The Role of Governmental Educational Institutions in Implementing Talents' Development Programs in the UAE: An Explanatory Study

دراسة حول دور المؤسسات التعليمية الحكومية في تنفيذ برامج تنمية المواهب في دولة الإمارات العربية المتحدة: دراسة استكشافية

by

BASEMA YOUNIS

A thesis submitted in fulfilment

of the requirements for the degree of

DOCTOR OF PHILOSOPHY IN EDUCATION

at

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Abstract

UAE educational institutions implement gifted and talented development programs; therefore, this study was the first to examine the application of these programs in UAE schools. The main research question of the study was to examine the efficiency of this implementation and the accuracy of outcomes of the applied programs over several stakeholders. The study adopted a qualitative explanatory method design to collect the data. The collection method included interviews with parents of the gifted and talented, teachers, programs' managers, experts in the field, gifted and talented students and adults, in addition to a focus group with parents, teachers, and talented individuals A review of documents was also conducted. The conclusions highlighted diverse deficits in the implementation of several program components that have arisen from findings, and room for thorough improvement is necessary. The last chapter included a set of recommendations presented to better serve the highly able students in the UAE in future.

Keywords:

Talented individuals- Institutions.

Abstract (Arabic)

تقوم المؤسسات التعليمية في دولة الإمارات العربية المتحدة بتنفيذ برامج خاصة لاكتشاف وتنمية الموهوبين في المدارس؛ وبالتالي، كانت هذه الدراسة هي الأولى من نوعها لاستكشاف دور خمس مؤسسات تعليمية في تنفيذ برامج تحديد الموهوبين وتطويرهم. كانت الأسئلة البحثية الرئيسية للدراسة هي مراجعة دور هذه المؤسسات في تنفيذ هذه البرامج وكيفية تقييم نتائجها من خلال اجراء مقابلات للعديد من أصحاب المصلحة. تم اعتماد تصميم طريقة البحث النوعي التوضيحي. تضمنت الأساليب المستخدمة لجمع البيانات مقابلات مع أولياء الأمور والموهوبين والمعلمين ومديري البرامج والخبراء في مجال الموهوبين والطلاب الموهوبين، بالإضافة إلى مجموعة تركيز مع أولياء الأمور والمعلمين والخبراء والطلاب الموهوبين. كما تم إجراء مراجعة للوثائق الرسمية التابعة لهذه المؤسسات. ووجدت الاستنتاجات عدة فجوات في هذه البرامج مع وجود مجال للتحسين اللازم. وتقدم الدراسة في الختام مجموعة من التوصيات لخدمة الطلاب الموهوبين والمتفوقين في دولة الإمارات العربية المتحدة بشكل أفضل في المستقبل.

الكلمات الرئيسية: الموهوبون-المؤسسات

Dedication

To the loving mother, brothers, and sisters and children who have given all the support needed to reach my dream, I dedicate this thesis.

Acknowledgement

I want to express my sincere gratitude to My advisor, Prof Eman Gaad, for her care and dedication within the whole process of my thesis, for her continuous support, for her patience, motivation, enthusiasm, and immense knowledge. Her guidance helped me in all the time of research and writing of this thesis, her selfless time and care were sometimes all that kept me going.

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Special gratitude goes to my amazing children Mohammed Ali, AbdulRahman, Hazzaa and AlYazia who provide constant inspiration.

Table of Contents

List of Tables

List of Abbreviations & Explanations

Abbreviation	Explanation	Origin
UAE	United Arab Emirates	UAE
UAEU	United Arab Emirates University	UAE
MOE	Ministry of Education	UAE
MCKD	Ministry of Culture & Knowledge Development	UAE
ADEK	Abu Dhabi Education and Knowledge	UAE
KHDA	Knowledge & Human Development Authority	UAE
HA	Foundation of Hamdan Awards	UAE
NPGP	The National Plan for Gifted Programs	UAE
PDPG	Program for Teachers' Development in Gifted Education	UAE
HCTC	Hamdan Center for Talents and Creativity	UAE
MCD	Ministry of Community Development	UAE
MOP	Ministry of Possibilities	UAE
DoT	Department of Talents	UAE
CSS	UAE Centre for strategic Studies	UAE
Ted	Talents Education	UAE
ESRCS	Emirates Center for Strategic Studies and Research	UAE
ADEZ	Abu Dhabi Educational Zone	UAE
DCT	Department of Tourism and Culture	UAE
NIVE	National Institute for Vocational Education	UAE
NQA	National Quality Authority	UAE
GCC	Gulf Countries Council	Gulf & Universal
WCGTC	World Council for Gifted and Talented Children	Universal
IEP	Individual Education Program	Universal
ALP	Advanced Learning Plan	Universal
GATE	Gifted & Talented Education	Universal
GAT	Gifted & Talented	Universal
G&T	Gifted & Talented	Universal
SAT	Secondary Assessment Test	Universal
IB	International Baccalaureate	Universal
AP	Advanced Placement	Universal
IQ	Intelligence Quotient	Universal
AI	Artificial Intelligence	Universal
IEP	Individual Education Program	Universal
STEAM	Science,Technology,Engineering,Arts and Mathematics	Universal
R&D	Research & Development	Universal
NAGC	National Association for Gifted Children	US
NCLB	The No Child Left behind Act	US
MI	Multiple Intelligence Theory	US
DMGT	Gagne's Differentiated Model of Giftedness and Talent	France
APA	American Psychological Association	US

List of Appendices

Appendix A: Interview Questions Guide: Experts-Teachers-Programs Leaders.

