Journal of Banking and Financial Dynamics
Vol. 10, No. 2, 15-20, 2026
ISSN(E): 2576-6821
DOI: 10.55220/2576-6821.v10.894

Talent and Intelligence in Light of Contemporary Models

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Abstract

This study aimed to analyse modern theoretical concepts of intelligence, talent, and skill in light of contemporary models (2020-2024) and to reveal the degree to which educational professionals understand the differences between them. The study employed a mixed-methods approach (descriptive-analytical and quasi-experimental) and was conducted on a sample of (50) educational professionals, divided into two groups (control and experimental). Using a revised conceptual understanding test based on the latest classifications and qualitative interviews, the results showed a statistically significant difference ($\alpha \leq 0.05$) in favour of the experimental group (trained on the modern models) in their ability to differentiate between concepts. The study also revealed significant conceptual confusion among the control group, particularly between the concepts of "comprehensive talent" and "digital skills." The study underscores the dynamic, multidimensional nature of talent that interacts with modern technologies and concludes with the necessity of adopting comprehensive models and implementing specialized training programs for educators to improve the accuracy of identifying and nurturing gifted individuals in light of the demands of the digital age.

Keywords: Comprehensive talent, Conceptual discrimination, Digital training, Educators, Multiple intelligences.

1. Introduction

The nature of intelligence and talent, and the complex relationship between them, has been a central focus of the rapid scientific advancements of the last decade. In the context of the Fourth Industrial Revolution and digital transformation, traditional models for understanding talent have evolved to encompass new dimensions that address the demands of the artificial intelligence and digital economy era. While the general intelligence (IQ) model has dominated as the sole measure of excellence for decades, recent studies (2020-2024) have demonstrated the inadequacy of this singular approach in the age of advanced technology. This has prompted researchers and global institutions to develop more comprehensive models that explain the dynamic and multifaceted nature of exceptional human abilities within the digital context.

This evolution has necessitated a distinction between key terms often used interchangeably in educational and popular discourse, such as "multiple intelligences," "comprehensive talent," and "digital skills." This conceptual confusion often has a negative impact on the field of education, where genuinely gifted students in emerging fields are overlooked due to a focus on academically high-achieving (high-IQ) students or those adept at performing routine digital tasks. Therefore, there is a need for studies that reveal the extent of this confusion in light of global developments and offer a modern theoretical and applied framework for distinguishing between these concepts. This will positively impact the fairness and effectiveness of gifted student programs in the education sector.

2. Research Problem

The research problem lies in the existence of a knowledge and practical gap between recent global theoretical developments in giftedness models (2020-2024) and their practical application in the local educational field. This is manifested in the continued widespread confusion among educators regarding the concepts of comprehensive giftedness, multiple intelligences, and digital skills. This confusion has been observed through:

- The assumption that academically gifted students in traditional fields (those with high intelligence) are automatically gifted, while overlooking those gifted in emerging fields.
- The focus on students proficient in performing routine digital tasks while neglecting gifted and creative students in non-traditional fields.

Designing gifted student programs based solely on narrow criteria (such as traditional intelligence tests) deprives students with talents in artificial intelligence, digital leadership, and technological innovation of opportunities.

- A lack of awareness of the modern characteristics of gifted individuals in the digital age (such as technological adaptability, complex systems thinking, and creativity in digital spaces).

This confusion leads to a waste of potential and an inequitable distribution of resources, depriving society of the opportunity to benefit from talent in emerging sectors. This necessitates research that clarifies the extent of this confusion, measures its impact, and provides a modern theoretical and applied framework for distinguishing between these concepts in light of global developments.

3. Research Objectives

This research aims to achieve the following objectives:

1. To analyse modern theoretical concepts (2020-2024) of multiple intelligences, holistic talent, and digital skills in light of contemporary models.
2. To determine the level of understanding among educators regarding the differences between multiple intelligences, holistic talent, and digital skills within the local context.
3. Measuring the impact of specialized training on modern models in improving conceptual understanding of the relationship between these concepts.
4. Developing and implementing updated quantitative and qualitative measurement tools to assess the conceptual understanding of educational staff in light of new international classifications.
5. Presenting a proposed practical framework and updated recommendations for improving giftedness identification and nurturing programs based on the findings and the requirements of the digital age.

