Professional Competencies of Talent Specialists in light of the Knowledge Economy Requirements

Research Team[1]

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Abstract

The era of knowledge has made professional development an urgent and imperative necessity, and that the focus on human capital constitutes the central domain of the development process, there arises a need to change the roles and responsibilities of teachers and talent specialists, develop their skills, and build their capacities, in order to achieve educational outcomes that align with the transition to a knowledge economy and are characterized by creativity and innovation. Accordingly, this study aims to identify professional competencies necessary for talent specialists in light of the knowledge economy requirements in addition to providing a proposed framework for these competencies. Utilizing a descriptive methodology, the research first delineates the requirements of the knowledge economy through an extensive review of literature. Subsequently, a comprehensive set of professional competencies is derived, encompassing personal, cognitive, skill-based, digital, communication and collaborative work, as well as follow-up and evaluation competencies. Survey data from 100 talent specialists across educational directorates and districts in five governorates further informs the development of a proposed framework for these competencies. The framework outlines its philosophy, objectives, starting points, and content, offering a structured approach to preparing talent specialists for the evolving requirements of the knowledge economy.

Keywords: Talent specialists, Professional Competencies, Knowledge Economy

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Introduction:

The knowledge economy is considered one of the most prominent contemporary outcomes of the rapid and remarkable scientific advancements witnessed globally in the field of information and communication technology. Knowledge and its associated skills have become among the most essential tools for keeping pace with these emerging changes, and indeed, have come to serve as a fundamental criterion for assessing the progress and prosperity of societies.

Previous literature, studies, and research addressing the concept of the knowledge economy have consistently agreed that knowledge constitutes its core component. It is an economy centered on the acquisition and effective utilization of knowledge, with the aim of improving the quality of life across various domains. This is achieved through the optimal use of advanced technological applications and the employment of the human mind as intellectual capital, in order to bring about a series of strategic transformations in the very essence of the economic structure.

Previous studies and research have emphasized the importance of transitioning and shifting towards a knowledge economy. Smith and Brown (2020) highlighted the significance of this transition and its impact on various sectors, including education and talent development. Their study indicated that the knowledge economy relies on creativity, innovation, and technology, which in turn reinforces the need for talent education to prepare individuals to be active participants in this dynamic environment. Furthermore, the study indicated that traditional educational systems may not adequately prepare individuals for employment within the knowledge economy, necessitating the development of curricula that emphasize analytical skills, critical thinking, and problem-solving abilities.

Given that the care and support of talented individuals represent one of the highest priorities for enhancing qualified human capital capable of building the knowledge economy, it is essential to prepare and train educational personnel who are able to nurture talents across various fields. Consequently, talent specialists at all levels (school, educational district, and directorate) are considered among the most critical human elements, whose training and professional development significantly contribute to the success of the process of identifying and nurturing talented students within Egyptian schools. Therefore, developing the professional competencies required for these specialists, particularly in light of the knowledge economy requirements, is a fundamental and vital pillar for the success of their role in identifying and nurturing talented individuals. Their effectiveness in performing these roles primarily depends on the extent to which they possess the necessary professional competencies, which in turn facilitates their work within schools and contributes to the ongoing improvement and development of these competencies in the future, thereby achieving the intended objectives of the processes of identifying and nurturing talented individuals.

This is further supported by the findings of Al-Munif's study (2022), which established a link between the knowledge economy and talented individuals, utilizing them as an entry point to the knowledge economy. The study aimed to explore the concept of the knowledge economy and its relationship to talent and talented individuals, while also focusing on the strategies necessary for nurturing talented students within the context of the knowledge economy. Moreover, it sought to identify the foundational elements that contribute to building and developing talented individuals in order to support the construction of a knowledge economy. The study reached several interconnected findings, the most prominent of which

emphasized the need to develop specific strategies for talent management aimed at qualifying, developing, and training talented individuals, particularly with regard to the technological demands of the current era. It also underscored the importance of aligning the overall educational system with the requirements of the knowledge economy.

In light of the above, and given that the era of knowledge has made professional development an urgent and imperative necessity, and that the focus on human capital constitutes the central domain of the development process, there arises a need to change the roles and responsibilities of teachers and talent specialists, develop their skills, and build their capacities, in order to achieve educational outcomes that align with the transition to a knowledge economy and are characterized by creativity and innovation.

Based on the foregoing, and to the best of the research team's knowledge, there is no existing study that has addressed the professional competencies of talent specialists in light of the knowledge economy requirements. Therefore, the need emerged to propose a framework for the professional competencies required of talent specialists in light of the the knowledge economy requirements.

Problem Statement and Research Questions:

Despite the Ministry of Education and Technical Education's focus on the role of talent specialists in identifying and nurturing talented students, evidence suggests gaps in their performance due to deficiencies in essential skills, knowledge, experience, and professional competencies required to fulfil their roles effectively. Furthermore, the existing expertise and skills they possess are no longer sufficient to efficiently meet the needs of talented student populations, particularly in the era of the knowledge economy and rapid advances in information and communication technology. Therefore, identifying the core professional competencies required for talent specialists may serve as essential guidelines for the development and enhancement of their skills, thus addressing the shortcomings in their professional performance and ultimately improving their ability to identify and nurture talented students in light of the knowledge economy requirements.

To address this problem, the current research seeks to answer the following questions:

1. What are the professional competencies of talent specialists in light of the requirements of the knowledge economy, as identified in relevant literature, studies, and previous research?
2. What are the professional competencies required of talent specialists in light of the requirements of the knowledge economy, from the perspective of the research sample?
3. What is the proposed framework for the professional competencies required of talent specialists in light of the knowledge economy requirements and the field study results?

Research Aims:

The current research aims to:

i. Identify a list of professional competencies required of talent specialists in light of the requirements of the knowledge economy, based on previous literature, studies, and research.

ii. Explore the professional competencies required of talent specialists in light of the requirements of the knowledge economy from the perspective of the research sample.

iii. Propose a framework for the professional competencies required of talent specialists in light of the requirements of the knowledge economy and the findings of the field study.