Appendix B: Interview Questions Guide: Parents of Talented Students.

Appendix C: Interview Questions Guide: Talented Students.

Chapter One. Introduction

1 Introduction of the Chapter

The oil depression and the enormous scientific developments urged a competition in the globe and made worldwide countries eager to build a knowledge-based society, that will move on with the future advancements. To stay within the platform of the advancing countries, the UAE entered the global competition towards a future that looks at creativity and innovation as a new, more reliable economy rather than oil. This competition raised the awareness of the importance of human resources and specifically the highly able persons' creativity and innovations. Gifted and talented individuals, therefore, are the country's main assets, investments and key to success. Consequently, this mission required the UAE to set an ecosystem that can support a deliberate, consistent search for gifted and talented individuals. This ecosystem should support the country's transiting from being an oil-reliable nation to profit from gifted and talented skills. Accordingly, this requires adopting a sustainable strategy that promotes the creative industries and supports the highly able productivity in this sector. The way to achieve success, as usual, starts from and infusing and inspiring education. The mission of the UAE focused primarily on transforming its educational institutions from providing education only to become a search engine and a skills booster for gifted and talented students(*government.ae*). Once again, this frantic transmission required more than a desire or a coherent system to find more gifted and talented individuals and to inspire their productivity. It needs a substantial well-set ecosystem, built on numerous successful plans and strategies and a different type of education that would achieve the UAE dream. Subsequently, the UAE government stepped in and established several educational institutions

delegated specifically to reform the existing educational system, including the surrounding environment, students and their educators' well-being.

These institutions exerted efforts and took responsibility to apply reforms to the existing educational system. They invested in additional identification programs to discover more highly able students. However, and in the light of not having ongoing researches or studies that document these achievements, such efforts are not seen nor evident for many others. A few pieces of research' findings and results would not inform how these institutions achieved and are achieving their roles. What did they do to implement the required improvements in the educational system? How did they prepare the ecosystem to thrive the highly able creativity and inspire them to innovate? Without having continuous studies or reports, it is more challenging to know how well they were able to organise and collaborate their efforts towards a national mission as well; what did they do to boost the discovery and development of gifted and talented students in schools?

Primarily, gifted and talented students have always been a rising issue in the realm of education not only in the UAE but in the entire world. To identify students as exceptionally or profoundly gifted, according to (Feldhusen, 1993) this requires a unique individual, differentiated learning plan. The responsibility for discovering and developing an individual's giftedness or talents has always been a joint responsibility shared between the individual who has the talent and the surrounding ecosystem. Today, serving talented and gifted individuals is not limited to, identification tools or development programs only. Development programs or individual learning plans aims solely at sharpening talents abilities and skills, however, the essential development interprets by designing an utterly thriving life journey that would ensure ongoing systematical service to meet all moral, psychological, educational, economic, emotional, and future needs of this category, at all stages and ages. Prominent scholars like (Alfred Binet, Terman, Gagne,Galton,

Hollingworth, Tannenbaum, Talyor & Renzulie) were of the pioneers in this field by promoting the needs of the gifted and talented students need. They didn't stimulate and inspire their countries' researchers and decision-makers only but their theories and researches were able to spread in many other countries as well to support the exceptional human resources by inspiring them to initiate various talent's development programs. Their researches and theories were followed by different researchers and they were able to open the way for other theorists who came with them or after them such as Gardner, The actual value of being talented and gifted, according to them, is by emphasising giving them differentiated care, attention, and education. Such programs are supposed to identify those gifted and talented individuals and satisfy their potentials (Hodge & Kemp, 2000). Moreover, (Watson, 2006 & Hew, 2007) pointed out that in the shadow of the digital revolution and if the conventional educational system is not capable of satisfying the needs of the society, though, what about the needs of those with extraordinary abilities? Is the current ecosystem qualified to nurture them, or is it unable to do so anymore?

Consequently, several questions wandered amongst interested researchers and educators in the area of the highly able individuals. (Watson, 2006 & Hew, 2007) For example, suggested nurturing these highly able students by a specialised gifted education that offers them a differentiated type of training. This education, according to (Watson 2006 & Hew, 2007), depends on various methods and programs such as acceleration and other motivational tools and applications. Their suggestion drew the field's attention to the possibility of implementing a differentiated educational system. This system separates the highly able students from their peers, and it should be able to satisfy their potential and unique demands as well. This suggestion, on the contrary, created criticism by other educators who opposed the idea. The critics assumed the problem is not in implementing a differentiated educational system, but it lies in other real factors that should analyse in more depth.

The conflated ideas regarding differentiation have led to inequality in schools and classrooms in contrary to it expects. Differentiation that might appear to be successful and a great solution, is not helping to look at other real facets affect these highly abled such as the environment, surrounding the society, attitudes and sociobiology(Taylor, S., 2017).

Furthermore, other questions enquired about what happens if the identification tool or method failed to identify a talented or a gifted student? What if this individual fell inadvertently because his or her talent was challenging to identify by that specific tool?"

It again tempted the scholars to look at the other side of the challenge. This time it was the definition itself. The definition, according to a long history of alterations and evolutions, is causing a conflict. The numerous definitions proposed by several scientists and through different theories tried to describe the concepts of talents and giftedness. The descriptions were dissimilar and should be defined separately (Gagne,2004).

