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Methods and Programs for Identifying Gifted and Talented Students: Challenges and Realities of Care in Algeria

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Abstract

Gifted and talented students represent a vital human resource for national progress and global competitiveness, yet their identification and care remain among the most complex challenges in educational systems. This study investigates the reality of discovering and nurturing gifted learners in Algeria by examining the programs, curricula, and institutional mechanisms currently in place. Drawing upon field evidence, policy reviews, and theoretical perspectives, the research explores the extent to which early identification methods are effectively implemented and the degree to which specialized care is provided to this exceptional group. The findings reveal that despite the recognition of giftedness as an innate aptitude requiring systematic development, significant gaps persist in early detection, individualized support, and the integration of specialized curricula into mainstream education. In particular, the lack of standardized diagnostic tools, limited professional training for educators, and inadequate institutional support structures hinder the proper nurturing of gifted learners. Furthermore, social and cultural challenges, including misconceptions about giftedness and inequities in access to care, exacerbate the problem. The study highlights the urgent need for comprehensive national strategies that combine early assessment, differentiated curricula, teacher preparation, and psychological support programs. By emphasizing both the opportunities and constraints of Algeria's current practices, this research underscores the importance of aligning educational policies with global standards in order to maximize the potential of gifted and talented youth and integrate them effectively into the country's developmental trajectory.

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1- Introduction

The progress and development of nations primarily depend on the wealth of human resources they possess, as these constitute the economic capital that allows them to occupy a prominent position among other countries. Undoubtedly, gifted and talented individuals represent this wealth, which has increasingly attracted attention since the second half of the twentieth century, with the aim of optimally utilizing their potential. Compared to ordinary individuals, the gifted are an important segment of society, given their high intelligence, special talents, and ability to innovate in various fields of life. This necessitates the development of special programs and curricula for their early identification and care, enabling them to reach the limits of their potential. The need for their contributions in all areas of life has now become more urgent than ever before, as they help address the technical, economic, political, and social challenges facing society.

According to the *Emirates Center for Strategic Studies and Research (2018)*, the progress of nations and the competitiveness among countries depend primarily on the extent of excellence in achievements, as well as on innovative and creative ideas that produce positive impacts and add value to humanity. Thus, it has become clear, beyond any doubt, that supporting gifted and creative individuals in all technical, cultural, athletic, and intellectual fields is one of the most important requirements for adapting to this rapidly changing world. Consequently, Algeria, like other developing and developed nations, has recently begun to pay special attention to the identification and care of gifted and talented individuals, by examining all relevant research and specialized studies to ensure the development of methods for their identification, support, guidance, and the full utilization of their talents in the service of national development. Accordingly, this study seeks to assess the reality of gifted education and care in Algeria, focusing on strengths, addressing weaknesses, and transforming challenges into opportunities.

Based on the above, the following research question is posed:
What is the reality of identifying and supporting gifted and talented individuals in Algeria?

1.1 Research Hypotheses

- The reality of identifying and supporting gifted and talented individuals in Algeria has witnessed noticeable development in recent years compared to the past.
- The Algerian state seeks to support gifted and talented individuals by attempting to design and implement appropriate programs and curricula for their identification and care.
- The Algerian state can contribute to developing methods for identifying and supporting gifted individuals by providing support for the establishment of specialized centers.

1.2 Definition of Concepts

Before defining the study's concepts, it is useful to provide a brief overview of the historical development of these notions:

According to *Al-'Umr (1990, p. 111)*, Grinder (1985) argued that definitions of giftedness and talent are influenced by the historical era and the prevailing intellectual paradigms. In the Middle Ages, giftedness was seen as a demonic tendency, and gifted individuals were treated in the same way as sorcerers. During the Renaissance, giftedness was regarded as a form of neurological disorder. In the nineteenth century, influenced by the ideas of Darwin, Thomas Huxley, and Herbert Spencer, a new perspective on human nature emerged, viewing giftedness as part of the process of natural selection.

Although societies have long been aware of the importance of gifted individuals, dating back to the earliest human communities, systematic scientific study of this field only began in the late nineteenth century. This period witnessed studies such as *Sir Francis Galton (1892)* in *Hereditary Genius*, which examined scientists, artists, judges, and politicians who had achieved fame and prestige in British society. Other significant works include those by Terman and Oden (1921), Hollingworth (1931), Dunnab (1945), and Baldwin (1963), all of whom employed intelligence quotient (IQ) as a criterion for classifying gifted individuals, though they differed in setting the threshold IQ levels and in estimating the prevalence of giftedness among different age groups (*Al-Damanhouri, 2013*).

At the beginning of the twentieth century, interest in individuals with high abilities grew. Although terminology varied across countries, many specialists in education and psychology emphasized the need for more intensive research in order to determine the most effective means of identifying gifted individuals and developing suitable educational programs for their care and the enhancement of their abilities, benefiting both society and the gifted themselves (*Sulayman & Ahmad, 2001*).

Concept of Gifted and Talented Individuals

Although the definitions of *giftedness* and *talent* often overlap, there is no single universal definition. Various definitions emphasize different dimensions, such as intellectual ability, academic achievement, creativity, and personal or cognitive traits.

The term *giftedness* or *gifted* became widely used in the second half of the twentieth century to refer to excellence and high ability. According to *Torrance (1975, p. 50)*, the term was used in the United States and Europe in different ways:

1. To denote intellectual superiority, linking giftedness with intelligence and academic achievement.
2. To denote creativity, focusing on flexibility, originality, and fluency.
3. To denote special talents in particular fields, such as the arts, literature, and music (*Sulayman & Ahmad, 2001*).

Giftedness has also been defined as *"the exceptional ability or unusual innate aptitude that allows an individual to excel in one or more domains"*, whereas *talent* is defined as *"the gifted or acquired ability, whether intellectual or physical"* (*Webster, 1995*).

Furthermore, *Vernon et al. (1977, p. 50)* describe gifted and talented individuals as those with outstanding performance in one or more specific domains. They identify nine fields in which schools bear responsibility for nurturing gifted students: mathematics, engineering, sciences, visual arts, languages, music, drama, sports, and social leadership (*Sulayman & Ahmad, 2001*).