Research Terminology:

- **Professional Competency**: In the context of this research, professional competencies are **operationally** defined as a set of knowledge, skills, and attitudes that talent specialists must possess and are directly related to their professional roles. These competencies enable them to perform their duties efficiently in alignment with the global shifts toward the knowledge economy. They ultimately contribute to achieving the intended outcomes of identifying and nurturing talented students. They include personal, cognitive, skill-based, digital, communication and collaborative work, and follow-up and evaluation competencies.
- **Knowledge Economy**: Abu Al-Shamat (2012) defines the knowledge economy as "an economy centered around acquiring, using, employing, creating, and innovating knowledge, with the aim of improving the quality of life in various domains by leveraging advanced technological applications and utilizing human intellect as intellectual capital to generate strategic changes in the nature of the economic environment." The research team defines the knowledge economy as "an economy that directly relies on the production, distribution, and use of knowledge and information, supported by the availability of information and communication technology, and driven by innovation and digital transformation."
- **Talent Specialist.** According to the *Guidance Bulletin* issued by the General Directorate for Gifted Students and Smart Learning under the Ministry of Education and Technical Education in Egypt (2021–2022, p. 13), the talent specialist is designated as the individual responsible for the identification and support of talented students through multi-faceted coordination efforts. These include collaboration with subject teachers to recognize and nurture talent, consultation with social workers, psychologists, and subject-matter experts based on the nature of the students' abilities, and the implementation of individualized student files comprising assessment tools, follow-up records, and related documentation. Additionally, the talent specialist is tasked with developing and maintaining a dynamic database of talented students, categorizing them by area of talent, and ensuring its continuous updating. Responsibilities also encompass the execution of enrichment activities—such as workshops, working groups, and skills-based sessions—in alignment with the Ministry's strategic plan and administrative guidelines. Furthermore, the role involves operationalizing directives from the Department of Giftedness and Learning at the educational directorate and establishing dedicated support teams within schools to address the needs of talented learners.

Review of Literature

Section One: The Knowledge Economy

Educational scholars view the knowledge economy as a concept that refers to "an economy based on building deep academic knowledge in individuals and directing it toward their professions during the process of acquiring academic knowledge" (Al-Batarsah, 2005). Al-Hashemi and Al-Azzawi (2007, p. 25) define it as "an educational system grounded in technological tools and scientific research aimed at utilizing individuals' capabilities across all age groups as an economic resource. This enables functional knowledge acquisition, with the

goal of developing national and human life through the acquisition, use, and production of knowledge." Al-Saqri and Al-Bazai (2017:53) add that the knowledge economy is one of the most significant contemporary developments, requiring a qualitative shift in the performance of educators, including the need for teachers to possess the necessary competencies to fulfil their evolving roles effectively. Lee and van der Heijden (2018:5) further note that the knowledge economy is characterized as "an economy where growth depends more on the quality, quantity, and accessibility of information than on traditional means of production."

In light of the various definitions of the knowledge economy, it can be concluded that it is:

- An economy directly dependent on the production, distribution, and utilization of knowledge and information.
- An economy in which knowledge generation and exploitation play a central role in the creation of wealth.
- An economy reliant on the availability of information and communication technology, as well as the application of innovation and digitalization.

Abu Baider (2007) emphasized the critical role of the knowledge economy in developing educational systems, attributing this to several benefits, including: (Al-Safi et al., 2010; Al-Wazni & Al-Juwari, 2017):

- Facilitating the dissemination, utilization, and production of knowledge across fields.
- Enabling electronic exchange and restructuring the labor market by eliminating outdated roles and introducing new, relevant professions.
- Promoting institutional innovation and responsiveness to consumer needs.
- Enhancing consumer empowerment by offering broader options and increased trust.
- Broad applicability across various institutions—including schools, libraries, and commercial organizations—due to its wide reach.
- Influencing economic growth rates, production patterns, and demand for skilled labor.
- Driving the creation of desired educational outputs and aligning job creation accordingly.
- Enhancing essential human services from early development stages and improving the quality and effectiveness of performance.
- Enabling fundamental, future-oriented changes and improvements.

Additionally, the knowledge economy is marked by a number of core characteristics (Abu Al-Shamat, 2012):

- Investment in human capital, recognizing it as intellectual and knowledge-based wealth.
- Continuous learning and retraining as essential practices.
- Effective integration of information and communication technology (ICT) in all sectors.
- Research and development as a dynamic engine for transformation and advancement.
- Intensive utilization of advanced scientific and technological knowledge, approached from a holistic perspective.
- Centrality of education and lifelong training systems, ensuring individuals' skills remain aligned with the evolving economy.
- Establishment of new economic foundations and principles, centered entirely around the creation and dissemination of knowledge.

- Virtualization of the economy, as digital technologies and the internet foster the emergence of virtual environments.

Mu'taman (2002) defines knowledge economy competencies as "those competencies related to a teacher's ability to effectively deliver and apply subject content, structured across nine key domains: academic, personal, creativity and innovation, leadership and administrative, communication and student interaction, self-development and professional growth, assessment and evaluation, information and communication technology (ICT), and career guidance and counselling competencies."

The findings of several studies—such as Ayyadat (2006), Al- Shadifat (2007), and Mustafa & Al-Kilani (2011)—have emphasized that the competencies required of teachers in light of the knowledge economy can be summarized as follows:

- **Educational and Academic Competencies**: These include understanding students' developmental characteristics, being aware of the educational stage objectives and subject-specific goals, staying updated with recent developments in the field of specialization, effectively managing the classroom and leveraging available educational resources, in addition to skills in lesson planning, assessment design, extracurricular activities programming, and building upon students' existing knowledge and accumulated experiences.
- **Personal Competencies:** These involve serving as a positive role model for students and dealing with various situations with wisdom and emotional balance—particularly in addressing student-related challenges.
- **Communication and Interpersonal Competencies:** These include respecting learners' individuality, using reinforcement and incentives, encouraging classroom dialogue and discussion, fostering positive relationships with and among students, and demonstrating sensitivity to students' emotions.
- **Research, Innovation, and Professional Development Competencies:** These refer to encouraging students to engage in inquiry and investigation, possessing skills in educational and action research, applying findings from high-quality research in teaching, learning, and leadership, enhancing internal expertise in subject content, and viewing professional development as an ongoing process rather than a static outcome.
- **Instructional Competencies:** These encompass the use of modern teaching strategies, effective utilization of available resources, classroom management skills, integration of ICT and digital tools, and actively promoting positive changes in students' behaviours, attitudes, and interests.
- **Assessment Competencies:** These include knowledge of appropriate evaluation methods, developing achievement tests, analysing student performance data, and providing feedback to students to improve learning outcomes.