Theorists saw it challenging to agree on one inclusive definition that can clearly define the significance of talents and could explain the meaning of giftedness. It was more challenging in their opinion than unifying an international definition that aims to describe individuals with special needs. Subsequently, the conflicts and massive views heated the debates again, and it focused more on the definition and the identification conflicts. According to several researchers in this area, the differences between the gifted and talented basis on their intellectual abilities and interests and not on their needs or behaviour (Betts, G.T. and Neihart, M., 1988). Such dispute urged more educators and experts to search for alternatives to support their views and provide this category with their needs. These alternatives were to design advanced educational development programs and introduce them to these highly able students as enrichment programs. However, and as these

enrichment programs do not comprise a curriculum, they are usually subject to the concept of "take it or leave it".

Therefore, the current study was born to explore these institutions achievements in their roles to define, identify and implement the development of the gifted and talented students in the UAE; to examine their mechanisms regarding collaborating to fulfil the national requirements in this regard; what challenges these highly able students faced and what can be suggested to help them overcome these challenges.

Finally, and for the sake of the topic, it was necessary to obtain the information from reliable, reputed resources. Consequently, and in light of the enormous shortage in researches and studies in the UAE, in this area and many others, this study has chosen to explore the reality of gifted and talented identification and development through a variety of methods such as interviews, focus groups, library search and document reviews. The five educational institutions considered the leading entities responsible for primary educational initiatives in the UAE were the subject of the study. The inspiring reason for wanting to study and review these institutions is because: (1) they implement regular and special education and developmental programs for entirely students in the whole UAE. (2) They have been among the prominent chief educational institutions since the inception of the UAE, (MOE inception was in 1971). (3) Since their establishment, these institutions have shown a concrete and sustainable role in the educational field in the UAE and have assumed responsibilities related to education in general and gifted and talented students' initiatives precisely. (4) The main reason for reinforcing the importance of referencing these sources is their responsibility for supporting the discovery and nurturing of talented and gifted students from different aspects and areas. (5) Being part of the UAE governmental institutions with full support to carry out their missions that go in line with the country's vision and ambitious

aspirations of the future. (6) Moreover, these five educational institutions enjoy plenty of opportunities and considerable funds to do everything possible to improve their operations and advance their outputs. In brief, these educational institutions are the utmost suitable institutions to answer this study's questions regarding the fundamentals of how they implement identification and development for the gifted and talented students in the UAE.

Key Words

Gifted and talented Individuals: Individuals with motivation and potential, committed to achieving in different areas and domains of gifts and talents at high levels compared with their peers from the same age groups.

Educational Institutions: Entities that provide a large variety of learning environments and programs where people gain an education, and gifted and talented students receive services like enrichment programs and initiatives.

1.1 Background of the study

The development of the educational institutions in the UAE is the responsibility of the educational institutions, subject of this study. Their role is to provide citizens and residents in the UAE with their needs for the appropriate education. This role is crucial. They have to provide ordinary students with their needs in a regular curriculum, in addition to giving the gifted and talented students their equal needs for development including gifted and talented education (GATE) and individual development programs (TAG). These institutions, if compared to global specialised institutions' in charge of gifted and talented development, can maintain their role successfully if they had a strategy to organise their roles appropriately (davidsonistitute.org). They implement countless enrichment programs considered as the main tools for the development of gifted and

6

talented. However, the benefit of such programs is not evident because they do not follow a differentiated particular framework, in addition to the absence of a policy that regulates their implementation and imposes standards and periodical evaluations to estimate their benefits.

The development programs in these institutions formulate numerous developmental initiatives and programs that intend to challenge those student's capabilities and fulfil their curiosity. However, stakeholders do not recognise such initiatives and programs as crucial or necessary. Having a policy that organises, safeguards and provides this category with their needs of qualified programs that ought to inspire them and boost their creativity is a key issue in this process (Sebring & Tussey, 1992). Furthermore, the absence of a national policy suggests the absence of the basic principles that should take place while implementing any development programs to nurture those extraordinary students. This study, consequently, takes the development side of the argument. It is born to support the UAE's ambitions towards nurturing the gifted and talented students and individuals as their future income boosters. The UAE sought this dream since its inception and exerted efforts to grasp its achieved success in various missions since then. It was able to become the first in the Arab World, and the (41st) in the global index of innovation in 2016. One aspect of the UAE's success was its support given to individuals with different domains of gifts and talents. The improvements imposed on the educational system was one of the essential objects to provide this category with care and specialised services, and the UAE's support given for creativity and talent has advanced its global ranking six levels in 2016 compared to 2015. On the other hand, and according to a survey field study conducted through (2012-2016) in collaboration amongst Hamdan Bin Rashid Talents Award (HA) and the UAE Centre for Strategic Studies (CSS), the study that explored the gifted and talented' status in the UAE said that their situation is still vague, and their specialized services appear as inconsistent." (Libary.ha.ae, 2016). Such opinion links the

(CSS) study results with the main issue that is continuously infuriating the field regarding the absence of federal policy. This policy that guides, specify, and clarifies the appropriate services for this category would be a solution to understand the current situation and be able to assess it. (Al Obaidly, 2006). The other shortage, and according to the same research, (Library.ha.ae, 2016) comes from the lack of collaboration amongst these educational institutions. Their missing collaboration to identify and develop the gifted and talented students in the UAE is making the scene more blurry and unorganised. Having multiple unlinked efforts leads to the existence of vague, unclear roles (A Field Study, MCKD. 2012).

This (MCKD, 2012) field study conducted in 2012, was one of the leading studies that investigated the (MOE) General Rules for the provision of Special Education Programs and services in Public and Private Schools in the UAE. The study conducted and published by the Ministry of Culture & Knowledge Development (MCKD) indicated that the (MOE) General Rules include regulations, and a law customised to safeguard the rights and education of disabled individuals only. The (MOE) accordingly implements a unified federal national policy to empower, nurture, and safeguard the students and people with special needs and disabilities. The gifted and talented included with special needs by the (MOE) mission. However, excluded from their policy, and there is no specific policy that arranges and regulates services and rights of the gifted and talented compared with what the people with disabilities have.