Concept of Curricula for Identifying and Supporting Gifted Students

These are sets of programs and activities covering multiple domains and distributed across various stages of scouting or educational movements. Through these curricula, the intended educational and developmental goals are achieved by reducing repetitive content that gifted students may already have mastered or can complete quickly. This allows for the provision of regular enrichment units suited to their abilities and talents. Such curricula may be implemented through schools or other social institutions responsible for education (*Al-Liqani & Al-Jammal, 2003*).

Concept of Programs for Identifying and Supporting Gifted Students

These are specialized educational tasks and activities that differ qualitatively and quantitatively from regular programs in terms of objectives, content, activities, and teaching methods. They are designed and implemented by teachers of gifted education to provide diverse and in-depth academic and intellectual experiences that are often unavailable in the general curriculum. Such programs adopt general scientific content aimed at developing thinking skills, based on recommendations from a supervisory committee, and are implemented over one or more academic years (*Al-Jughayman, 2008*).

2- Characteristics and Traits of Gifted and Talented Individuals

A review of educational and psychological research literature reveals that many studies on the characteristics of gifted and talented individuals began to emerge at the start of the twentieth century. Among the most notable were Terman's famous studies on giftedness in the mid-1920s, Hollingworth's research on intellectual superiority in the mid-1940s, Torrance's studies on innovation and creativity in the mid-1960s, and, later, Ehrlich's work in the 1980s, coinciding with the growing movement for the identification and care of the gifted. In addition, dozens of studies have since been conducted by researchers in the same field up to the present day. The following are the main characteristics that distinguish gifted and talented individuals:

According to *'Abd al-Salam and Al-Sheikh (1966, p. 98)*, three groups of characteristics define the gifted: physical, intellectual, and emotional/social. These can be summarized as follows:

First: Physical Characteristics

Terman's longitudinal study (1925) demonstrated that physical constitution, overall health, and muscular development rates among gifted individuals were superior to those of ordinary peers. Tests related to heredity and physical fitness confirmed that the gifted outperform average individuals in both physical and motor abilities. Hollingworth and Terman (1936) further showed that gifted children are generally stronger, larger in build, heavier, and healthier. However, their intense focus on intellectual work may sometimes divert them from physical activity, leading to weight gain or reduced fitness. This highlights the importance of early identification and guidance to encourage physical activities and enhance their physical development. Similarly, Monahan and Hollingworth found that gifted children outperform their peers in physical tasks and exhibit greater fitness and precision (*Sulayman & Ahmad, 2001*).

In the same context, Porter Louis noted that gifted children, even in their early years, display advanced physical skills such as balance, physical activity, directional awareness (right–left), and the ability to create drawings and models with unusual skill (*Al-Qurayti, 2005*). *Al-Ma'aytah and Al-Buwayliz (2004)* observed that they begin walking and talking nearly two months earlier than average children. *Al-Tantawi (2008)* added that they tend to be taller, heavier, and more mature than their peers. *Wahbah (2008)* indicated that gifted children require less sleep, yet they consistently show high energy, vitality, and physical strength (*Belbekai & Ilyas, 2016*).

Second: Intellectual Characteristics

According to *'Abd al-Salam and Al-Sheikh (1966, p. 99)*, the main distinction of intellectually superior individuals lies in their mental growth rate, which averages (1.3) compared to (1.0) for ordinary children. *Nabil Hafez* reported that Terman, in his 35-year longitudinal study, found that gifted children had superior language development, reading skills, vocabulary quality, conversational ability, memory, and logical thinking. They also achieved higher

academic performance and excelled in sciences, literature, arts, and mathematical reasoning (*Sulayman & Ahmad, 2001*).

Third: Emotional and Social Characteristics

Gifted and talented children possess more positive emotional and social traits than their average-intelligence peers. Socially, they demonstrate leadership abilities both inside and outside school, showing competence in leading other students, solving interpersonal conflicts, managing discussions, and resolving peer issues. As a result, they are generally well-liked by their peers.

A study by *Schinder et al. (1989)* on social relationships among gifted children examined the social and individual impacts of exceptional academic ability within Canadian educational legislation. The research covered students in the fifth, eighth, and tenth grades, using varied samples across educational stages and study variables. Participants were divided into two groups: gifted students in regular classrooms and gifted students grouped together. The study yielded significant findings according to the selected variables:

A. Self-Concept

The study indicated differences in the cognitive ability of self-concept between control groups, as the mean scores of integrated gifted students were higher than those of the regular control group in the eighth grade. Regarding the effect of school status on gifted students, significant differences were observed in the cognitive ability among fifth- and eighth-grade students. Pupils with a low self-concept showed weaker academic performance compared to their peers in integrated classes.

B. Peer Satisfaction

Peers observed that integrated gifted children were more socially satisfied and capable, showing greater leadership skills than other groups, except for fifth-grade children.

C. Gender and Intelligence Differences

The study revealed that the interaction of gifted students with gender variables was not significant. Thus, they were less inclined toward social ability items among integrated children. Emotionally, however, many studies have shown that gifted and talented children are emotionally stable, less prone to psychological disorders, have a positive self-concept, and derive happiness from achievement. At the same time, they may experience emotional and social difficulties more than their ordinary peers. This means that the positive psychological and social traits of gifted and talented children do not make them immune to emotional and social problems, as some of these issues may result from extremes in intellectual ability, exposing them to pressures unrelated to their giftedness. In addition, economic and social conditions, along with physical traits, may also contribute either negatively or positively to their socio-emotional characteristics (*Sulayman & Ahmad, 2001*).

Conclusion of Section

From the foregoing, it can be concluded that despite the positive traits and excellence that distinguish gifted and talented individuals from ordinary peers, this does not preclude their failure in certain life tasks or their exposure to difficulties that may hinder the realization of their innovations and creativity especially in the absence of adequate support, care, and favorable conditions to foster their potential, which requires special programs and curricula.