The transition toward implementing the knowledge economy across various educational stages and forms requires the concerted efforts of all human resources, the provision of both material and non-material conditions, and the enactment of legislations and policies that ensure the success of this type of education. This includes establishing a well-educated, trained, and supportive human infrastructure, and fostering a broad societal base in the use of communication technologies, the internet, and information technology. The requirements for this transition can be summarized as follows (Tong & Baslom, 2019:3; Darwish, 2019:386; Al-Rashoud, 2018:315; Al-Najjar, 2015:383):

- **ICT Infrastructure:** Information and communication technologies (ICT) aim to facilitate effective communication and the dissemination and processing of information. With the exponential growth of human knowledge and the shift of the global economy to one based on scientific knowledge—generating the majority of added value—there is a growing need for an environment and societal context that promotes creativity and technology. ICT infrastructure contributes to encoding knowledge, thereby making it easier to share and transfer, avoiding redundant efforts in rediscovering knowledge, and ultimately fostering economic growth.
- **Education:** Education is regarded as a productive process and a long-term investment, serving as the backbone of societal progress and the principal means of preparing human resources. Education contributes to enhancing the efficiency of human capital, developing intellectual capabilities, and enabling the acquisition of modern knowledge and technologies. Consequently, investing in education becomes an imperative necessity for the knowledge economy. The extent to which a country can benefit from the knowledge economy depends largely on how swiftly it transitions into a learning economy—where individuals and enterprises are capable of generating wealth based on their learning capacities.
- **Scientific Research and Development:** Integration into the knowledge economy necessitates a strong orientation toward scientific research and keeping pace with technological advancements. This involves supporting research centres, increasing investment in research and development projects, and optimizing the application of research outcomes in practical fields. It also entails enhancing the quality of human capital and the competencies of professionals, particularly in intangible domains such as information and software.

Section Two: Professional Competencies:

Competencies are defined as the combination of skills, knowledge, and behaviors that a teacher must possess in order to effectively perform his instructional role (Kamal & Al-Hurr, 2003:40). Competency is closely linked to the ability to perform specific tasks efficiently and effectively. Al-Sharif (2015) defines it as: "a set of teaching, assessment, and interpersonal abilities and skills related to the teaching process, enabling the teacher to carry out their duties and responsibilities within the educational institution, both inside and outside the classroom, in a manner that is observable and measurable, thereby ensuring the quality of the educational process, its outcomes, its continuous development, and its academic accreditation."

In the context of teaching talented students, competencies can be identified as a set of knowledge, skills, and behaviors that teachers need to perform effectively in the learning environment. Mahfouz (2015:6) defines them as: "a group of personal, professional, social, and cognitive skills" that should be possessed by teachers or coordinators of talent education programs.

Thus, professional competencies in the context of talent education can be summarized as: "an integrated set of abilities, knowledge, skills, and attitudes possessed by the teacher or coordinator of talented students, which directly or indirectly influence their performance in the field of talent. These competencies may vary and encompass diverse aspects of performance."

With contemporary scientific and technological advancements, the teacher's role is no longer limited to delivering content and explaining lessons. Rather, the teacher has become a planner, implementer, assessor, mentor, and guide, providing students with impactful and

meaningful educational experiences. This shift necessitates that teachers possess a wide range of professional competencies related to their profession. Hence, the emergence of the teacher education movement based on competencies (Radwan, 2014:109). Abdulrahman (2010) highlights the importance of professional competencies in adopting new technologies that contribute to better and faster learning outcomes with lower costs. These competencies also play a role in the development of the teaching profession, the expansion of educational sciences, the diversification of the teacher's responsibilities, and the shift from reliance on academic qualifications to a focus on practical competence and skills—all of which demand that teachers be equipped with specific educational capabilities and competencies.

Given the discussion about teachers or coordinators of talented students, it is essential to address the standards of **the National Association for Gifted Children (NAGC).** These standards were developed to define the procedures that educational institutions and administrations must follow regarding how to provide educational services to talented students. Based on these standards, the professional competencies required of those responsible for talented students are also identified. These are formal standards widely used in the field of talent education in the United States and are regularly revised by a standards committee to ensure they remain aligned with the latest educational developments. The general principles underlying the NAGC standards include the following:

- The standards are designed to promote the professional competencies of teachers, rather than enforce specific curricula or teaching methods that lead to high-quality education.
- The standards define expected student outcomes and benchmarks for educational excellence.
- They also establish performance levels that educational settings and administrators should strive to meet.
- The standards represent the broad professional consensus in the United States regarding best practices in the field of talent education and are widely accepted among educators.
- They are tangible, practical components in developing educational programs, directly related to the sustainable development of the skills and abilities of talented students (Al-Ghamdi & Hussein, 2019:243).

Given the critical role played by talent specialists, a number of previous studies have examined their professional competencies. Among these is the study by Chan (2001), which aimed to explore the traits and competencies of teachers and talent specialists in Hong Kong, in order to identify best practices applicable to this group. The study highlighted several essential traits, including high intelligence, general knowledge, perseverance, a strong achievement drive, enthusiasm for the field of talent education, and functional competencies that enable them to work effectively with talented students. Similarly, the study by Miller (2012) sought to enhance the professional competencies of teachers of talented students and emphasized the importance of including a set of key competencies in training programs. These competencies encompass pedagogical skills such as teaching critical thinking, leadership, and problem-solving, as well as cognitive competencies related to understanding the characteristics and traits of talented students. Additionally, the study highlighted the importance of assessment and evaluation competencies for identifying appropriate measures for this student population. Mills (2003) focused on identifying the professional competencies of teachers and talent specialists, emphasizing qualities such as openness, flexibility, and the

ability to think logically and objectively—qualities that have a significant impact on educating talented learners. Furthermore, the study by Henderson and Jarvis (2021) shed light on the multifaceted roles played by talent education coordinators, which contribute significantly to the development and support of educational programs for talented students, thereby enhancing their potential and supporting their academic and personal growth. Likewise, the study by Al-Ghamdi and Hussein (2019) aimed to assess the extent to which teachers of talented students possess professional competencies in light of the standards of the National Association for Gifted Children (NAGC). The results indicated a "high" level of professional competency and appropriate selection criteria among teachers. The study recommended recruiting teachers of talented students after passing academic and personal assessments aligned with National Association for Gifted Children (NAGC) standards, ensuring adherence to these standards, prioritizing affective development of student teachers in colleges of education, and adopting modern approaches to support such development.