Table 1. Vision & Mission in General Rules for the provision of Special Education Programs and Services (Public & Private Schools). (MOE).

Vision for Special Education	Mission for Special Education
To provide educational programs and associated services to all students with special needs and gifts and talents in public and private schools in the UAE. These	To use all available resources and to plan, implement, and monitor the provision of special programs. To plan, implement, and watch the related services provided to students with special needs, gifts, and talents. To ensure

services will reflect the best international standards and practices to prepare them to be productive members of society. *(school for all,moe.gov.ae)*	they all children in the UAE receive an Individual Education Program (IEP) or Advanced Learning Plan (ALP) based on their strengths and needs to enhance their social competence, to enable them to maximise their contributions to their communities. *(school for all,moe.gov.ae)*

This study, therefore, targets to review the roles and practices of five educational institutions in charge of educational development in the UAE. The review is in respect of their responsibility to achieve the UAE's vision 2021 by exerting more efforts to find and nurture gifts and talents within all individuals living and residing in the country. It also aims to understand the extent of their collaboration to achieve the UAE's National Agenda requirements and to satisfy the country's high-level ambitions.

1.2 Purpose and Rationale

This study intends to explore the implementation of the development programs through five of the UAE leading educational institutions. It aims to make an impact by contributing to the educational system in the UAE, which went through fundamental improvements to support the National Agenda, the UAE Vision 2021 and the UAE Centennial 2071. For this purpose, this study will carry out an intensive investigation and will provide researchers in the field the opportunity to study and research for more in-depth issues within the area of gifts and talents in the UAE.

1.3 Research Questions

The study answers the following questions

1. What is the role of development programs implemented by governmental, educational institutions to develop gifted and talented students in the UAE?

Sub Questions:

2. How are gifted and talented students defined and identified in the UAE?

3 How is the development of gifted and talented students implemented in the UAE?

4. What are the main challenges facing the gifted and talented identification and development in the UAE?

Based on the findings, the research will seek to offer the decision-makers a set of recommendations regarding gifts and talents' identification and development in the country. It will participate in the efforts working for the improvement of gifted and talented developmental services in the country. Such a study focuses on supporting the UAE's Vision and National Agenda. The vision and the agenda aim to put the UAE amongst the advanced countries in the world within the Human Development Index. They also aim for the UAE to be the happiest among all nations and to make all citizens and residents feel proud they belong to the UAE. Education, skills training and inspiring innovation and creativity is accordingly the basic construction for the required development and the most excellent guaranteed investment in the youth and gifted and talented students in particular. This study explores the UAE's efforts and methods in nurturing and appreciating gifts and talents. It examines the development projects applied to achieve that, and the expectations of these projects in the future.

Finally, the research builds on data obtained by different methods and tailored in the form of literature review and case studies to present the efforts of the Educational Institutions' and to learn how they work to achieve such a goal.

1.4 Significance and Research Problem

This study is a relative comparison to equate the functions and operations of the leading educational institutions in the UAE, their practices, and policy implementation regarding gifted development, education and initiatives. Areas examined herein include the definition, process of identification, and gifted and talented development procedures. This study is born at a time of crucial need to discover and nurture gifted and talented individuals, not in the UAE, but also throughout the globe. The UAE is accordingly launching and funding more institutions to undertake the responsibility of talented identification and development. However, and pre the establishment of other institutions, there is a need to understand and examine the actual position of identification and development of the gifts and talents in the UAE and what their needs are.

The governmental concern and the confidence given to these institutions assume that enormous efforts made by them in respect of the development of this area and the improvements applied to boost the educational system.

The study, henceforth, intended to clear the view in this area regarding the identification and development of gifts and talents in the country. It looks forward to providing the extraordinary learners', the concerned leaders and educators, the experts, and decision-makers with clarifications regarding the situation of the identification and development programs and initiatives in the UAE. It also intends to endorse how to improve these practices according to some of the best similar performs in the world, if needed. It will also provide officials and decision-makers in the UAE with in-depth information and suggestions for any future improvements with recommendations. In short, if the UAE is counting on its gifted and talented program to support achieving its vision and mission in the coming years, it is worth looking at such programs closely.

1.5 Limitations and anticipated Challenges

The researcher is working at the Ministry of Culture and Knowledge Development (MCKD) and in charge of Department of Talents at the Ministry of Possibilities. The researcher confronted numerous challenges due to the following issues:

 (1) The topic of gifts and talents, their definition, identification and development is complicated and challenging, not only in the UAE but also around the globe.

 (2) (MCKD) as one of the examined institutions in this study, is where the researcher currently work.

(3) The Department of Talents (DOT) at the Ministry of Possibilities (MOP) is conducting similar research to explore and examine the same situation.

(4) This study will rely on document reviews, interviews and focus groups. It is not to criticise the institutions or their efforts in this area, but to share these institutions' their appreciated national efforts and to collaborate with their ambitions to achieve the UAE's vision and to support their future improvements by reliable researches.