3- Methods and Techniques for Identifying Gifted and Talented Individuals

Different societies have long paid attention to the early identification of their gifted children. A clear example is the Chinese Empire, which adopted complex mechanisms to select the gifted for governmental positions as early as *2200 BCE*. According to *Du Bois (1964)*, in his paper presented at the Conference on the Problems of Identifying the Gifted, the Chinese system relied on selecting individuals with talents in music, engineering, literature, mathematics, and other skills essential for public life. Since the 2nd century BCE, government examinations in China were based on Confucian philosophy (*Al-Shakhṣ, 2015*).

By the nineteenth century, the Chinese examination system had become open to competition for all. It was conducted in three successive stages:

1. **First Stage** – A general examination in the main cities, admitting around 2,000 individuals of various ages each year. Candidates spent 24 hours producing a poem and one or two essays on assigned topics. The success rate was about 1%, and successful candidates were awarded the title of *Budding Genius*.
2. **Second Stage** – Held every three years for those who passed the first stage. This exam, known as *Promoted Secular*, consisted of three sessions of three days each, supervised by senior state officials. The success rate was about 1%.
3. **Third Stage** – The final examination for candidates holding the first two certificates from each province. Successful candidates were awarded the *Ready for Office* certificate, qualifying them for permanent government positions. They also had the opportunity to take a final examination before the Emperor himself, who selected the most capable to receive the title of *Perfect Scholar*. This title brought great honor, ceremonies, gifts, and recognition for both the scholar and his family (*Al-Shakhṣ, 2015*).

Thus, throughout history, examinations were used as an objective method for selecting and identifying gifted and talented individuals from an early age, ensuring quality in the utilization of human resources, and cultivating excellence, creativity, and innovation.

In this context, *'Abd al-Salam and Al-Sheikh (1966, pp. 94–96)* emphasized that early identification of gifted and talented children is a crucial step toward developing their abilities and utilizing their capacities. But the question remains: **How can gifted and talented children be identified at an early stage?**

This can be achieved through a combination of several methods, the most notable of which are as follows:

1. Cumulative Record

This is a tool used to collect information about each student, enabling faculty members to plan and provide the most appropriate educational program for them. The data compiled in this record come from observing the student's behavior, administering tests, analyzing sociometric materials, conducting personal interviews, and employing other study and analysis methods. Typically, the information recorded includes school grades obtained, notes on the student's adjustment, curricular and extracurricular activities, health history, and social adaptation (*Jaber & Kafaqi, 1989, p. 522*).

2. Case Study

This refers to the in-depth examination of an individual case, whether of a person, a family, or any other social unit. In such an approach, all types of psychological, physiological, and environmental data are gathered, taking into account the individual's biography in order to shed light on their background, relationships, behavior, and adjustment methods (*Jaber & Kafaqi, 1989, p. 522*).

Both *'Abd al-Salam and Al-Sheikh (1966, pp. 90–91)* recommend relying on the method of multiple criteria for identifying gifted and talented students. A pupil is considered gifted if they meet any of the following conditions:

- Having an intelligence quotient (IQ) of at least 120, determined through verbal intelligence tests.
- Attaining a high academic achievement level that places the child among the top 15% to 20% of peers of the same chronological age.
- Demonstrating a high level of special aptitudes such as scientific, artistic, physical, or social leadership abilities.
- Possessing a high level of creative thinking (*Sulayman & Ahmad, 2001*).

2.1 Methods of Identifying Gifted and Talented Children in Kindergarten

Educators today believe that identifying gifted and talented children should be carried out at an early stage of life, as this helps in providing them with appropriate educational and instructional services and programs to maximize the growth of their abilities and potential. If such identification is not easily accomplished at the kindergarten level, giftedness should at least be clearly expressed during primary education, particularly in the first three years.

According to *Witty (1958, pp. 66–67)* and *Zahlouq (2000, p. 106)*, in order to determine whether a child displays signs of giftedness while still in kindergarten, one must first recognize certain traits characteristic of gifted children at this stage. To identify such traits, the following questions may be asked:

- Does the child surpass peers of the same age in speech? Does he or she use an extensive vocabulary accurately?
- Does the child display creativity, analytical ability, and wide imagination when facing problems?
- Is the child curious, eager to explore, and motivated to learn more about the surrounding world?
- Does the child enjoy books? Can he or she distinguish and understand written words?
- Does the child show interest in reading and request help in learning to read before the age of six? (*Sulayman & Ahmad, 2001*).

Zahlouq adds that answers to these questions are largely shaped by family upbringing, as the gifted child's family plays a key role in identifying gifted traits. Researchers stress the importance of early identification, as their experiences show that gifted children exhibit unusual abilities in the first years of life. They can solve complex puzzles and recall details of past events with precision.

Thus, the question arises: How can gifted children be identified in kindergarten?

The answer lies in direct observation of various activities and behaviors displayed by children in classrooms and playgrounds. If traits of giftedness are noticed such as learning quickly without repetition, demonstrating striking logical thinking, showing leadership tendencies toward peers, preferring mental games such as puzzles, or quickly grasping and distinguishing concepts and sizes (larger–smaller, above–below)—then the presence of giftedness traits, as agreed upon in specialized studies, is confirmed.

Zahlouq (2000, p. 105), in agreement with other researchers (*Al-Rousan, 1996, p. 264; Surur, 1998, p. 112*), emphasizes the need to supplement these observations with specific measurement tools administered by specialists in assessment and evaluation. Examples include:

- **Bracken Basic Concept Scale (BBCS):** Consists of 30 items and is used to identify gifted and talented children in kindergarten and the first grade of primary school. It includes a series of pictures where children are asked to choose the appropriate image.
- **Wechsler Intelligence Scale for Children –** Revised (WICS-R): Measures the general intellectual abilities of children aged 3–7 years.
- **Torrance Tests of Creative Thinking (performance and movement):** Comprising four tasks designed to identify creative abilities in children aged 3–8 years.
- **Pride Scale (1983):** Measures manifestations of giftedness and talent among preschool children aged 3–6 years (*Sulayman & Ahmad, 2001*).