The study conducted by Al-Musharraf and Al-Harithi (2024) explored the level of professional values held by teachers of talented and high-achieving students in the Kingdom of Saudi Arabia, in light of the Saudi Arabia's Vision 2030. The findings revealed that the level of professional values among teachers of talented students in Saudi Arabia was very high. Based on these results, the study recommended the need to further strengthen the professional values among teachers of talented students to ensure their continued high levels. It also called for holding local seminars and programs in the field of professional ethics to facilitate the exchange of experiences between teachers of talented students and regular classroom teachers. Another study by Renzulli and Reis (2023) aimed to provide a comprehensive framework for the development of professional competencies among talent specialists. The purpose was to enable them to enhance their knowledge and skills in supporting the growth of emerging talents within the school context. Likewise, Al-Qarni (2021) conducted a study to assess the professional development needs of talent specialists based on the professional standards developed by the National Center for Assessment and Evaluation. These standards include that the talent specialists should:

- Be aware of the key concepts and foundational principles that underpin the field of talent.
- Understand the general characteristics of talented students as well as the primary psychological and social challenges they may encounter.
- Be able to identify and diagnose talented students using appropriate methods and procedures.
- Be aware of the educational alternatives and specialized programs designed for talented students.
- Be capable of designing and developing curricula and educational programs tailored to meet the needs of talented students.
- Be able to implement effective instructional strategies and teaching methods suitable for talented and high-achieving learners.
- Effectively utilize information and communication technologies in the educational process.
- Apply systematic and scientifically grounded approaches to assess both talented students and the educational programs provided for them.

Summary and Commentary:

Based on the theoretical framework, the requirements of a knowledge-based economy, and the research team's review of relevant previous studies, the following conclusions can be drawn:

- There is a clear need to enhance the professional competencies of talent specialists, foster their creativity, and strengthen their capacity inquiry and learning by equipping them with critical thinking skills and technological competencies.
- Emphasis should be placed on integrating information and communication technologies (ICT) for both students and talent specialists, while promoting knowledge management and activating its tools and strategies.
- Knowledge acquisition should be pursued through advanced and modern methods and processes.
- Accessing and benefiting from global sources of knowledge is vital.
- The current study drew on previous research to identify the key requirements of the knowledge economy and its most essential competencies. These insights were instrumental in constructing the research tool—a professional competency questionnaire for talent specialists—which covered the following dimensions: personal, cognitive, skill-based, digital, communication and collaboration, and follow-up and evaluation competencies.
- Although many previous studies addressed the knowledge economy, its requirements, and its relevance to educational practitioners, the current study is distinguished in that it specifically targets talent specialists—a group that was largely overlooked in earlier research, which mostly focused on teachers in general and their practice of knowledge economy competencies across various disciplines.
- The study also benefited from prior literature in selecting the research sample, determining appropriate selection criteria, and identifying the most suitable research methodology.
- Furthermore, it drew upon earlier recommendations emphasizing the importance of investing in talented students within the context of building a knowledge economy, as well as the need to support and professionally develop those who oversee these students. The study also supports calls to raise public awareness of the concept and significance of the knowledge-based economy.

Based on the above, these findings highlight the originality of the current study and its anticipated contribution to the field of education generally, and to the domain of talent identification and nurture specifically. This is particularly significant given its focus on talent specialists—a target group not adequately addressed in previous research. Thus, the first research question—" ***What are the professional competencies of talent specialists in light of the requirements of the knowledge economy, as identified in relevant literature, studies, and previous research?"*** has been addressed.

Research Procedures:

Research Methodology

The descriptive approach was utilized, including its steps and procedures, due to its suitability for the current research. This was achieved through a comprehensive review of relevant literature, studies, and previous research, as well as surveying the perspectives of talent specialists regarding the professional competencies required in light of the knowledge economy requirements.

Research Sample:

A purposive sample was selected for conducting the statistical treatments related to the questionnaire. The research sample consisted of talent specialists working in directorates and educational districts across several governorates of Egypt. The research instrument (the questionnaire) was administered in selected educational directorates and districts in five governorates: Cairo, Giza, Alexandria, Menoufia, and Sohag.

Research Instrument (The Questionnaire)

- The purpose of the questionnaire was to identify the professional competencies required of talent specialists in light of knowledge economy requirements. This was intended to support the development of a proposed framework for such competencies.
- The questionnaire included six main domains of competencies: personal, cognitive, skill-based, digital, communication and collaborative work, and follow-up and evaluation competencies. Each domain comprised a set of sub-items, totalling 50 statements, that reflect and represent the specified competencies.
- The questionnaire was reviewed by a panel of 10 expert referees in the fields of education and psychology to validate its content and ensure its appropriateness for the intended purpose. The experts agreed on the relevance of the statements to the questionnaire dimensions and suggested certain modifications and deletions. Following these revisions, a final version of the questionnaire was developed and confirmed as valid for use in the current study.

Field Application Procedures: The field application procedures were carried out in accordance with the following steps:

- Conducting the field study in selected governorates across Egypt, in collaboration with the General Administrations for Gifted Education and Smart Learning within the educational directorates and their affiliated departments. This collaboration facilitated the application of the research on talent specialists within the directorates and schools under their supervision.
- Selecting talent specialists from each educational district to ensure representation from the respective educational directorates.
- The research instrument (the questionnaire) was administered to the talent specialists— the study sample — totalling 100 individuals from various educational districts and schools in five governorates. The purpose of the study and instructions for completing the questionnaire were clearly explained to the participants.
- The field application of the research instrument was conducted in the middle of the first semester of the academic year 2024/2025.

Statistical Analysis:

The Statistical Package for the Social Sciences (SPSS) was used to analyse the collected data. The analysis included calculating frequencies, percentages, and Pearson correlation coefficients to assess internal consistency reliability. Cronbach's Alpha coefficient was also calculated to examine reliability. Additionally, means, relative frequencies, and item rankings were computed to process the participants' responses to the questionnaire designed to identify the professional competencies required of talent specialists in light of the requirements of the knowledge economy.

Research Results, Interpretation, and Discussion:

To answer the first research question " ***What are the professional competencies of talent specialists in light of the requirements of the knowledge economy, as identified in relevant literature, studies, and previous research?***", A thorough analysis of relevant literature, studies, and research was conducted. This analysis yielded a list of professional competencies necessary for talent specialists, aligned with the requirements of the knowledge economy.

