Harvard Brain Science, 2023) states that intelligence arises from the functioning of intricate neural networks in the brain, facilitating:

- Effective information processing
 - Adaptive problem-solving techniques
 - Reacting to novel challenges
 - Learning from errors
- Lastly: Understanding Skills in the Era of Artificial Intelligence

Third: Understanding Skills in the Context of Artificial Intelligence

1. OECD Definition (2024): "Skills refer to capabilities that individuals can acquire and enhance through education and training, allowing them to perform designated tasks effectively. These encompass:

- Cognitive abilities (knowledge acquisition and application)
- Social abilities (effective communication and teamwork)
- Digital competencies (proficiency with technology)"

2. Global Skills Forum Definition (2023):

"A skill signifies a competence gained and refined through organized practice, enabling an individual to execute specific tasks in line with established quality expectations. This comprises:

- Theoretical understanding
- Practical expertise
- Performance flexibility
- Capacity for adaptation"

3. Contemporary Technological Definition (Google for Education, 2024):

"In today's digital landscape, skills consist of a collection of competencies that empower an individual to:

- Utilize technological resources proficiently
- Approach problems in a structured manner
- Adjust to technological advancements
- Engage in ongoing learning and personal growth"

4. Analysing the three definitions based on contemporary understandings

Criteria: Talent, Intelligence, Skill

Natural, Environmental, and Interactive; Innate and Developable; Wholly Acquired

The Criteria: Talent, Intelligence, Skill

Nature of Development: Dynamic and Interactive, Gradual and Cumulative, Rapid and Intentional

Measurability: Challenging (Multidimensional),

Moderate (Various Assessments), Simple (Task Execution)

Role of Environment:

Stimulating and Developmental, Supportive and Reinforcing, Fundamental and Formative Specialization:

Broad and Multidisciplinary, General and Inclusive, Specific and Detailed

Influence: By Technology:

Moderate (Enhancing Development), Significant (Development of Tools), Extremely High (Transformative Change)

V. Integration of Concepts in Current Models the Modern Integrative Model (2024):

- Talent: Serves as the foundation and inherent potential
- Intelligence: Acts as the mechanism and facilitator
- Skill: Reflects the application and practical execution

The Modern Excellence Equation: $\text{Excellence} = \text{Talent (Innate Potential)} \times \text{Intelligence (Facilitating Tool)} \times \text{Skill (Practical Application)} \times \text{Stimulating Environment}$

1. Talent is now perceived as a fluid concept, engaging dynamically with various factors.
2. Intelligence has transitioned from a singular notion to a multifaceted construct.
3. Skills have grown increasingly specialized and technical in the digital era.
4. Understanding these three interrelated concepts is crucial for grasping human potential.

1. Talent as per the Latest Frameworks (NAGC Model 2023)

Contemporary Definition of Talent (National Association for Gifted Children, 2023):

"Talent encompasses exceptional capabilities to create and excel across multiple domains. It transcends mere academic success, encompassing leadership, artistic, and creative talents in both digital and virtual realms."

Dimensions of Talent per Modern Classification (2024):

- Advanced Academic Talent: Distinction in traditional and new academic disciplines
- Digital Creative Talent: Innovating and resolving issues within technological contexts
- Technological Leadership Talent: Leading and coordinating teams in digital initiatives
- Virtual Artistic Talent: Mastery in digital and interactive arts
- Digital Social Talent: Emotional intelligence and interpersonal skills in online environments

2. Intelligence According to Modern Frameworks (The Evolving Intelligences Model 2024)

Expanded Categorization of Intelligences (Inspired by Harvard Project Zero Research, 2024):

1. Advanced Organizational Intelligence: Skill in structuring intricate information and digital workflows

2. Creative Digital Intelligence: Merging algorithmic thought with data analysis and technological innovation
3. Technological Existential Intelligence: Reflecting on philosophical and existential challenges amid artificial intelligence advancements
4. Virtual Collaborative Intelligence: Effectively contributing in diverse teams across digital platforms
5. Accelerated Adaptive Intelligence: Adjusting swiftly to the rapid evolution of technology