3-2. Methods of Identifying Gifted and Talented Students in Primary School

'Abd al-Rahim and Bishay (1990, pp. 460–461) state that there is broad agreement that the earlier a child gifted or talented is identified, the more effectively specialists can design and provide suitable educational experiences to maximize that child's development. Accordingly, identification at the primary stage is best achieved through varied methods implemented by a dedicated task force. The most commonly used methods include:

A. Individual Intelligence Tests.

This type of testing is a basic method for screening and identifying gifted students and is among the traditional tools used for that purpose. However, it requires a trained examiner to administer, score, and interpret the test, and it takes longer than other tests and scales. Such tests tend to be more useful for identifying adolescent gifted students than younger gifted children. The most well-known individual test is the Stanford–Binet Intelligence Scale. Given practical constraints related to cost and time, individual testing is often unavailable at scale in most school systems; thus, group assessment and teacher observations are commonly used as alternatives.

B. Group Assessment.

Most school systems periodically assess students' mental abilities and academic achievement using group assessment methods. These evaluations typically determine, respectively, the level of mental maturity (**IQ**) and the level of academic performance. However, the stability of the results for each individual pupil is generally lower, due to the limited personal interaction between the examiner and the large number of students tested simultaneously.

C. Teachers' Observations.

If the selection of gifted and talented students were left solely to teachers, a large number of gifted children would still be identified. Yet, a study by Pegnato & Birch (1959) showed that a sample of teachers overlooked more than half of the gifted pupils who were later identified using the Binet intelligence test. Such findings underscore the need for teacher-training programs either in general education systems or within special education to help teachers recognize giftedness in children.

In the same vein, Renzulli (1971) designed a rating scale to help teachers more accurately identify giftedness. The scale comprises four domains through which parents and teachers can estimate children's outstanding potential:

- **Learning Characteristics**
- **Motivational Characteristics**
- **Creativity Characteristics**
- **Leadership Characteristics**

When discussing tests and measures, it is also necessary to address **assessment of creative ability** among the gifted. Foremost here are **Torrance Tests of Creative Thinking (TTCT)**, developed in **1966**, which can be administered individually or in groups and adapted by age level. The TTCT assess creative ability in terms of Fluency, Flexibility, Originality, and Elaboration (*'Ayyasrah & Ismail, 2012*).

Based on the foregoing, the responsibility for accurately assessing the abilities of gifted and talented students rests primarily with the school. This is undoubtedly a heavy burden that falls largely on the teacher, especially when the school fails to identify gifted pupils at which point the teacher is often held responsible for neglect or oversight. Yet, considering the many tasks teachers shoulder, it is difficult to rescue all struggling pupils while simultaneously fulfilling responsibilities for identifying and guiding the gifted. It is therefore unsurprising that teachers may sometimes fall short in this aspect of their multifaceted mission, even if they are familiar with methods for selecting gifted students whose traits and characteristics vary widely.

4. Programs and Curricula for the Care of Gifted and Talented Students

Today, the world is experiencing a mode of life unprecedented in history, one that elevates the mind by its achievements and outputs and, consequently, the value of its bearer. With the spread of economic systems that grant market mechanisms greater freedom in steering the economy, and with increased competition through open borders and global trade, these are manifestations of the release of human intellect that has placed modern humanity before two alternatives: either to invest its intellectual capacities wisely or to witness the collapse of the civilization it has built. Hence, there is a pressing need to discover distinctive capabilities and potentials that enable keeping pace with accelerating developments, driven by scientific and technological progress (*Sulayman & Ahmad, 2001*).

We now live in a world of intensified competition, where the value of the mind and its achievements tops developmental rankings. The strongest nations are those that best invest the intellects of their people. In response to these challenges, countries especially Arab states, including Algeria are reexamining their educational systems to determine what services and educational programs they can provide to help students reach the highest possible levels of intellectual potential, promising greater investment and development of such potential in service of societal progress.

First: Stages in the Education and Care of Gifted and Talented Students

According to Hafez (1985, pp. 14–17), the process involves three fundamental stages: (1) preparing measures, (2) preparing teachers, and (3) preparing special educational programs. Since the first stage has already been covered in the earlier discussion on identification methods, we will focus here on what directly serves the study's objectives from that stage, and then present what pertains to the remaining two stages.

Stage One – Preparing Measures (as relevant to the study):

A. Administering standardized objective tests as part of an integrated program for identifying gifted and talented students. These tests should be diagnostic and advisory; they must not only provide scores but also inform guidance. Trained specialists are required to ensure accuracy and objectivity in administration and interpretation (*Al-Maqsud, 1988, pp. 476–496*). The most prominent tests include:

- Intelligence tests, both individual and group forms. Group tests serve as a general screening tool, while individual tests are used to estimate and diagnose each child's abilities in depth. Because a single test

examines only one aspect of mental activity, more than one individual test should be administered per child.

- Creative thinking ability tests, among the most famous of which are the Minnesota tests.
- Aptitude and special-ability tests that assess children's specific capacities in mechanical, linguistic, and other domains.
- Objective achievement tests that measure academic attainment; these should cover all school subjects and be administered at regular intervals.
- Personality tests, such as rating scales, personality inventories, and social maturity measures.

B. Parents' Ratings.

According to Marianne Schieffele (1985, pp. 8–9), parents' reports are among the most valued sources for recognizing children's giftedness, as parents know their children's behaviors and traits best many of which objective tests may not reveal. However, these reports are often influenced by subjective judgments; therefore, their information should be used primarily as supporting evidence alongside other established identification tools.

D. Student Cards (Records).

These are psycho-social profiles that describe the child's academic status and achievement, orientations, interests, hobbies, social and health conditions, and sports activity. Ideally, such cards would guide schools in identifying gifted students. Unfortunately, many schools pay insufficient attention to them because staff are overburdened with curricular duties and are insufficiently trained to manage such matters; consequently, they are unable to devote time to them (*Sulayman & Ahmad, 2001*). This neglect leads to squandering bright minds, failing to identify and nurture them, and under-developing their capacities resulting, inevitably, in the loss of these minds' potential contributions to sectors that underpin the national economy.