To answer the second research question: " ***What are the professional competencies required of talent specialists in light of the requirements of the knowledge economy, from the perspective of the research sample?",*** the competencies identified in response to the first question were presented to the sample group for evaluation. Based on the participants' perspectives, the following results were obtained:

1. Results of the Research Sample Responses to the First Domain (Personal Competencies) of Talent Specialists in Light of the Requirements of the Knowledge Economy

Table (1) *Relative Weight, Standard Deviation, Degree of Agreement l, and Ranking of Sample Responses to the Domain: Personal Competencies of Talent Specialists in Light of the Requirements of the Knowledge Economy (n = 100)*

No.	Statements	Responses			Relative Weight	% of Relative Weight	Std. Deviation	Degree of Agreement	Rank
		Yes	To some extent	No					
1	Intrinsic motivation to work in the field of identifying and nurturing talented students	**92%**	**8%**	**---**	**2.92**	**97.33%**	**0.27**	**High**	**2**
2	Initiative in providing support and assistance to talented students	**%83**	**%17**	**---**	**2.83**	**94.33%**	**0.38**	**High**	**5**
3	Flexibility and adaptability to new and future roles and responsibilities	**84%**	**16%**	**---**	**2.84**	**94.65%**	**0.37**	**High**	**4**
4	Possessing critical thinking and problem-solving skills	**85%**	**14%**	**1%**	**2.84**	**94.67%**	**0.40**	High	**3**
5	Ability to deal with talented students of various talents and levels	**80%**	**19%**	**1%**	**2.79**	**93%**	**0.43**	**High**	**6**
6	Ability to manage stress in the workplace and when dealing with talented students	**62%**	**37%**	**1%**	**2.61**	**87%**	**0.51**	**High**	**9**
7	Ability to address situations and problems encountered by talented students	**74%**	**26%**	**---**	**2.74**	**91.33%**	**0.44**	**High**	**8**
8	Capacity for innovation and creativity in the field of talent education	**77%**	**22%**	**1%**	**2.76**	**92%**	**0.45**	**High**	**7**
9	Awareness of the importance of lifelong learning to improve professional practices in the field of talent	**96%**	**4%**	**---**	**2.96**	**98.67%**	**0.20**	**High**	**1**

Since the total number of participants in the sample is (100), the percentages presented in the table represent the frequency distribution of the responses (Yes – To some extent – No).

Table 1 shows that the relative weights of the responses of talent specialists regarding the statements under the domain of personal competencies—in light of the requirements of the knowledge economy—ranged from 2.61 to 2.96, all of which reflect a high degree of agreement.

The highest-rated item was statement 9, which states: "*Awareness of the importance of lifelong learning for improving professional practices in the field of talent education*" with a very high response rate of 98.67%. This indicates that talent specialists strongly recognize the critical role of lifelong learning in enhancing their professional performance and its direct impact on effectively serving talented students. This emphasis aligns with the core principles of the knowledge economy, where continuous skill development and knowledge updating are essential.

In contrast, Statement 6, which reads: "*The ability to manage pressure either in the work environment or when dealing with talented students*," received the lowest percentage of 87%, although it still reflects a high level of agreement. This relatively lower rating may suggest that while the ability to deal with stress is acknowledged by participants, it may not be viewed as a top priority compared to other competencies. This perception could stem from a belief that such pressures are occasional rather than constant. Nevertheless, this result may point to a lack of awareness about the critical importance of stress management, indicating a need for targeted training programs to highlight and reinforce this competency within professional development frameworks.

These findings are consistent with the results of several previous studies emphasizing the importance of education in building a knowledge-based economy, such as those by Hanas (2008) and Youssef (2014). They also align with the study by Đonlagić & Kurtić (2016), which highlighted the urgent need to develop the professional competencies of talent specialists, particularly in areas such as critical thinking, problem-solving, and advanced technological skills.

2. Results of Research Sample Responses to the Second Domain (Cognitive Competencies) of Talent Specialists in Light of the Requirements of the Knowledge Economy

Table (2) *Relative Weight, Standard Deviation, Degree of Agreement, and Ranking of Sample Responses to the Domain: Cognitive Competencies of Talent Specialists in Light of the Requirements of the Knowledge Economy (n = 100)*

N.	Statements	Responses							
		Yes	To some extent	No	Relative Weight	% of Relative Weight	Std. Deviation	Degree of Agreement	Rank
10	Deep understanding of the principles and theories of identification and nurture of Talented Students	**47%**	**51%**	**2%**	**2.45**	**81.67%**	**0.54**	**High**	**6**
11	Awareness of the characteristics and challenges of talented students	**82%**	**18%**	**—**	**2.82**	**94.00%**	**0.39**	**High**	**2**
12	Understanding the special needs of talented students (academic, psychological, social, etc.)	**90%**	**8%**	**2%**	**2.88**	**96.00%**	**0.38**	**High**	**1**

13	Awareness of mechanisms for identifying talented students and guiding them	**71%**	**28%**	**1%**	**2.70**	**90.00%**	**0.48**	**High**	**3**
14	Awareness of local and regional Talent Nurture Programs	**61%**	**37%**	**2%**	**2.59**	**86.33%**	**0.53**	**High**	**4**
15	Deep understanding of duties and responsibilities according to global trends in identification and nurture of talented students	**60%**	**38%**	**2%**	**2.58**	**86.00%**	**0.54**	**High**	**5**
16	Continuous engagement with local and international policies for talent education	**49%**	**46%**	**5%**	**2.44**	**81.33%**	**0.59**	**High**	**7**

Since the total number of participants in the sample is (100), the percentages presented in the table represent the frequency distribution of the responses (Yes – To some extent – No).

Table 2 shows that the relative weights of the sample responses to the statements under the "Cognitive Competencies" domain, in light of the requirements of the knowledge economy, ranged from 2.44 to 2.88, indicating a high degree of agreement.

Statement (12), which reads: " *Understanding the special needs of talented students (academic, psychological, social, etc.*" received a notably high percentage (96%). This indicates that talent specialists recognize the importance of having a deep understanding of the special needs of talented students. This is considered a positive indicator as it reflects their awareness of the need to address multiple aspects of talented learners' academic, psychological, and social development. It also suggests that this competency is perceived as the strongest among the cognitive competencies.

In contrast, Statement (10): "*Deep understanding of the principles and theories of identification and nurture of talented students*" ranked lower, with a percentage of (81.67%). This suggests that talent specialists may not place a high value on this competency, possibly due to their greater focus on practice. This emphasizes their inclination toward acquiring cognitive competencies that align directly with the practical requirements of the knowledge economy as an integral part of their professional training and development.

This also helps explain why the statement " *Continuous engagement with local and international policies for talent education* " received the lowest ranking among the cognitive competencies, with a percentage of (81.33%). It appears that talent specialists place more importance on cognitive competencies that relate directly to their day-to-day practices. As such, the competency related to understanding the special needs of talented students (academic – psychological – social) ranked first.

These findings are consistent with Al-Qarni's (2021) study, which addressed the cognitive professional standards for teachers of talented students. The study emphasized the importance of understanding the fundamental concepts of the talent education field, the general characteristics of talented students, the psychological and social challenges they face, and the methods used to identify and assess them. It also highlighted that talent specialists have a significant need for competencies associated with this domain.