4. Research Hypotheses

The following hypotheses emerged from the research problem and objectives:

- Main Hypothesis: There are statistically significant differences ($\alpha \leq 0.05$) in the mean scores of the sample on the modern conceptual understanding test between the experimental group (trained on modern models) and the control group (untrained), in favour of the experimental group.
- Sub-Hypotheses:

1. The mean score obtained by the control group on the modern conceptual understanding test does not exceed 60%.
2. There is a statistically significant positive correlation between the level of familiarity with modern technologies and the degree of conceptual understanding of the relationship between multiple intelligences and comprehensive giftedness. 3. The greatest conceptual confusion among members of the control group lies between the concepts of "comprehensive talent" and "digital skills".

Theoretical Framework and Review of Recent Literature

First: Definitions

1. National Association for Gifted Children (NAGC, 2023) Definition:

"Giftedness is an exceptional capacity for thinking, creativity, and achievement in one or more areas, requiring educational services and activities that cannot be normally provided in a school setting. These abilities manifest in diverse contexts, including academic, creative, leadership, and digital environments."

2. UNESCO Definition (UNESCO, 2022) Definition:

"Gifted individuals are those who demonstrate outstanding performance abilities in areas such as general intellectual abilities, leadership, the arts, sciences, and technology. Giftedness involves the interaction of biological, environmental, and cultural factors."

3. Modern Integrative Definition

4. World Council for Gifted and Talented Children (WCC, 2024) Definition: "Giftedness is a multidimensional innate predisposition that interacts with a stimulating environment and structured training to produce outstanding and creative performance in one or more traditional or emerging areas." Second: Defining Intelligence According to Contemporary Models

1. The Massachusetts Institute of Technology (MIT, 2023) Definition: "Intelligence is an integrated system of mental abilities that enables an individual to:

- Learn from experience
- Adapt to changing environments
- Understand complex concepts
- Use knowledge to overcome obstacles"

2. The World Economic Forum (WEF, 2024) Definition: "Intelligence in the digital age includes:

- Analytical intelligence (analysing information)
- Integrative intelligence (connecting different fields)
- Contextual intelligence (understanding multiple environments)
- Predictive intelligence (anticipating the future)"

3. The Modern Neurological Definition (Harvard Brain Science, 2023): "Intelligence is the product of the interaction of complex neural networks in the brain, which enable

Harvard Brain Science, 2023): "Intelligence is the product of the interaction of complex neural networks in the brain, which enable:

- Efficient information processing
- Flexible problem-solving
- Adapting to new situations
- Learning from mistakes"

Third: Defining Skills in the Age of Artificial Intelligence

1. OECD Definition (2024): "Skills are abilities that can be learned and developed through education and training, enabling individuals to perform specific tasks efficiently. They include:

- Cognitive skills (knowledge and application)

- Social skills (communication and collaboration)
- Digital skills (use of technology)"

2. Global Skills Forum Definition (2023): "A skill is an ability acquired and developed through structured practice to perform specific activities according to required quality standards. It includes:

- Theoretical knowledge
- Applied competence
- Flexibility in performance
- Adaptability"

3. Modern Technological Definition (Google for Education, 2024): "Skills in the digital age are a set of Competencies that enable an individual to:

- Use technological tools effectively
- Solve problems systematically
- Adapt to technological changes
- Continuous learning and self-development

Fourth: Comparison of the three concepts according to modern definitions
Criteria: Talent, Intelligence, Skill
Source:
Natural + Environmental + Interactive, Innate + Developable, Fully Acquired
The Criteria: Talent, Intelligence, Skill
Nature of Development
Dynamic and Interactive, Gradual and Cumulative, Rapid and Planned
Measurability
Difficult (Multidimensional), Moderate (Various Tests), Easy (Task Performance)
Role of Environment
Stimulant and Developmental, Supportive and Reinforcing, Fundamental and Shaping
Specialization
General and Multidisciplinary, General and Comprehensive, Specific and Precise
Influence
By Technology
Moderate (Accelerating Development), High (Tool Development), Very High (Radical Change)
V. Integration of Concepts in Contemporary Models
The Modern Integrative Model (2024):

- Talent: Forms the foundation and latent ability
- Intelligence: Represents the tool and facilitator
- Skill: Represents the application and practical performance

The Modern Excellence Equation: Excellence = Talent (Ability) × Intelligence (Tool) × Skill (Application) × Stimulating Environment
1. Talent is no longer a fixed concept but a dynamic system that interacts with variables
2. Intelligence has evolved from a singular concept to a constructive one Multidimensional
3. Skills have become more specialized and technical in the digital age.
4. Integrating these three concepts is essential for understanding human capabilities.
1. Talent according to the latest models (NAGC Model 2023)
The modern definition of talent (National Association for Gifted Children, 2023):

"Talent is the exceptional ability to create and achieve in one or more areas. It is not limited to academic achievement but includes leadership, artistic, and creative abilities in digital and virtual contexts."