Stage Two – Preparing Teachers

'Abd al-Majid (1967, p. 37) views the teacher of gifted and talented students as a cornerstone in their care and education. Some researchers therefore propose that such teachers should possess the following qualities:

- Belief in the importance of educating gifted children, familiarity with their psychology, and a sound grasp of the meanings of giftedness and creativity.
- Subject-matter expertise and mastery, with the ability to design a coherent curriculum that provides diverse and varied experiences for gifted pupils.
- Proficiency in teaching methods suitable for the gifted treating topics in greater depth than with others, without forcing students to align their ideas with the teacher's, so as not to stifle creativity; allowing freedom to express abilities.
- Broad knowledge of research methods in scientific and specialized curricula for the gifted.
- Capacity to lead gifted children through their activities and school groups, and to foster adjustment between them and their non-gifted peers.
- Freedom from feelings of envy or jealousy toward the gifted child's abilities; instead, valuing and taking pride in them (*Sulayman & Ahmad, 2001*).

To achieve these qualities, it is essential to establish special tracks in colleges of education for preparing teachers of the gifted, culminating in specialized professional diplomas beyond the first university degree in Gifted Education and the Psychology of Giftedness. Opportunities should also be provided for exposure to international programs, and access should be facilitated to publications and research (journals, bulletins) on giftedness. The more

successful the teacher, the more successful the program and its real-world implementation. Alexander & Muia (1986) maintain that the teacher is the key factor in the care and growth of gifted and talented students, helping them acquire skills and attitudes necessary for sound engagement with the present and the competencies required to understand, interact with, and adapt to the future. Thus, the teacher can become an effective instrument for the growth of the gifted.

Training Programs for Teachers of the Gifted.

A review of current teacher-preparation programs in general education reveals that they lack many of the features essential for preparing teachers of the gifted. Hence, dedicated programs are needed. According to *Al-'Unr* (1925, p. 138), such programs should aim to:

1. Develop greater awareness and understanding of the broad range of giftedness domains and highlight the needs of the gifted across educational stages.
2. Provide direct experience working with gifted students to achieve a deeper understanding of their characteristics.
3. Introduce the core resources across subject areas for optimal use.
4. Present the best practices for managing classrooms of gifted students and offer opportunities to practice these methods.

Lindesy (1980) divided the areas around which a preparation program for teachers of the gifted may be organized into five domains, namely:

First. The Humanistic Domain

This is among the principal domains in preparing teachers of the gifted. It aims to prepare a teacher capable of meeting the challenge of teaching pupils who may surpass them in intelligence level; hence, the program emphasizes developing a positive self-concept.

Second. The Scientific Domain of Subject Content

It is essential that the teacher master their subject matter going beyond theoretical knowledge to organizing and validating this knowledge so it can be translated into practice thereby enabling more flexible handling of content.

Third. The Domain of Instructional Processes

The program should emphasize reliance on induction, exploration, divergent thinking, analysis, synthesis, and evaluation so that the learning outcomes of the subject matter are achieved.

Fourth. Training in the Use of Scientific Methods and Approaches

Among the most important tools for dealing with diverse problems is the scientific method. Teachers must train students to formulate hypotheses, collect facts, analyze them, present results, and then make appropriate decisions.

Fifth. Training in Teaching Methods

When designing a preparation program for teachers of the gifted, Seeley (1981, p. -168–165) stresses a set of standards to regulate this program and ensure its success. These standards are:

- The necessity of setting admission criteria for the program, ensuring the presence of cognitive and affective characteristics aligned with the program's objectives.
- The program should include an approach to major issues related to the education of the gifted, emphasizing theory, application, and research in this field.
- Preferably, the program should be at the graduate level.
- The teaching staff should be specialists in the field of gifted education or individuals with interests and studies in this area.
- The program must be periodically evaluated in order to modify and improve it. (*Sulayman & Ahmad, 2001*)

In a study by Zettel (1979) on courses offered in programs preparing teachers of the gifted, a general pattern of courses was found, consisting of: psychology of the gifted and their education; tests and measurements; creativity; research methods; methods of teaching gifted students; principles of leadership; classroom management; science education (*Sulayman & Ahmad, 2001*).

Stage Three: Programs and Curricula for the Care and Identification of Gifted and Talented Students

1. Philosophy of Programs and Curricula for the Care of the Gifted

Among the foremost aims of gifted identification and care programs and curricula is the early identification of gifted and talented students and guiding them to recognize their abilities, the most suitable fields for them, and their academic and professional futures while providing diverse experiences to nurture those abilities and potentials so that the student reaches the highest levels of self-realization and excellence (*Feldhusen & Treffinger, 1980*). It is well known that the gifted student possesses a set of mental abilities that surpass those of typical peers; placing such a student in an ordinary classroom limits the consideration given to these high abilities, as the general curriculum focuses on the largest segment of the school population and typically prioritizes basic skills and pre-specified content. This often compels the teacher to overlook the needs of the gifted student, rendering much of the time spent in class limited in benefit for gifted learners (*Al-Jughayman, 2008*).

Accordingly, the philosophy of enrichment programs and curricula which Smith et al. (2000) define as a set of experiences added to the regular school curriculum to challenge the abilities of gifted students and offer them deeper learning opportunities (*Al-Shawk, 'Ababneh & Shu'ayb, 2010*)—rests on the premise of assembling gifted and talented students at multiple, regular intervals throughout the semester within the school. This provides opportunities for interaction with peers of similar abilities, exchanging ideas and experiences across fields, thereby enabling them to develop their capacities to a level that allows greater self-understanding and discovery of strengths and weaknesses (*Al-Jughayman, 2008*).

Before implementing gifted programs, Renzulli (1987) argues that administrators must internalize the philosophy and objectives of such programs in terms of supporting specialized care; agree on appropriate methods for identifying gifted students; ensure the availability of an appropriate curriculum that builds their capacities comprehensively and systematically; and foster positive attitudes among teaching and administrative staff contributing to program success. A clear evaluation plan is also essential. Sayyid Sulayman (1991, pp. 125–215) identifies five educational programs commonly adopted to identify and care for the gifted, presented as follows:

First: Programs for Caring for Gifted and Talented Children in Regular Classrooms

This approach avoids isolating gifted children in separate groups. Care is provided through two methods:

1. Gifted children carry out in-depth projects on program topics, enabling optimal use of their high capacities.
2. Gifted children temporarily leave their classes to receive advanced lessons aligned with their level, then return to their regular classrooms.