This study, therefore, does not attempt to evaluate the effectiveness of the UAE educational institutions or how beneficial are their efforts in implementing various educational systems and their improvements in the UAE; instead, it aims to explore specific gifts and talents oriented initiatives practices, launched to identify and develop students' gifts and talents in the UAE. It also seeks to identify the used practices by these UAE Educational Institutions in respect of capable students' identification and development compared with the identification and development practices employed by other similar talents'-oriented initiative internationally. The aim of this study's construction has initially been to base its data collection primarily on previous studies and

researches in this area, responses from stakeholders who benefit from these programs, and data obtained from different resources. However, and due to some administration obstacles, the study depended on the retrieved information collected from preliminary data published mainly on their official websites or the government official websites besides the data generated from the research applied methods such as interviews and focus group. The study utilised the open data facility and the results of researches and interviews gained from the currently ongoing investigations in this area. Such sources are all presumed to be the most reliable, trusted, and up-to-date data that can be found about the gifted and talented issue in the UAE in addition to the matched destinations and aspirations towards the same results that will support this category in the UAE.

1.6 Organisation of Chapters

An overview of the area of gifts and talents in the United Arab Emirates, purpose, and rationale of the study, significance and research problems, limitations, and anticipated challenges were in this chapter, followed by Chapter 2 reviews the literature related to this study. Chapter 3, the institutions' case studies. Chapter 4 presents the methods and procedures used to create this study. Chapter 5 presents the results and data discussion, and Chapter 6 contains the findings, recommendations, and conclusion.

Chapter Two. Literature Review

Introduction

This chapter analyses the relevant literature for this study. For this literature pursuit, the utilised researches obtained from international countries are studies conducted by prominent scientists and theorists in this field. They are from nations like England, America, and the UAE. The chapter discusses definitions of gifts and talents and any associated issues. These issues include identification process, development programs, their need for special provision, and what it should involve. Therefore, and to understand what type of improvement these developmental programs require, the chapter refers to some older texts and use them as references, despite updating some of the models in them. This literature review aims to try to track the development in the field of gifts and talents, their identification, development programs and practices. It includes an assessment of related literature in the areas of global debates, definition of talent, definition evolution, identification processes, and development procedures, stages of talents development, assessing achievement, special education and gifts and talents development programs and presenting two experiences of two leading countries known for being prominent in the identification and development of gifts and talents (US & China experiences). A discussion regarding intelligence and talents, defining intelligence, nature of intelligence, intelligence tests, criticising intelligence view, and theories of intelligence are also present. This chapter discussed and criticised four of the pioneering theories of intelligence. These theories include The Triarchic Theory of intelligence; The Theory of Multiple Intelligence; Gagne's Differentiated Model of Giftedness and Three -Ring Conception of Giftedness. It indicates the employment of The Theory of Multiple Intelligence as well.

2.1 Global Gifted and Talented Debates

Scholars have always wanted to understand the meaning of giftedness, how to identify giftedness and talents, how to develop them, and to make other scholars and researchers explore, understand and learn more regarding them. Earlier theories and other empirical investigations have usually been dependable on previous works and researches. These studies appeared complementing or conflicting over conceptions from time to time. The heated topic in the conflicts was regarding the concept and the portion of the responsibility of each stakeholder towards explaining the conception and the development of this category as well. In a study by (Subtonik, Olszewski, Pand Worrell, 2011), for example, a set of interrelated arguments about talents was discussed. It has confirmed that the abilities do matter and that the different talent domains have different development routes. On the other hand, the study indicated that the society is responsible as well for supporting the development process of talents development. Gifted and talented individuals are also responsible for their abilities and skills development, and they share this responsibility with the community and other stakeholders as well. The leading goal is to allow gifted and talented individuals to reach an outstanding and high level of personal satisfaction and self-actualisation. They should produce several benefits to themselves and society. (Subtonik & Arnold, 1994) said that talented individuals need special education to thrive, and the mentors of the gifted students believe that even highly intelligent students benefit from exceptional educational opportunities, and they may also require them to satisfy and foster their potential.

Several studies were very famous in this area, like the popular debate in the history of psychology title "nature vs nature "by (Baker, 2012). This debate made it hard to decide how talented abilities development happen. The question was if it predisposes in the DNA, or influenced by the talent's life experiences and the surrounding environment? Several studies examined "the influence of

physical ability, mental and emotional aspects of the talents' development. (Rita, Curlos, 2015) Examined home influence, school, and culture affect and discussed an athlete's performance enhancement by several factors. The study results showed that many factors affect development, and they are essential. She considered things like supervising, mentoring and coaching are part of the athletes' development. The cognitive-behavioural therapy and attention to aspects of health psychology are included in her study results as well. Other factors, such as neuropsychological interventions are according to her part of this development. Another study by (Olszewski, P., Kulieke, M.and Buescher, T., 1987) indicated that many factors boost gifts and talents development, including family environment and parents' value as well. Many conducted types of research were to examine the causes of talents' achievements and the effect of the environment on their success, such as (Subtonick, 1988). Subotnick studied (94) American winners identified from a popular American science talent search. The longitudinal study that started from the time when those winners awarded in 1983 until 1993, investigated the factors that led those winners' achievements in science and math. She also studied the retention of this achievement. According to her mentors helped a lot in supporting those scientists and making their achievement sustainable. Mentors constituted an essential part of those scientists winning. (Subtonick, 1988) found that curiosity was a great motivation that led them to win.Exposing the classroom to scientific debates helped much in supporting their success. She also compared between males and females and found that both had different views of success. According to Subotnick, men's success refers to their intelligence and creativity, while women's success refers to their hard work and dedication. The study also indicated that the main factor that led those scientists to decline continuing their studies in these fields was because they believed that scientists' lives are not interesting. The lack of reasonable mentoring and the quality of education were also reasons for making these winners