Dimensions of Talent According to the Modern Classification (2024):

- Advanced Academic Talent: Excellence in traditional and emerging fields of study
- Digital Creative Talent: Divergent thinking and problem-solving in technological environments
- Technological Leadership Talent: Influencing others and managing teams in digital projects
- Virtual Artistic Talent: Excellence in digital and interactive performing arts
- Digital Social Talent: Emotional intelligence and social interaction in virtual spaces

2. Intelligence According to Contemporary Models (The Evolving Intelligences Model 2024)
Expanded Classification of Intelligences (Based on Harvard Project Zero Research, 2024):
1. Advanced Organizational Intelligence: The ability to organize complex information and digital processes
2. Creative Digital Intelligence: Algorithmic thinking and data analysis combined with technological creativity
3. Technological Existential Intelligence: Thinking about philosophical and existential issues in the age of artificial intelligence
4. Virtual Collaborative Intelligence: Working effectively in diverse teams across digital platforms
5. Accelerated Adaptive Intelligence: Adapting to rapid changes in technological environments
3. Skills in the Age of Artificial Intelligence (2024)

The Contemporary Concept of Skills (World Economic Forum, 2023):
"Skill is the ability acquired through structured training to perform specific tasks efficiently and effectively, with the capacity to adapt to technological changes and leverage artificial intelligence tools."

Types of Modern Skills (2024):

- Advanced Hard Skills: Measurable technical skills in emerging fields
- Digital Soft Skills: Personal and social skills in virtual contexts
- Advanced Digital Skills: Working with modern technologies and advanced programming
- Hybrid Skills: Combining traditional, digital, and human skills

4. The Integrated Talent Model (2024)
Components of Comprehensive Talent According to the Modern Model:

- Advanced Core Abilities: Various types of intelligence in the digital context

Emerging Tendencies and Interests: Personal Motivations in Modern Fields

- The Digitally Stimulating Environment: Family, School, and Technological Support
- Advanced Developmental Opportunities: Programs and Training Using the Latest Technologies
- Smart Supportive Technologies: Artificial Intelligence and Machine Learning Tools

5. Modern Differences Between Concepts (2024)
| Dimension | Multiple Intelligences | Comprehensive Talent | Digital Skills |
|- ... Fundamental, Pivotal, and Defining |
Modern Theoretical Summary: Talent in the modern era is no longer a static concept, but rather a dynamic system that interacts with modern technologies and global changes. Gifted student programs need to adapt to these changes and adopt comprehensive models that integrate innate abilities, acquired skills, and supporting technologies within a modern, holistic framework.

5. Previous Studies

In light of this modern theoretical framework, a survey of previous applied studies (2020-2024) that examined these models and assessed their practical application was conducted. These studies can be categorized into three main areas:

5.1. First Area: Studies That Addressed Modern Theoretical Models of Talent

- The study by NAGC (2023) presented a comprehensive model of talent, emphasizing that the interaction between multiple abilities, digital creativity, and task commitment in technological contexts is what produces contemporary gifted performance.
- The study by Gagné (2022) developed the DMGT 2.0 differential model, clearly distinguishing between talent as a multidimensional innate aptitude and competence as acquired performance in digital domains.
- Second axis: Studies that addressed the conceptual confusion between multiple intelligences and universal talent.
- The study by Winner (2023) discussed contemporary challenges surrounding gifted children, noting that multiple intelligences are not synonymous with universal talent, and that many gifted children may not excel in traditional school but are distinguished in digital domains.
- (Aljughaiman & Ayoub, 2023) focused on the Gulf environment and indicated the effectiveness of multi-component models in developing digital creative productivity among gifted students, highlighting the importance of adopting broader models than just traditional intelligence.
- Third Axis: Studies that Measured Teachers' Awareness of Modern Concepts of Giftedness.
- A study by (McCoach & Siegle, 2023) found that teachers' beliefs about giftedness in the digital age significantly influence the process of nominating students for gifted programs, often focusing on traditional academic achievement rather than digital creative attributes.
- A local study (Al-Juhani, 2024) revealed a deficiency in teachers' knowledge of the characteristics of gifted students in digital fields, calling for training programs to improve this aspect.