Second: Programs Based on "Individualized Classes" (Unique/Non-graded Classes)

Features include a flexible curriculum accommodating individual differences in ability, allowing each pupil to progress at a pace consistent with their capacities. A gifted child can advance through the curriculum without waiting for others. This flexibility can eliminate sequential grade levels, grouping students from various grades together. Challenges include the difficulty of preparing as many varied programs as there are pupils in a single class (often 35–40 students) (*Yasin, 1981, p. 154*), as well as financial cost (the need for many books, resources, maps, visuals, practical exercises, and teaching aids), which may be impractical in large urban schools. Another obstacle is teachers' preference to work with the whole class rather than individuals within it.

In a study by Jones (Jones daisy, 1968, pp. 167–168) on the impact of individualized learning on academic achievement with a sample of fourth-grade pupils, five classes were taught as experimental groups using lessons, textbooks, and varied methods tailored to each pupil. The curricula included books ranging from second-grade to sixth-grade levels. The control group comprised pupils of the same age as those in the experimental groups but received only standard fourth-grade materials. The study concluded that the only difference between the experimental and control groups was the use of a better instructional plan namely, individualized instruction (*Sulayman & Ahmad, 2001*).

Third: Programs Based on "Special Groups"

These programs include the following **methods**:

- **Special Classes Method.**

Abu 'Allam & Al-'Umr (1985, p. 22) consider special classes among the most common methods for caring for the gifted within homogeneous groups. Advantages include enabling the teacher to work with groups sharing multiple characteristics, facilitating delivery of content tailored to the group's traits. Having gifted students together in the same classroom also provides a challenge level that stimulates them to work at their maximum potential. Prominent programs used in these classes include:

a. **The Productive Thinking Program.**

Designed for fifth and sixth grade pupils to develop creative thinking through self-directed learning; it consists of 15 lessons, each involving pupils in uncovering a puzzle or event.

b. **The Purdue Creative Thinking Program.**
Prepared for third, fourth, and fifth grade levels; it aims to develop creative thinking and comprises 28 lessons recorded on audio tapes with accompanying printed exercises. Owing to its proven effectiveness, it is widely used in the U.S.A.

c. **The Parnecs Program (Barnes).**

Designed to develop creative thinking in the city of Buf falo (Buffalo), New York, by stimulating diverse group ideas on a given topic commonly known as brainstorming.

d. Mayers–Torrance Workbook (1964).

Prepared to develop creative thinking among primary-school pupils through a set of questions and exercises. Numerous educational studies have indicated its effectiveness in enhancing creative thinking.

e. Khatena's Training Method (1972).

Designed for the same purpose as the other programs, but targeting both children and adults. It includes multiple visuals, tools, and training programs for creative thinking. Evaluation studies have pointed to its effectiveness in developing creativity.

f. Akron's Exploratory School Program (1980).

Also designed to foster creative thinking among school students, it includes twelve instructional packets in science and mathematics containing problems that require students to find solutions via inquiry and investigation. Studies have indicated its effectiveness in developing creative problem-solving in scientific and mathematical contexts.

From the advantages of these special classes is that they strengthen the motivation for innovation and creativity among the gifted, who by nature require mutual intellectual stimulation.

Special Schools for the Gifted.

This is one of the approaches to programs for teaching gifted and talented students, by grouping this category of pupils in a single school, provided they have a high mental level, obtain the highest academic achievement scores, and display good adjustment and psychological stability. Gallagher (1976, pp. 50–51) maintains that programs in such schools place responsibility for the program in the pupils' own hands, as though they work in different groups, each with its own hobby such as drawing and photography, music, drama, or foreign languages. This type of school offers gifted children opportunities for scientific inquiry and study (*Sulayman & Ahmad, 2001*).

Fourth: Enrichment Programs

These programs aim to achieve intellectual enrichment for gifted students while they remain in regular classrooms. Passon (1958) considers enrichment to be one of the easiest instructional operations to support the gifted child, yet at the same time one of the most difficult tasks teachers face, since enrichment is tied to selecting and organizing appropriate experiences to develop the capacities possessed by the gifted child. It is therefore especially urgent and essential for the gifted, whose advanced abilities require continual encouragement and sustained care. Studies have shown that gifted and talented students exposed only to regular instruction that does not challenge their abilities tend to proceed through schoolwork with negligence and lassitude and lack the desire to make effort. Hence, the enrichment program emerged as an important educational approach for caring for the gifted within the same classroom as typical peers, providing additional, distinctive curricula from which they choose what suits their interests and abilities, broadening and deepening their experiences. Many education scholars have endorsed the plan of enriching the instructional program—expanding and deepening it to make it more suitable for the abilities of the gifted and talented. There are two basic orientations in the additional curriculum:

- **First orientation:** The additional curriculum is closely linked to the original curriculum, **complementing** it and going deeper than the original content.
- **Second orientation:** The additional curriculum is uncircumscribed, and need not be related to the original curriculum.(*Sulayman & Ahmad, 2001*)

According to *Al-'Umr* (1990, p. 135), enrichment programs should be based on advance planning for how to enrich the material in ways appropriate to the abilities of the gifted and the type of final product expected from their work. Forms include, most notably:

- **Independent study**, whereby the gifted learner employs scientific methods and library skills to conduct studies on selected topics under the teacher's supervision.
- **Working at higher cognitive levels**: while typical students are asked to handle the facts they have learned, gifted students are simultaneously asked to engage the same topic using skills of analysis and evaluation.
- **Teaching part of next year's content**: the teacher may coordinate with the next-grade teacher to allow the gifted child to study a portion of the curriculum prescribed for the following year.
- **Drawing on experts' experience** in various fields: meetings can be organized between children and field specialists whether university professors or professionals in different workplaces through which pupils gain practical experience to supplement their theoretical learning. (*Sulayman & Ahmad, 2001*)

Overall, this approach is among the most suitable for our educational context, since clustering the gifted in special schools or classes requires large budgets to establish and generalize nationwide particularly given free education, the increase in the number of schools and students, and the rapid population growth in Algeria. Even if the state manages to create special schools or classes for the gifted in major cities, pupil numbers in smaller towns and rural areas are relatively low, making it difficult to establish special schools or classes for this segment of society.