decline science (Subotnik, 1994). By 1988, several winners dropped out of science. The number of (41% out of the 73) females and (12% out of the 57) males constituted the dropped out of science. The study indicated that those winners who remained in the science track had received the essential continuous support.They received several motivations to carry out research projects.The resources included tools to engage in researches. They also had the opportunity of receiving mentoring services by expert mentors, and they had the chance to learn a tacit knowledge they needed to continue. Such factors helped them succeed in science major and continue in scientific research. Other studies from different countries discussed talents, giftedness, and educational issues. Studies concerned about the development of gifts and talents are usually supporting their development and providing the area with valuable debates and arguments in this regard. This issue is the most important one on a large scale because the area of gifts and talents is in need for special resources including differentiated educational system, special teaching methods and tools that provide them with their needs and fit in with their higher abilities, interests, and intelligence. (Bloom, 1985) conducted a study in which he interviewed (120)gifted and talented outstanding individuals in America who were under (40) from different disciplines of giftedness and talents, including Olympic swimmers, research mathematicians, concert pianists, world-class tennis players, research neurologists, and sculptors. Bloom's research team picked the participants based on the most objective criteria they were able to devise after they consulted experts in each field. The selection was limited to people under their 40s to make sure they still remember how they were able to develop their talents and achieve their success. Bloom,1985 interviewed their parents, trainers, and coaches, too in some cases to get more information. Bloom,1985 stated that the main point of his research was to confirm that the initial ability was not the thing that made these talented individuals achieve in the future but focusing on a continuous

practice for long years and getting help from others around them. Practice, in other words, was the reason for their success. "They achieved excellent competence in their field because they got help and had the opportunities to practice" (Bloom, 1985). Bloom's type of research would have a better impact if they were as longitude researches that would trace talents' early lives and how did they go through different obstacles plus getting training and support. Another research by (Feldman, 1993) was about a prodigy. The researcher viewed prodigy as a different form of talent viewed in a different focus (Feldman, 1993). Feldman interpreted prodigy as the high performance of a child who is not ten years old yet in a very demanding field of endeavour, and his performance is similar to the performance of a highly trained adult. Feldman (1993) suggests in his interpretation that the child's prodigy is distinct from any other kind of talent. For Feldman, the prodigy was the supporting factor that made the development process more obvious and apparent in children because they shine amongst their peers very easily. Feldman studied six talented boys in different disciplines of talent, such as music, math, writing, and chess playing. The findings of Feldman's study acknowledged the effect of three factors on these children's development: (1) Their families were capable of providing them with good resources for their education; (2) The sort of discovered talent in early years and (3) Motivation played an essential role in their lives(Feldman,1993). (Stanley, 1971) ;(Lubinski& Benbow, 1996) as well conducted a planned 50-year longitudinal study that focused on young individuals who were talented in math and science. The study tried to understand the factors that affect talented people to become successful in math and science and how those factors helped them develop their talents. The longitudinal study that Stanley started in 1971 and continued by Lubinski and Benbow in 1996 found that students aged 12-13 succeeded because they had the opportunity to sit for (SAT) test at an early age. The researcher found them through a talent search that looked for students with high scores that top 3% on standardised tests

(Gross, 2006). The study that was long has traced the development of the academic, social and emotional factors of (20) Australians who were highly exceptional with an IQ of (160 and above) (Gross, 2006).The findings of Gross's study noted significant differences that appeared clearly in the participants' life satisfaction, social connections and relationships, and self-esteem. Most of those talented people, deeply accelerated by two years, had professional careers and satisfying social lives. The others who had equal abilities but accelerated by one year or were not allowed to accelerate reported lower levels of life and work and did not show satisfaction compared to the other group (Gross, 2006). The study referred to the development models of (Tannenbaum and Gagne); however, it did not follow these models in an obvious way. The study found that talented children with high abilities were not satisfied because they did not get their academic, social and emotional needs (Gross, 2006).Gross indicated that many factors such as family support, ability and motivation are the factors that contribute to supporting talents' development (Gross, 2006). (Feist, 2006) surveyed to study the nation's best scientists winners of "Westinghouse" competitions in the years (1965, 1975, 1985, and 1995). The study investigated their "career results, gender differences, and age of talent recognition" (Feist, 2006). The first survey question asked, "how they were able to recognise the first sign of talent in them, and when their interest in Science began". The survey also asked about "how their productivity changed over the years and whether their gender influenced their productivity" (Feist, 2006)   Results of the survey indicated that both males and females were equal by the number of honours they received, and they had similar levels of education throughout university and postgraduate studies. Both males and females were interested in science in similar ages, though, the similarity changed after high school (Feist, 2006). A study by (Neu& Baum & Cooper. 2011) traced a winner of (Intel Science & Engineering Fair (Intel ISEF).It wanted to understand the factors that led him to achieve and how he was able

to handle the project, fix his issues, and what made him a winner(Neu& Baum & Cooper. 2011). The main issue detected in the student's story was the need to recognise special needs students who are talented in science. Students as well need a differentiated science curriculum and lab to help them study and apply what they study in books. It also focused on the collaboration of students who have the same interests and talents in order to support each other and win. This study, according to (Baum,2011), has informed both professional development and instructional practice (Baum, 2011). Another study by (Subhi-Yamin, 2009) contained an overview of the Arab Gulf region's different cultures, each with its experience methods regarding the terminology evolution and the concepts of uniqueness.It presented several significant problems in the field of identification and the growth of talent and creativity. (Subhi-Yamin, 2009) discussed multiple issues and challenges faced by educators in both the Arabian Gulf and the Middle East. These challenges include the philosophy of gifted education, the identification of gifts and talents, their development programs, advanced educational technology, and the new digital functionality. The study found out that, the identification and development of gifts and talents would be more complex if this category definition and description is not appropriate and if the educational system is following traditional methods in teaching them (Subhi-Yamin, 2009). Furthermore, according to (Allana, 2010), while Dubai is well known for being prominent in every respective field such as financial services, education, and lifestyle, however, a crucial area in its education systems is yet to be explored and requires more attention. This area focuses on how gifts and talents appreciated and acknowledged in schools. (Allana, 2010) examined the assessments and provisions provided for the gifted children studying in private schools in Dubai. It concluded by indicating the urgent need for recognition, assessments, and several arrangements for the development and education of gifted and talented children in Dubai's private schools(Allana,