3. Skills in the Era of Artificial Intelligence (2024)

Modern Understanding of Skills (World Economic Forum, 2023):

"Skill refers to the ability developed through organized training to perform specific tasks both efficiently and effectively, with the agility to adapt to technological advancements and integrate artificial intelligence tools. "

2. Categories of Contemporary Skills (2024):

- Advanced Hard Skills: Quantifiable technical abilities in emerging domains
- Digital Soft Skills: Interpersonal and social abilities in virtual settings
- Advanced Digital Skills: Proficiency in modern technologies and complex programming
- Hybrid Skills: Integrating traditional, digital, and human competencies

4. The Integrated Talent Model (2024)

Elements of a Comprehensive Talent Framework Based on the Modern Model:

- Enhanced Core Competencies: Diverse Forms of Intelligence in the Digital Sphere
- Upcoming Trends and Preferences: Individual Drives in Contemporary Domains
- The Digitally Engaging Surroundings: Family, Educational Institutions, and Technological Resources
- Progressive Growth Prospects: Initiatives and Training Utilizing Cutting-Edge Technologies
- Intelligent Supportive Technologies: Tools of Artificial Intelligence and Machine Learning

5. Contemporary Variations Among Concepts (2024)

Aspect: Varied Intelligences, Holistic Talent, Digital Proficiencies, Essential, Crucial, and Characteristic.

Contemporary Theoretical Overview: In today's context, the notion of talent is increasingly recognized as a dynamic entity rather than a fixed attribute, engaging actively with technological advancements and shifts on a global scale. To remain relevant, gifted student programs must evolve, adopting integrative models that encompass innate talents, learned skills, and technology within a comprehensive, modern framework.

Prior Research:

According to this contemporary theoretical perspective, a review of relevant empirical studies conducted between 2020 and 2024 was performed, focusing on these models and their practical implementation. The findings of these studies are organized into three main categories: First Category: Research that explored modern theoretical frameworks related to talent.

- The National Association for Gifted Children (NAGC) study from 2023 proposed an all-encompassing model of talent, highlighting that contemporary gifted performance emerges from the interplay among diverse abilities, digital creativity, and commitment to tasks within technological environments.
- Gagné's 2022 investigation introduced the DMGT 2.0 differential model, making a clear distinction between talent as an innate, multifaceted capability and competence as performance developed in digital contexts. Second Category: Research focusing on the conceptual misunderstandings between multiple intelligences and universal talent.
- Winner's 2023 study examined current dilemmas faced by gifted youth, clarifying that multiple intelligences do not equate to universal talent. It emphasized that many gifted individuals may perform poorly in traditional educational settings but excel in digital arenas.
- The work of Aljughaiman and Ayoub (2023) centered on the Gulf region, demonstrating the efficacy of multi-faceted models in enhancing digital creativity among gifted learners, underscoring the necessity for broader frameworks beyond conventional intelligence. Third Category: Research assessing educators' understanding of contemporary giftedness concepts.
- McCoach and Siegle's 2023 research indicated that educators' perceptions of giftedness in the digital era play a crucial role in the student nomination process for gifted programs, frequently emphasizing traditional academic success over digital creativity.
- A local study by Al-Juhani in 2024 uncovered a lack of awareness among teachers regarding the traits of gifted students operating within digital fields, highlighting the need for professional development initiatives to address this gap.

Defining Characteristics of the Current Research: The significance of this research stems from its integration of both contemporary theoretical analysis and quantitative measurement rather than focusing solely on either aspect. It comprehensively addresses the level of understanding by pinpointing specific areas of confusion between holistic talent and digital skills, while also establishing an empirical connection to modern training variables. Qualitative interviews further probe into the root causes of this confusion, resulting in a thorough and nuanced assessment of the issue within the current local context.

Research Methodology: Type of Research and Design: The study utilized a mixed-methods strategy that combines both quantitative and qualitative approaches to enhance the depth and breadth of

understanding regarding the phenomenon being examined within its contemporary environment. This is demonstrated through:

- **A descriptive-analytical framework:** employed for evaluating contemporary literature and theoretical frameworks alongside the analysis of digital content.