Fifth: Acceleration Programs

This type of program aims to shorten the years of study for academically gifted children, enabling gifted and talented students to complete an educational stage in less time than typical peers by about one or two years. These programs have received both opposition and support. The opposing view holds that removing the gifted child from their class and placing them in a higher grade with peers superior in physical and emotional maturity may adversely affect psychological health and deprive the child of certain basic information and skills of the original grade. The supporting view maintains that most gifted children are not harmed by skipping grades, particularly if they possess emotional and social maturity, enabling them to interact with older peers.

Acceleration is also an appropriate educational means to provide gifted children with experiences that challenge their intellectual abilities, give them the chance to express these abilities fully, and spare them the boredom typical of regular classes. Some researchers cite two justifications for using this approach: first, it is administratively simple and economical; second, it meets the gifted child's intellectual and cognitive needs while ensuring earlier entry into practical life (*Al-Shakhṣ, 2015*).

Forms of acceleration programs when planning the education and care of the gifted include, most notably:

1. **Early entry to kindergarten:** the child may enter before the prescribed age, depending on maturity level and superiority in various traits.
2. **Full grade-skipping:** if a pupil's superiority in the current grade is established, they move to a higher grade.
3. **Partial grade-skipping:** the gifted pupil advances **only** in subjects where superiority is established.

However, achievement-based acceleration must be undertaken with caution, and educators responsible for the process should ensure:

- The child's social and emotional readiness to participate in acceleration programs.
- The feasibility of these programs on the one hand, and their suitability for the gifted child on the other.
- The amount of knowledge acquired by the pupil and its adequacy to qualify them to employ their ability-predictive potential.
- The readiness of some teachers and their ability to provide and prepare opportunities for the gifted and grant them due attention and care.

The most important conclusion from these programs is that they are an important step toward discovering and caring for gifted and talented students in a way that serves their needs across domains and the needs of society, elevating both.

5. The Reality of Caring for Gifted and Talented Students in Algeria

Considering the reality of caring for the gifted and talented in Algeria, we find that mechanisms and procedures for identifying and caring for the gifted and talented are absent in implementation across national educational institutions. Nonetheless, it cannot be denied that Algeria has recently begun to accord special attention to identifying and caring for the gifted and talented by reviewing relevant specialized research and studies and by turning toward supporting the establishment of centers dedicated to this group so as to meet the challenges confronting gifted care in Algeria, presented as follows:

1. Contributions of Algerian Studies on Gifted Care

Some Algerian studies presented at local and Arab scientific conferences have called on the Algerian state to establish support and care centers for talent and to provide greater attention to gifted and talented individuals. This appears, in particular, in the following:

1.1. A Call to Establish a National Center for Talent Care.

Al-Fajr newspaper reported on (**23 April 2008) that participants in the "Sixth International Conference on the Gifted Child in the Arab World" in Setif emphasized the need to establish a national center specialized in caring for the gifted and talented. Participants hosted by Ferhat Abbas University stressed the importance of coordination among Arab countries especially those with experience in this field to benefit from their expertise. They also called for the creation of a specialized unit within ministries of education devoted to the affairs of the gifted and talented, tasked with raising awareness of the importance of early identification and follow-up, and preparing plans and programs for their care.

1.2. A Call for Greater Support for the Gifted and Talented in Algeria.

The Algerian Press Service (APS) reported on (**08 November 2015) that Naïma Ben Ya'qub, President of the Algerian Association for the Gifted and Talented, stated on the sidelines of the "11th Scientific Conference for the Care of the Gifted and Talented" in Amman that caring for this group has become more than necessary in Algeria, as in other countries, particularly Arab ones, which mobilize large financial and material resources to support the gifted in all fields as a factor in scientific development and economic and social growth. The conference also honored Algeria, represented by the Ministry of Higher Education and Scientific Research, with a Merit Badge "in recognition of efforts in human resource development in higher education and support for the gifted and talented."

2. Establishing Secondary Schools for High Achievers in Mathematics

Among these is the Secondary School for High Achievers in Mathematics (El-Kouba), opened in 2012. Its academic system includes a common core in Science and Technology, after which the pupil continues in the Mathematics stream in the second and third years of secondary school. It follows the same programs adopted in general and technological secondary schools, with adaptation for this group. Admission is open to top pupils who wish to enroll and who have obtained an average of 16/20 or above on the Brevet d'Enseignement Moyen (BEM). They are ranked by merit on the basis of a selection average equal to: [BEM average + (Mathematics score in the BEM × 2)] / 3. (*Dalal, Samira & Oqqad, 2018*)

3. Founding the First National Center for the Gifted in Chéria, Tebessa

Annasr daily (by Nassib, editor-in-chief) reported on (**28 October 2017) that the city of Chéria in Tébessa recently witnessed the birth of a national center concerned with the gifted and talented, housed at the educational institution "Stars of the New Generation for Foreign Languages and Human Development" in Chéria. ʻUmar Bouʻakkaz, head of the provincial office for Tébessa, was appointed director of the center. The editor explained that the center is an academic educational body and an independent research consortium, founded by the National Association for the Discovery and Promotion of Talent. It is dedicated to developing talent, creativity, and caring for gifted and talented Algerian children and youth, believing they represent the true capital and strategic asset for the country's future and progress. The center aims to craft a national strategy for caring for the gifted and talented at different ages and educational stages, with defined, actionable mechanisms, by concluding cooperation agreements with specialized professors, centers, experts, and trainers.

The ultimate goal is to keep pace with contemporary changes and drive development by investing in human intellect, a tremendous and distinctive force for the nation. The center's mission is to provide exceptional care and identification for gifted and talented students. The director added that the institution has a strategic vision to become a nationally leading center for the gifted and talented across the country, leveraging their innovations for development and propelling them to global standing.