2010).(Mansour,2011) in another study, conducted analytical research to investigate the Status of development programs provided for gifted and talented students in Cycle 2, in public schools in Abu Dhabi. The study examined the processes and procedures of these programs and investigated the challenges they faced and concluded that the main challenges were in how to improve their abilities and the programs used for their development(Mansour,2011). The study that conducted a thorough examination and comparison among three centres for gifted and talented learners in (ADEZ) identified the standings of these centres and compared them with the situation of similar centres in other advanced countries. The study concluded the need to introduce effective programs to promote gifted learners' thinking skills. Teachers in these centres proposed a set of suggestions included in the findings of the study(Mansour,2011). In another research (AlGhawi, 2017)focused on the issue of gifts and talents identification and development in the United Arab Emirates through the new education system named as (Ted education).The study interprets the education and development provided to the students who demonstrated some exceptional abilities in seven schools in Dubai - UAE. The study searched these development programs provided for this category in the study's participating schools and looked into how to improve the requirements of such education. The study followed the standards of the National Association for Gifted Children (NAGC) framework in gifted programs and adopted it as an outline. It also discussed the provision of education in Dubai as an advanced education within the last ten years. According to the researcher, there were several improvements required to amend the application of gifted development programs. The researcher emphasised the importance of training the school administrators and teachers and making them aware of the policies issued by the Ministry of Education. The researcher recommended improving the area of gifted students 'development in the UAE(AlGhawi, 2017). Researchers in UAE such as (Al-Jaghaiman, 2018) conducted a study

to learn about gifts and talents identification and methods of identification in the UAE. Al-Jaghaiman's study compared (HA) identification method with the identification methods adopted in other centres and institutions in the GCC countries. He then compared them all to the National Association of talented American children (NAGC) standards and methods. The study presented a set of recommendations to support the development of existing practices(Al-Jaghaiman, 2018). Another study by (Budair, 2018) was the first to examine (ADEK's) Abu Dhabi Education and Knowledge gifted education in the UAE. The study that examined a gifted pilot program implemented in three public schools in Cycle 1, 2 and 3 in Abu Dhabi, focused on examining the application and its efficiency and the accuracy and the outcomes of the program that affects several stakeholders. It also checked their acquiescence with the standards applied by (NAGC) (Budair, 2018). The findings of the study showed the existence of several deficiencies that appeared in the application of the program components.It recommended making intensive improvements in this program to assist the students, to whom this program aim in the UAE(Budair, 2018). The field study conducted by the(Emirates Center for Strategic Studies and Research, 2018 (ESRCS) to research the position of the gifts and talents in the United Arab Emirates highlighted the reality of giftedness in the UAE.The research focused on the idea that the interest of talented students in the UAE is part of the national agenda. It concluded that nurturing this category in the UAE is a priority in the country (ESRCS,2018).The study concentrated on the efforts of the educational institutions that sponsor the development of these exceptional students. The study also discussed a set of concepts and definitions that describe giftedness and the challenges faced by these individuals due to these definitions. It intended to form a comprehensive picture of the area of the study review.It also presented a set of theories and discussed several international experiences. These experiences involved a group of countries that ranked the first six in the index of global

creativity in 2016 (ESRCS,2018).Finally, the study highlighted the positive role of the educational institutions and the civil society to enhance the area of gifts and talents care and the UAE's vision for the future of talent, however, it stressed on the ambiguity in the scene and the necessity of more researches to clarify it (ESRCS,2018).

Consequently, the abovementioned researchers substantiated that highly able individuals should get exceptional services. These services start from providing them with a supportive infrastructure and a nurturing ecosystem that accepts their differentiation. This ecosystem should include the educational, cultural, physical, and social institutions and initiatives, policies, strategies, laws, tools, updated curriculums, new digital tools, media awareness, family awareness, and qualified human resources. The UAE accordingly launched numerous institutions and initiatives to identify and nurture additional gifts and talents within the entire country. However, the lack of studies and researches that help to give us an insight view and enlightens the decision-makers regarding these institutions' achievements makes it more challenging to decide what they accomplished and if they need any improvements.

Therefore, the previous reviews in the literature aimed to look at some international, Arabic, and local studies that investigated the same issue in different methods and approaches. Countries differed in their procedures to identify and develop gifted and talented individuals. Some of the studies focused on younger children; others looked at gifted and talented adults. Some studies limited their focus to the fields of science and math, while others studied the talented people who display creative skills in performing arts. What makes these studies important is that they searched different types of factors and matters in support of the development of students' gifts and talents. It was evident that some elements are outdated or interpreted as variables at a specific date or moment. Some are no longer beneficial, helpful, or even fit for gifted and talented people in this

century. However, what linked them all was focusing on the importance of providing gifted and talented at all times with differentiated services, mainly a definition that reflects their exceptional traits. Searching for some gifted and talented requires special identification tools, while others stand out by their performances. The deliberate practice is, on the other hand, a must to secure gifted and talented sustainable development and to motivate them. A collaboration among the educational institutions intends to help the gifted and talented students' progress and grow within a secured environment. The different opinions, views, and methods used to search for these factors and the discussions of their findings form guidance for this study and many types of research to come.