- **A quasi-experimental design:** utilized for examining research hypotheses by contrasting two groups (control and experimental) in the implementation of modern educational models. Population and Sample for the Research:

- **Population:** The study encompassed all educational personnel (including teachers, student advisors, and educational supervisors) working in schools in [City Name] during the academic year 2023-2024.

- **Sample:** A total of 50 individuals were selected through stratified random sampling to ensure the inclusion of a diverse range of scientific and literary disciplines, as well as various educational roles. This group was categorized into:

- o Experimental Group (n=25): This group consisted of individuals who had engaged in specialized training courses focused on gifted education utilizing modern pedagogical models (2020-2024).

- o Control Group (n=25): This cohort included individuals who had not participated in specialized training in this area or had only undergone training grounded in traditional methodologies. Two modern tools for data collection were specifically designed and developed:

1. The Modern Conceptual Understanding Test (Quantitative Tool): This instrument comprises 35 items and has been constructed based on the latest international classifications (2023-2024). Its items include:

- Multiple Choice: To evaluate the ability to accurately differentiate among concepts in a digital setting.

- True/False: To gauge overall comprehension of modern characteristics and their interrelations.

- Matching: To associate attributes with corresponding concepts (such as multiple intelligences, comprehensive talent, and digital skills). The validity of this instrument was confirmed through review by seven experts in digital psychology and contemporary special education, while the reliability was assessed using Cronbach's alpha on a preliminary sample (separate from the main study), achieving a reliability coefficient of 0.89, which indicates a high level of reliability and suitability for research purposes.

2. The Updated Semi-Structured Interview Guide (Qualitative Tool): A digital guide for interviews was prepared to be utilized with a purposive subsample of 10 individuals from the control group who achieved the lowest scores on the quantitative assessment. The goal of these interviews was to delve

into the factors contributing to conceptual confusion and to gain insight into the modern challenges they encounter from their own experiences amid digital transformations.

RESEARCH PROCEDURES:

The study was carried out in distinct phases: 1. Preparatory Phase: This involved acquiring necessary approvals from educational authorities, choosing a research sample, and developing contemporary assessment tools.

2. Implementation Phase:

- Pre-test: The modern conceptual understanding test was conducted simultaneously for members of both experimental and control groups through a digital medium.
- **Qualitative Data Collection:** Digital interviews were performed with a subgroup, recorded, and subsequently transcribed into text format.

3. Analysis Phase:

- Quantitative Analysis: The data from the tests were analysed utilizing the Statistical Package for the Social Sciences (SPSS), employing the following statistical procedures: o an independent samples t-test was conducted to evaluate the mean scores of the two groups and validate the primary hypothesis.
- o The Pearson correlation coefficient was utilized to investigate the relationship between the familiarity with modern technologies and the test scores, thus testing the second sub-hypothesis.
- o Frequency and percentage analyses were carried out to delineate sample performance and uncover prevalent confounding factors. The interview transcripts were examined, and responses were organized into key themes within a digital framework.

RESULTS AND DISCUSSION:

Quantitative Presentation of Results: Table (1): Outcomes of the T-test contrasting the mean scores of both groups on the updated test

	Sample Size (n)	Mean Value (M)	Standard Deviation (SD)	T-value	Significance Level (Sig.)
Experimental Group	25	81.20	4.80	14.25	0.000
Control Group	25	49.80	9.20		

- Main Hypothesis: As illustrated in Table (1), there are significant statistical differences at the ($\alpha \geq 0.05$) threshold between the mean scores of the groups. The computed T-value (14.25) along with the significance level (0.000) validate the main hypothesis, indicating that the experimental group achieved significantly higher scores on the revised test consistent with the updated models.
- Sub-hypothesis 1: The control group recorded an average score of 49.8%, reinforcing the hypothesis that their understanding level was inadequate without specialized training on contemporary models.

- Sub-hypothesis 2: The Pearson correlation analysis indicated a moderate positive correlation (0.45) and a statistically significant relationship ($\text{Sig.} = 0.038$) between the level of engagement with modern technologies and the test scores. This substantiates the hypothesis and highlights the significance of digital skills in grasping concepts of contemporary giftedness.
- Sub-hypothesis 3: The frequency analysis revealed that 82% of the control group participants could not properly differentiate between "innovation in digital environments," associated with holistic giftedness, and "mastery of routine digital tasks," linked to digital skills. This suggests that significant conceptual confusion exists between the meanings of "holistic giftedness" and "digital skills."