3. Results of Research Sample Responses to the Third Domain (Skill-Based Competencies) of Talent Specialists in Light of the Requirements of the Knowledge Economy

Table (3) *Relative Weight, Standard Deviation, Degree of Agreement, and Ranking of Sample Responses to the Domain: Skill-Based Competencies of Talent Specialists in Light of the Requirements of the Knowledge Economy (n = 100)*

N.	Statements	Responses							
		Yes	To some extent	No	Relative Weight	% of Relative Weight	Std. Deviation	Degree of Agreement	Rank
17	Identifying the needs, strengths, and challenges of talented students	82%	17%	1%	2.81	93.67%	0.42	High	1
18	Setting performance goals for talented students based on a clear understanding of their needs	77%	22%	1%	2.76	92.00%	0.45	High	3
19	Designing and developing individualized plans and programs for each talent	60%	37%	3%	2.57	85.67%	0.56	High	6
20	Implementing talent identification and nurture programs in cooperation with stakeholders	76%	22%	2%	2.74	91.33%	0.49	High	4
21	Providing guidance to talented students (academic – social – psychological)	81%	16%	3%	2.78	92.67%	0.48	High	2
22	Utilizing specialized programs to guide talented students and enhance their creativity	55%	39%	6%	2.49	83.00%	0.61	High	7
23	Motivating talented students to set challenging goals and high performance expectations	73%	23%	4%	2.69	89.67%	0.55	High	5

Since the total number of participants in the sample is (100), the percentages presented in the table represent the frequency distribution of the responses (Yes – To some extent – No).

Table 3 above shows that the weighted means of the talent specialists' responses to the statements of the **"**Skill-Based Competencies**"** domain, in light of the requirements of the knowledge economy, ranged from 2.49 to 2.81, with a high degree of agreement.

Item (17) "*Identifying the needs, strengths, and challenges of talented students*," ranked first with a percentage of (93.67%), which is a very high percentage. This confirms that most respondents place great importance on accurately identifying the needs of talented students, considering it one of the core competencies of talent specialists. It reflects the need for a comprehensive evaluation of each talented student to enable them to make the most of their potential.

Meanwhile, item (22), "*Utilizing specialized programs to guide talented students and enhance their creativity*" ranked last in this domain with a percentage of (83%). This suggests that talent specialists may not view the use of specialized programs as highly important. This perspective may be attributed to the perceived lack of adequate specialized programs for talented students, or to the belief that such programs are unnecessary and that other educational or advisory methods may be sufficient. This underscores the need to raise awareness about the importance of these programs in stimulating creativity, and to conduct training programs for talent specialists to strengthen their understanding of this area. It also emphasizes the importance of improving and developing tools and programs specifically designed for nurturing talented students in line with the requirements of the knowledge economy.

This aligns with the study by Al-Qarni (2021), which outlined a set of professional standards for teachers of talented students, including several skill-based competencies such as designing curricula and programs tailored to their needs. The study also indicated that teachers of talented students have a significant need to develop the skills associated with this domain.

4. Results of Research Sample Responses to the Fourth Domain (Digital Competencies) of Talent Specialists in Light of the Requirements of the Knowledge Economy

Table (4) *Relative Weight, Standard Deviation, Degree of Agreement, and Ranking of Sample Responses to the Domain: Digital Competencies of Talent Specialists in Light of the Requirements of the Knowledge Economy (n = 100)*

N.	Statements	Responses							
		Yes	To some extent	No	Relative Weight	% of Relative Weight	Std. Deviation	Degree of Agreement	Rank
24	Utilizing educational internet services to explore and support talented students	50%	50%	—	2.50	83.33%	0.50	High	4
25	Ability to create and regularly update a comprehensive electronic database categorized by talent domains	34%	57%	9%	2.25	75.00%	0.61	Moderate	6
26	Ability to design digital content that meets the needs of talented students	28%	53%	19%	2.09	69.67%	0.68	Moderate	8
27	Ability to utilize distance learning to develop the abilities of talented students	49%	46%	5%	2.44	81.33%	0.59	High	5
28	Using social media platforms (e.g., Twitter, Facebook) to strengthen communication with talented students	75%	20%	5%	2.70	90.00%	0.56	High	2

29	Ability to apply ethical and legal principles (e.g., copyright, avoiding plagiarism and cheating) in digital use	71%	29%	—	2.71	90.33%	0.46	High	1
30	Ability to apply safety and privacy standards in dealing with digital information	60%	37%	3%	2.57	85.67%	0.56	High	3
31	Using digital portfolios to document and monitor the academic and personal progress of talented students	27%	52%	21%	2.06	68.67%	0.69	Moderate	9
32	Ability to use data analysis software to evaluate the performance of talented students	34%	52%	14%	2.20	73.33%	0.67	Moderate	7

Since the total number of participants in the sample is (100), the percentages presented in the table represent the frequency distribution of the responses (Yes – To some extent – No).

The previous Table 4 shows that the weighted means of talent specialists' responses to the statements under the domain of "Digital Competencies" in light of the requirements of the knowledge economy ranged from 2.06 to 2.71, indicating a high level of agreement overall.

Statement No. (29), *"Ability to apply ethical and legal principles (e.g., copyright, avoiding plagiarism and cheating) in digital use"* ranked first with a percentage of (90.33%). This result reflects teachers' perception of the importance of talent specialists' understanding of ethical and legal standards when using digital resources. Awareness of copyright and protecting others' rights is viewed as one of the essential competencies to ensure proper digital content usage. This finding may also indicate a perceived need for additional training on how to effectively implement these rules amidst growing digitalization and technological expansion.

In contrast, Statement No. (31), *"Using digital portfolios to document and monitor the academic and personal progress of talented students"* ranked last with a percentage of (68.67%). This suggests a limited interest among talent specialists in using digital portfolios as a tool for tracking the progress of talented students. Some may perceive these tools as unnecessary or difficult to implement effectively. The low percentage could also be attributed to a lack of awareness regarding the benefits of digital portfolios in monitoring both academic and personal growth.

Similarly, Statement No. (26) *"Ability to design digital content that meets the needs of talented students"* ranked second to last, with a percentage of (69.67%). This may reflect an acknowledgment among talent specialists of the need to design such content, but a lack of confidence in their ability to do so effectively. One possible reason is the insufficient training currently available on developing digital content tailored to talented learners. This further emphasizes the importance of enhancing technological competencies among talent specialists as a fundamental requirement of the knowledge economy.

Among the studies addressing this domain is Al-Qarni (2021), which aimed to assess the professional development needs of teachers of talented students based on professional standards set by the National Center for Assessment in the Kingdom of Saudi Arabia. The

study included a set of professional criteria and indicators for teachers of talented students and pointed out a significant need for skills related to digital competencies. Specifically, it emphasized the ability of talent educators to use information technologies in teaching, as well as in the identification and support of talented students.