Center's Tasks.

The center works to liaise with local and international institutions concerned with caring for the gifted and talented; to raise awareness of this group's needs by identifying their problems and care methods through various media and communication channels; and to open branches in all provinces. It also conducts theoretical and applied research in the field of giftedness, talent, and creativity; prepares a series of guides and pamphlets for families and schools to inform parents and teachers about methods of identifying, caring for, and developing talent; and organizes seminars, training courses, and scientific conferences specialized in caring for gifted and talented students in Algerian schools. Further, it seeks to enumerate and draw attention to the gifted across Algerian society and to encourage them continuously.

6- Conclusion

From the overall findings of this study, it can be concluded that, despite Algeria's delay in giving attention and care to the category of gifted and talented individuals, the state has recently begun to recognize the importance of this group and has taken steps to support, nurture, and develop them. This is evident in the establishment of specialized centers for the gifted and talented, most notably the National Center for the Gifted in Tébessa, as well as in the comprehensive review of specialized research and studies on the subject. Moreover, efforts have been made to encourage the organization of scientific conferences and symposia that emphasize the necessity of early

identification and sustained care of this group by implementing special programs and curricula for the gifted and talented across all educational institutions including the family so as to nurture and develop their abilities and potential. These efforts aim to address weaknesses in the care provided to this segment of society, transforming them into strengths, and to convert challenges into opportunities for advancing the world of gifted and talented individuals in Algeria.

Accordingly, these positive indicators allow us to affirm that:

- The reality of identifying and caring for gifted and talented individuals in Algeria has witnessed remarkable development in recent years compared to the past.
- The Algerian state seeks to support this group by attempting to design and implement the most appropriate programs and curricula for their identification and care.
- The Algerian state can further contribute to the development of methods and strategies for identifying and caring for the gifted through providing support for the creation of specialized centers.

Findings

- Early Identification Deficiencies – There is no standardized national framework for detecting gifted and talented learners, leading to inconsistent and delayed recognition.
- Curricular Gaps – Current educational programs are insufficiently differentiated, offering limited opportunities to foster advanced cognitive, creative, and socio-emotional development.
- Institutional Challenges – Specialized institutions exist but face structural, financial, and organizational constraints that limit their effectiveness.
- Teacher Preparedness – A lack of professional training and diagnostic expertise among teachers hinders the effective application of identification and care programs.
- Cultural and Social Barriers – Misconceptions about giftedness, unequal access to educational opportunities, and social stigma contribute to under-recognition and underutilization of talent.
- Policy Implications – A comprehensive national strategy integrating early screening, tailored curricula, psychological support, and teacher training is essential for advancing gifted education in Algeria.

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Conflict of Interest

The author declares that there is no conflict of interest regarding the publication of this article.

References

1. Al-Shakhṣ, ʿA. A. (2015). Methods of Identifying the Intellectually Gifted and Talented and Nurturing Them and Developing Their Creative Abilities. Riyadh: United Arab Emirates University.
2. Al-Laqqani, A., & Al-Jammal, ʿA. (2003). Dictionary of Defined Educational Terms. Cairo: ʿĀlam al-Kutub.
3. Al-Damanhuri, F. (2013). Giftedness and Talent. Alexandria, Egypt: Alexandria Book Center.
4. Sixth International Conference on the Gifted Child in the Arab World. (2008, April 23). Conference proceedings. Algeria. http://www.djazairess.com

5. Baligh, H. A., Saleh, A. ʿA., & Muhammad, R. Sh. (2010). Working Paper Presented at the National Conference on the Care of Gifted and Talented Students. Great Jamahiriya, Tripoli: Misurata University.
6. Jamal, B., & Sarah, L. (2016). Arab and International Efforts to Care for the Gifted and Talented – The Yemeni Excellence Development Center as a Model. Lark Journal of Philosophy, Linguistics, and Social Sciences.
7. Salami, D., ʿAmāmarah, S., & Sumayyah, W. (2018). Pioneering Arab and International Experiences in Caring for and Supporting Gifted Children. Algeria: University of Hamma Lakhdar, El Oued.
8. Samer, M., Muhammad, ʿA., & Nūr, ʿA. I. (2012). Traits and Characteristics of Gifted and Talented Students as a Basis for Developing Identification Scales. Arab Journal for Developing Excellence, (04). Malaysia: International Islamic University Malaysia.
9. ʿAbd Allah, B. M. A. (2008). Program for Caring for the Gifted in Public Education Schools. Saudi Arabia: Ministry of Education.
10. ʿAbd al-Raḥmān, S. S., & Ṣafāʾ, Gh. A. (2001). The Intellectually Gifted: Their Characteristics, Identification, Education, and Problems. Cairo: Zahraʾ al-Sharq Library.
11. ʿUmar, M. A. (2007). Integration Between the State, Private Sector, and Civil Society in the Education and Care of the Gifted. Sudan: Open University of Sudan.
12. Fathi, A. ʿA., & Halim, S. B. (1990). Psychology of Exceptional Children and Strategies of Special Education (4th ed.). Kuwait: Dār al-Qalam.
13. Naïma, B. Y. (2015, November 8). 11th Scientific Conference on the Care of Gifted and Talented in Amman. Algerian Press Service (APS). http://www.djazairess.com
14. Naṣīb, ʿA. (2007, October 28). Establishment of the First National Center for the Gifted and Talented in Chéria, Tébessa. Al-Nasr Newspaper. http://www.djazairess.com
15. United Arab Emirates Center. (2018). The Reality of Caring for the Gifted and Talented in the United Arab Emirates: A Field Survey Study (2012–2016) (1st ed.). Dubai: Qandil for Printing, Publishing, and Distribution.
16. Belabbas, S. (2025). Strategies for e-learning for gifted students. Science, Education and Innovations in the Context of Modern Problems, 8(1). IMCRA.
17. Zhidkov, A. V. (2025). Formation of a healthy lifestyle in the preschool education system (including discussion on gifted children). Science, Education and Innovations in the Context of Modern Problems, 8(7). IMCRA.