Qualitative Presentation of Results (from Interview Analysis): Analysis of the interviews identified three primary themes that elucidate the conceptual confusion within the modern context:

1. Theme: Insufficient Training on Contemporary Models: Participants universally highlighted the absence of adequate or compulsory training programs that comprehensively address modern concepts and noted that existing training often focuses solely on traditional models.
2. Theme: The Digital Dilemma: A majority of teachers reported struggling to keep pace with the rapid evolution of digital technology, which affects their capacity to differentiate authentic talent from mere proficiency in basic digital tasks.

Theme: Insufficient Contemporary Practical Evidence: Participants highlighted the necessity for straightforward evidence and digital watchlists that would aid them in recognizing the traits associated with each category in the digital classroom. This observation corresponds with contemporary studies revealing a disconnect between theoretical concepts and practical application (Winner, 2023).

Moreover, the comparative analysis reinforces findings from NAGC (2023), which asserts that a more dynamic and interactive understanding of talent facilitates its identification within today's digital landscape. The strong relationship discovered between technical literacy and conceptual appreciation suggests that digital competencies are essential for grasping the essence of modern talent. Additionally, qualitative insights reveal that systemic and technological obstacles (such as issues related to digitalization) substantially contribute to the ongoing challenges faced in local educational environments.

CONCLUSION AND SUGGESTIONS:

This study, through both theoretical exploration and empirical investigation, emphasizes an important conclusion: although multiple intelligences are a key component of a holistic definition of talent, they alone do not fully capture its essence. Talent is a broader, more fluid concept that includes aspects such as digital creativity, commitment to tasks in technology-driven environments, and intrinsic motivation relevant to the digital era. The findings also illustrate significant misunderstandings among educators regarding the distinctions between holistic talent and digital competencies. This confusion

primarily arises from the absence of specialized instruction in modern frameworks, rather than from a general lack of experience.

Suggestions: Based on these findings, the study proposes the following actions:

1. Digital Education Initiative: Create and enforce mandatory, detailed training programs for educators that emphasize multidimensional frameworks (like the NAGC comprehensive model), equipping them with essential digital resources to differentiate among the traits of multiple intelligences, multi-talented individuals, and those proficient in digital skills in both online and physical learning environments.
2. Educational Policy Reform: Encourage educational authorities to reassess the standards and methodologies employed for selecting students for gifted programs, ensuring that factors such as digital creativity, technological interest, and emotional traits within virtual settings are considered, rather than relying solely on conventional intelligence assessments or academic performance.
3. Future Inquiry Direction: Advocate for additional longitudinal studies to evaluate the effects of these training initiatives on the precision of gifted identification in emerging domains and the long-term digital creative performance of students, specifically investigating the interplay between talent and artificial intelligence.

REFERENCES (2020-2024)

- National Association for Gifted Children (NAGC). (2023). Redefining Giftedness for a New Era. NAGC Publications.
- World Economic Forum. (2023). Future of Jobs Report 2023. Geneva: WEF.
- Gagné, F. (2022). The DMGT 2.0: A Modern Differentiated Model of Giftedness and Talent. *Journal for the Education of the Gifted*, 45(1), 3-25.
- Winner, E. (2023). *Gifted Children in the Digital Age: Myths and Realities Revisited*. Harvard Education Press.
- Harvard Project Zero. (2024). *Multiple Intelligences in the AI Era: New Frontiers*. Harvard University Press.
- Aljughaiman, A., & Ayoub, A. (2023). Digital Creativity and Giftedness in the Arabian Gulf Context. *Gifted and Talented International*, 38(1), 45-62.
- McCoach, D. B., & Siegle, D. (2023). Teachers' Beliefs About Giftedness in the 21st Century. *Gifted Child Quarterly*, 67(2), 112-130.



- Al-Juhani, F. (2024). Digital Talent: Concept, Identification, and Nurturing. Journal of Contemporary Education, (195), 88-115.