5. Results of Research Sample Responses to the Fifth Domain (Communication and Collaborative work Competencies) of Talent Specialists in Light of the Requirements of the Knowledge Economy

Table (5) *Relative Weight, Standard Deviation, Degree of Agreement, and Ranking of Sample Responses to the Domain:* communication and collaborative work competencies *of Talent Specialists in Light of the Requirements of the Knowledge Economy (n = 100)*

N.	Statements	Responses							
		Yes	To some extent	No	Relative Weight	% of Relative Weight	Std. Deviation	Degree of Agreement	Rank
33	Building constructive collaborative relationships with school subject teachers to identify and support talented students	79%	20%	1%	2.78	92.67%	.44	High	3.5
34	Effective communication with supervisors of educational activities to identify talented students	84%	15%	1%	2.83	94.33%	.40	High	1
35	Working effectively and flexibly in multidisciplinary teams to identify and support talented students	79%	20%	1%	2.78	92.67%	.44	High	3.5
36	Ability to communicate effectively (in-person and digitally) with the talented students themselves	77%	23%	—	2.77	92.33%	.42	High	5.5
37	Communication with social workers and psychologists to provide support to talented students	82%	18%	—	2.82	94%	.39	High	2

38	Effective collaboration with school administration and follow-up on reports concerning talented students	83%	11%	6%	2.77	92.33%	.55	High	5.5
39	Communication with parents to monitor talented students and provide them with needed support	80%	16%	4%	2.76	92%	.52	High	7
40	Effective communication with local community institutions to support talented students	64%	28%	8%	2.56	85.33%	.64	High	8

Since the total number of participants in the sample is (100), the percentages presented in the table represent the frequency distribution of the responses (Yes – To some extent – No).

The analysis of Table 5 shows that the weighted means of the responses of talent specialists regarding the domain "Communication and collaborative work Competencies" in light of the requirements of the knowledge economy ranged from 2.56 to 2.83, with a high degree of agreement.

Item (34), *"Effective communication with supervisors of educational activities to identify talented students"* ranked first with a percentage of 94.33%. This indicates that talent specialists believe strongly in the importance of maintaining good communication with supervisors of educational activities and recognize the significant role these supervisors play in identifying talented students through school activities. Such activities offer valuable opportunities for students to express their talents, and collaboration with supervisors enhances the discovery of talents in non-academic domains.

On the other hand, item (40), *"Effective communication with local community institutions to support talented students"* came last with a percentage of 85.33%. This suggests that talent specialists demonstrate a moderate level of awareness regarding the importance of communication with local community institutions. It also highlights a need to enhance and raise awareness about building strong partnerships with these institutions to provide diverse resources and support for talented students. This could be achieved through training programs aligned with the requirements of the knowledge economy.

6. Results of Research Sample Responses to the Sixth Domain (Follow-up and Evaluation Competencies) of Talent Specialists in Light of the Requirements of the Knowledge Economy.

Table (6) *Relative Weight, Standard Deviation, Degree of Agreement, and Ranking of Sample Responses to the Domain: Follow-up and Evaluation Competencies of Talent Specialists in Light of the Requirements of the Knowledge Economy (n = 100)*

N.	Statements	Responses							
		Yes	To some extent	No	Relative Weight	% of Relative Weight	Std. Deviation	Degree of Agreement	Rank
41	Following up the implementation of talent assessment tools in collaboration with stakeholders	67%	28%	5%	2.62	87.33%	.58	High	6
42	Monitoring the progress of talented students using evaluation results	76%	19%	5%	2.71	90.33%	.56	High	1
43	Guiding talented students to conduct self-assessment based on specific standards	66%	29%	5%	2.61	87%	.58	High	7
44	Involving talented students in self- and peer-assessment based on defined criteria	73%	22%	5%	2.68	89.33%	.57	High	2
45	Guiding talented students to set future goals based on evaluation results	68%	27%	5%	2.63	87.67%	.58	High	5
46	Interpreting the results of talent assessment according to defined benchmarks	56%	37%	7%	2.49	83%	.63	High	10
47	Providing feedback to all relevant stakeholders to enhance performance and support continuous growth	62%	31%	7%	2.55	85%	.63	High	9
48	Guiding educational decisions for talented students based on evaluation results	69%	26%	5%	2.64	88%	.58	High	4
49	Developing short- and long-term goals based on evaluation outcomes	61%	34%	5%	2.56	85.33%	.59	High	8
50	Modifying talent identification and nurture programs according to evaluation results	72%	23%	5%	2.67	89%	.57	High	3

Since the total number of participants in the sample is (100), the percentages presented in the table represent the frequency distribution of the responses (Yes – To some extent – No).

The previous Table 6 shows that the weighted means of the responses of talent specialists regarding the "Follow-up and Evaluation Competencies" domain, in light of the requirements of the knowledge economy, ranged from 2.49 to 2.71, indicating a high level of agreement.

Statement No. (42): "*Monitoring the progress of talented students using evaluation results*" ranked first with a percentage of (90.33%). This indicates that talent specialists believe that effectively monitoring the progress of talented students based on evaluation results is essential, and that using previous assessments to track students' progress and compare their performance over time is a necessary component of talent development.

In contrast, Statement No. (46): "*Interpreting the results of talent assessment according to defined benchmarks"* ranked last with a percentage of (83%). This suggests that some talent specialists may view this competency as less essential, possibly due to the lack of clear, standardized benchmarks or evaluation criteria currently in place. This reflects the need for more explicit standards accessible to all relevant stakeholders for accurate assessment and interpretation.

Among the studies addressing this dimension is the study by Al-Qarni (2021), which identified a set of standards and indicators for teachers of talented students. It emphasized the importance of talent specialists being familiar with systematic, scientific methods for evaluating talented students and the programs provided to them. The study concluded that teachers of talented students have a strong need for assessment and self-monitoring skills, lifelong learning, and the development of practical and scientific knowledge, enabling them to generate and use technologies more efficiently in alignment with the requirements of the knowledge economy.