5.2. Distinguishing Features of the Current Study:

The importance of this study lies in the fact that it is not limited to modern theoretical analysis alone, nor to purely quantitative measurement, but rather integrates both in a mixed design. Furthermore, it goes beyond simply measuring the level of understanding; it goes further by identifying the precise points of confusion (between holistic talent and digital skills) and empirically linking this to the modern training variable. It also investigates the underlying causes of this confusion through qualitative interviews, thus providing a more comprehensive and in-depth diagnosis of the problem within the contemporary local context.

6. Research Methodology

6.1. Research Type and Design

This research adopted a mixed-methods approach, integrating quantitative and qualitative methodologies, to gain a deeper and more comprehensive understanding of the phenomenon under study within its modern context. This was manifested in:

- Descriptive-analytical approach: for analysing modern literature and theoretical models and analysing digital content.
- Quasi-experimental design: for testing the research hypotheses by comparing two groups (control and experimental) in applying contemporary models.

6.2. Research Population and Sample

- Research Population: This included all educational staff (teachers, student counsellors, and educational supervisors) in schools in [City Name] for the 2023-2024 academic year.
- Research Sample: The research sample consisted of (50) individuals, selected using stratified random sampling to ensure representation of various scientific and literary disciplines and educational roles. They were divided into:
- Experimental Group (n=25): Individuals who had previously participated in specialized training courses in gifted education based on modern models (2020-2024).
- Control Group (n=25): Individuals who had not previously participated in any specialized training in this field or had received training based on traditional models.

6.3. Two Key Modern Data Collection Instruments Were Designed and Developed

1. The Modern Conceptual Understanding Test (Quantitative Instrument): This is a 35-item numerical test developed based on the latest international classifications (2023-2024). Its questions varied, including:

- Multiple Choice: To measure the ability to distinguish precise definitions of each concept within a digital context.
- True/False: To assess general understanding of modern characteristics and relationships.
- Matching: To link attributes to the appropriate concept (multiple intelligences, comprehensive talent, digital skills).
- The instrument's validity was verified by presenting it to seven expert reviewers specializing in digital psychology and modern special education. Its reliability was calculated using Cronbach's alpha on a pilot sample (outside the main research sample), yielding a reliability coefficient of 0.89, indicating high reliability and the instrument's suitability for the research.

2. The Updated Semi-Structured Interview Guide (Qualitative Instrument): A digital interview guide was developed for use with a purposive subsample of 10 individuals from the control group who scored lowest on the quantitative test. The interviews aimed to explore the reasons for conceptual confusion and understand the modern challenges they face from their personal perspectives in light of digital transformations.

6.4. Research Procedures

The research was conducted in the following stages:

1. Preparatory Stage: Obtaining official approvals from educational authorities, selecting the research sample, and designing modern instruments.

2. Implementation Stage:

- Pre-test: Administering the modern conceptual understanding test to members of both the experimental and control groups simultaneously via a digital platform.
- Qualitative Data Collection: Conducting digital interviews with the sub-sample, recording them, and converting them into text.

3. Analysis Stage:

- Quantitative Analysis: Processing the test data using the Statistical Package for the Social Sciences (SPSS) with the following statistical tests:
- independent samples t-test to compare the mean scores of the two groups and test the main hypothesis.
- Pearson correlation coefficient to examine the relationship between the level of familiarity with modern technologies and scores (to test the second sub-hypothesis).
- Frequency and percentage analysis to describe sample performance and identify the most common confounding factors

To analyse the interview transcripts and categorize the responses into main themes within the digital context.