7. Results of the Research Sample Responses to the Overall Domains

Table (7) *Relative weight Means and Rank of the Overall Domains*

Domains	No. of Statements	Domain Score	Mean	% of Mean	Standard Deviation	Degree of Agreement	Rank
Domain 1: Personal Competencies	9	27	26.16	93.67%	2.22	High	1
Domain 2: Cognitive Competencies	7	21	21.52	87.90%	2.42	High	4
Domain 3: Skill-Based Competencies	7	21	22.07	89.71%	2.57	High	3
Domain 4: Digital Competencies	9	27	18.46	79.70%	3.43	High	6
Domain 5: Communication & Collaborative work Skills	8	24	25.29	91.96%	2.94	High	2
Domain 6: Follow-Up and Evaluation Competencies	10	30	18.84	87.20%	4.93	High	5
Overall Total	50	150	132.34	88.23%	15.33	High	—

Table 7 shows that domain one: Personal Competencies ranked first of all domains, with a general weighted mean of 26.16. This was followed by domain five: Communication and Collaborative work Competencies, which achieved a weighted mean of 25.29. Domain Three: Skill-based Competencies ranked third with a weighted average of 22.07, followed by domain two: Cognitive Competencies with 21.52. Domain six: Follow-up and Evaluation Competencies came next with 18.84, while domain four: Digital Competencies ranked last with a weighted mean of 18.46.

This result reflects an urgent need to raise awareness of the importance of digital competencies, especially considering the requirements of the knowledge economy. Meanwhile, the results also indicate a strong awareness of the importance of other

competencies particularly personal, communication, skill-based, cognitive, and evaluation competencies in that order. The prominence of personal competencies at the top aligns with the findings of the study by Al-Shadifat (2007).

Overall, these findings indicate that talent specialists recognize the importance of developing competencies across various domains (personal, cognitive, skill-based, digital, communicative, and evaluative). However, there is a pressing need to strengthen digital competencies and technological skills to keep pace with the technological shifts required by a knowledge-based economy.

To answer the third research question, which is: " *What is the proposed framework for the professional competencies required of talent specialists in light of the knowledge economy requirements*? and based on the findings of the field study, the proposed framework has been reached and can be presented as follows:

The Proposed Framework for the Professional Competencies Required of Talent Specialists in Light of the Knowledge Economy Requirements

In light of the research questions and aims, and based on the findings, their discussion, and the perspectives of the talent specialists (the study sample), a proposed framework has been developed for the professional competencies required of talent officials in light of the knowledge economy requirements, as follows:

1. Philosophy of the Proposed Framework:

The philosophy of the proposed framework is rooted in developing an integrated vision for the professional competencies needed for talent specialists in the era of the knowledge economy. This aims to enhance the quality of talent identification processes to reach levels of excellence and precision. The knowledge age has rendered professional development an urgent necessity, placing human capital at the core of the development process.

Accordingly, this necessitates a transformation in the roles and responsibilities of talent specialists, alongside the development of their skills and the building of their capacities. The goal is to achieve educational outcomes characterized by creativity and innovation, in alignment with the transition to a knowledge-based economy. This requires equipping talent specialists with the necessary competencies to identify talented students effectively and provide them with appropriate support. These include personal, cognitive, skill-based, digital, communication and collaborative work as well as follow-up and evaluation competencies.

2. Objectives of the Proposed Framework: The proposed framework aims to:

- Reconsider the process of preparation and qualification of talent specialists in line with global transformations in the era of the knowledge economy.
- Enhance the capacities of talent specialists and equip them with the necessary professional skills that enable them to effectively work with talented students.
- Provide talent specialists with sufficient flexibility and practical experience to adapt to emerging developments and changes in the world of work.
- Develop the creative thinking abilities of talent specialists to help them adapt to their roles, face future challenges, and overcome obstacles—particularly in the area of identifying and nurturing talented students.
- Continuously develop the skills of talent specialists and train them in accordance with the requirements of the knowledge economy era.
- Equip talent specialists with the necessary knowledge to deal with emerging information technology tools and to utilize them in self-directed and lifelong learning.

3. **Foundations of the Proposed Framework can be summarized as follows:**
   - The Information and Communication Revolution,
   - Information Technology,
   - Lack of Competencies and Skills,
   - The Need for Lifelong Learning,
   - Rapid and ongoing changes in the local and regional environment resulting from the knowledge explosion,
   - Findings of the field study that indicated a decline in the digital competencies and skills of talent specialists, as well as a limited ability to keep pace with the requirements of the knowledge economy.
4. **Content of the Proposed Framework:** The proposed framework components are outlined in the previous six professional competencies tables, which include fifty competencies.
5. **Requirements for Implementing the Proposed Framework:** To bring about a change in the roles and responsibilities of talent specialists, develop their skills, and build their capacities to achieve creative and innovative educational outcomes—and through possessing the competencies that enable them to identify talented students and keep pace with the shift to a knowledge-based economy—the following requirements are necessary:
   - Disseminating digital literacy among public education institutions personnel.
   - Providing a digital platform to support talent and talented learners.
   - Establishing an electronic platform under the supervision of the Ministry of Education and Technical Education, incorporating diverse and integrated development programs to enhance the performance of talent specialists in utilizing information and communication technologies.
   - Equipping schools with modern, high-efficiency technological devices to ensure quality identification and nurture of talented students.
   - Developing continuous ICT application skills among talent specialists.
   - Training talent specialists in the use and management of talent programs via electronic media.
   - Building the necessary infrastructure for transitioning to electronic management systems.

Research Recommendations and Suggestions:

In light of the literature review, previous research, the aims of this study, and the results it yielded, the research team recommends the following:

- Utilizing the proposed framework to develop the professional competencies needed for talent specialists in light of knowledge economy requirements, in order to enhance their efficiency in identifying and nurturing talented learners.
- The necessity of coordination and collaboration between the Department of Educational Activities and Talent Nurture at the National Center for Educational Research and Development and the General Directorate for Gifted Education and Smart Learning at the Ministry of Education and Technical Education in implementing the proposed framework presented by this research.
- Coordinating efforts among talent specialists at schools, educational districts, and directorates to prepare suitable digital strategies for dealing with talented students across various domains.

- Creating an electronic database for talented students at all educational stages within schools.
- Establishing a digital environment within the Egyptian Knowledge Bank dedicated to talented, creative, and innovative students at the ministry, directorate, and districts levels.
- Ensuring the provision of an engaging and stimulating educational environment that fosters creativity and innovation by equipping schools with the latest technologies and appropriate facilities.
- Developing and implementing programs for identifying, nurturing, and tracking talented learners using digital tools such as electronic reports, social media platforms, learning management systems, and other monitoring tools.
- Conducting workshops across the country to train talent specialists at directorate, district, and school levels on the professional competencies identified in this research.
- Establishing communication channels between educational officials and the private sector to activate community partnerships and provide the necessary support for talent management through modern technology.
- Designing and implementing training programs to enhance the skills and capacities of talent specialists in line with the competencies identified in this research.
- Developing criteria for selecting talent specialists and coordinators at the directorate, district, and school levels based on the professional competencies established in this research.

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