7. Results and Discussion

Quantitative Presentation of Results:

Table 1 Results of the T-test comparing the mean scores of the two groups on the modernized test

Group Number of Individuals (n) Arithmetic Mean (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 shown in Table (1), there are statistically significant differences at the ($\alpha \geq 0.05$) level between the mean scores of the two groups. The calculated T-value (14.25) and the significance level (0.000) confirm the main hypothesis that the experimental group performed significantly better on the modified test according to the modernized models.
- Sub-hypothesis 1: The control group's average score was 49.8%, supporting the hypothesis that the level of understanding was below average in the absence of specialized training on contemporary models.
- Sub-hypothesis 2: Pearson's correlation analysis showed a moderate positive correlation (0.45) and a statistically significant correlation (Sig. = 0.038) between the level of familiarity with modern technologies and test scores. This confirms this hypothesis and indicates the importance of digital skills in understanding contemporary giftedness concepts.
- Sub-hypothesis 3: Frequency analysis revealed that 82% of the control group members incorrectly distinguished between the attribute of "innovation in digital environments" (related to holistic giftedness)

and "mastery of routine digital tasks" (related to digital skills). This confirms that the greatest conceptual confusion occurred between the concepts of "holistic giftedness" and "digital skills."

7.1. Qualitative Presentation of Results (from Interview Analysis)

Through interview analysis, three main themes were identified that explain conceptual confusion in the modern context:

1. Theme: Lack of Training on Contemporary Models: All participants emphasized the lack of sufficient or mandatory training programs that address these modern concepts in depth, with training limited to traditional models.

2. Theme: The Digital Challenge: Most teachers indicated the difficulty of keeping up with rapid digital developments and the impact this has on their ability to distinguish genuine talent from superficial digital skills.

3. Theme: Lack of Modern Practical Evidence: Participants expressed their need for clear evidence and digital watchlists to help them identify the characteristics of each category in the digital classroom.

These findings align with recent literature indicating a digital divide between theory and practice (Winner, 2023). The comparative results also support the study by NAGC (2023), which emphasizes that understanding talent as a dynamic, interactive construct enhances its identification in the digital age. The positive correlation between technical literacy and conceptual understanding can be interpreted as digital skills becoming a means of understanding the nature of contemporary talent. Qualitative findings underscore that systemic and technical barriers (such as digital challenges) play a significant role in perpetuating the problem within local educational settings.

8. Conclusion and Recommendations

Through theoretical and empirical analysis, this research affirms a central truth: while multiple intelligences form a fundamental pillar of comprehensive talent, they are insufficient to define it. Talent is a broader and more dynamic construct that encompasses digital creativity, task commitment in technological contexts, and intrinsic motivation in the digital age. Furthermore, the research demonstrates significant conceptual confusion among educators, particularly between comprehensive talent and digital skills. This confusion stems primarily from a lack of specialized training in contemporary models rather than general experience.

8.1. Recommendations

In light of these findings, the research recommends the following:

1. Digital Training Recommendation: Design and implement mandatory and comprehensive training programs for educators, focusing on multidimensional models (such as the NAGC comprehensive model) and equipping them with practical digital tools to differentiate between the characteristics of multiple intelligences, multi-talented individuals, and those who are digitally skilled, within both virtual and real-world classrooms.

2. Technology Policy Recommendation: Urge ministries of education to reconsider the criteria and tools for selecting students for gifted programs, ensuring their inclusion of measures of digital creativity, technological motivation, and emotional characteristics in virtual contexts, and moving away from exclusive reliance on traditional intelligence tests or academic achievement.

3. Future Research Recommendation: Encourage further long-term studies to track the impact of such training programs on the accuracy of giftedness identification in emerging fields and on students' long-term digital creative achievement, with a focus on the interaction between talent and artificial intelligence.

References

Aljughaiman, A., & Ayoub, A. (2023). Digital creativity and giftedness in the Arabian Gulf context. *Gifted and Talented International*, *38*(1), 45–62.

Al-Juhani, F. (2024). Digital talent: Concept, identification, and nurturing. *Journal of Contemporary Education*, *195*, 88–115.

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.

Harvard Project Zero. (2024). *Multiple intelligences in the AI era: New frontiers*. Harvard University Press.

McCoach, D. B., & Siegle, D. (2023). Teachers' beliefs about giftedness in the 21st century. *Gifted Child Quarterly*, *67*(2), 112–130.

National Association for Gifted Children (NAGC). (2023). *Redefining giftedness for a new era*. NAGC Publications.

Winner, E. (2023). *Gifted children in the digital age: Myths and realities revisited*. Harvard Education Press.

World Economic Forum. (2023). *Future of jobs report 2023*. WEF.