The present study may not differ from the previously mentioned studies or may resemble some of them or even replicate the topic and the approach of any other. Such similarity, if occurred, is due to a critical factor that the UAE lacks a considerable number of researches in all aspects of the field of education, gifted and talented and their development. The UAE works continuously on launching more initiatives and institutions to discover and nurture additional gifts and talents in the individuals who can infuse innovation and creativity with their extraordinary traits. However, no surveys or collimated studies clarify the techniques used to identify and nurture this category currently. Therefore, this makes studying developmental initiatives, factors that encouraged and motivated their abilities, the achievements of the educational institutions, essential support to the field researchers, highly able students, and similar institutions to launch in the future.

Finally, the issue of gifted and talented is a crucial topic in all aspects and regards. Their role is vital in the development of countries and nations and an essential part in the development of the economy of the nations. They also help the countries achieve their ambitions and fearlessly enter the modernised challenging global competition. The UAE's recent national agendas seek to

support a new industry dependable on creative industries. Such an aim needs to invest in all areas of gifts and talent, starting with the improvement of the quality of life of these individuals in the UAE and the globe. It is obvious now that innovation cannot thrive if there is a shortage in the knowledgeable, creative and have the foresight human resources, while the supportive environment is the second-largest crucial support that would enhance innovation and give it space to thrive. Consequently, this study that reviews the educational institutions, currently responsible for supporting the highly able students' well-being, their identification and development, will provide an additional unique feature of this research and will undoubtedly support and highlight an unexplored part in the area of development of gifted and talented students in the UAE.

2.3 Theoretical Framework

2.3.1 Definition of Talent

"Gifted and talented "terms are usually open to multiple interpretations. They have been problematic for every stakeholder related to gifts and talents or deals with them(Al Obaidly,2006). Stakeholders in this study include the teachers, theorists, scientists, scholars, and experts in this area. This term describes persons who display exceptional performance and high levels of competence in different topics and domains such as scientific, academic, and culturally valued domains or socially useful forms of expression. (Encyclopedia of Education.com, 2019). Notwithstanding, the ambiguity of the concepts of gifts and talents resulted in continuous debates and confusion among researchers. (Howe & Davidson & Sloboda, 1998) For example, pointed at certain issues that scientists should avoid when defining talents. These issues are: (1) Not limiting the definition to a certain skill and (2) Not using a definition that needs a shred of evidence to prove the reason for using it(Howe & Davidson & Sloboda, 1998).

Theories of intelligence, on the other hand, focused on searching the origin of gifts and talents. Their debates concentrated on the origin more than anything else did. Theorists were always in conflict and debates to understand if the gift or talent is inherited or nurtured. Many theories that were invented by prominent scholars and theorists such as (Sternberg, 2004; Renzulli, 2005; Gagne, 2005) have presented the views of their inventors on what constitutes (giftedness and talent). Accordingly, this chapter pursues a range of views and opinions that argued and discussed what constitutes a (gift or a talent), starting with the evolution of the definition, the link between the definition, the identification type and the identification tool to the gifted development Programs tailored for the sake of their growth.

2.3.2 Evolution of the definition

The interest in these exceptional individuals raised by a set of ideas generated by researchers and theorists such as (Renzulli, 1978; Cohn, 1981; Gardner, 1983; Sternberg, 1985) and others. In scientific literature, notwithstanding the efforts exerted by scientists and theorists in talented and gifted issues. These efforts continue to face some out tackled and not yet agreed upon problems that keep ongoing flaming debates among researchers, scholars and educators. One of the significant conflicts regarding talents and giftedness is about deciding who is gifted and who is talented. This conflict encouraged scientists and scholars to exert further efforts and try to formulate an acceptable definition that would describe talents and explain the differences between the gifts and talents as well.

(Gagne, 1985), consequently, examined several definitions that were common in the field. Gagne examined (Renzulli, 1979 and Cohn, 1981) definitions. Gagne's research resulted in a reflection on the ambiguity found in the differences that occur in the concepts of giftedness and talents, which

accordingly, made him believe that there is a clear differentiation between both terms (Gagne,1985). Talents, according to Gagne, connect with areas of abilities that raise the performance in different domains of actions, while giftedness relates to academic success. Latterly, the ambiguity of the concept of talent urged more specialists to try to interpret talent according to the differentiated skills of talented individuals and their different locations. Educators in schools, for example, wanted the term to describe the academically talented students; parents thought it when the child starts talking or crawling, the society interprets talents according to their popularity and fame. Therefore, such variations imposed more ambiguity on the definition of talents, which is supposed to define individuals with extraordinary special skills other than their academic achievements. (Howe & Davidson & Sloboda, 1998) Pointed at certain problems that we must avoid when it comes to defining talents like not limiting the definition to a certain skill, besides not using a definition that needs evidence to prove the reason for using it and to justify it (Howe & Davidson & Sloboda, 1998). Theories of intelligence as well focused on the origin of talents, and their debates primarily concentrated on trying to know whether a person is born talented, or this person talents should find appropriate development to cultivate and thrive. This confusing relation between intelligence and talents developed and advanced in modern theories to prevent the deficit and inadequate recognition of the talent. These theories intended as well to discontinue the confusion that appears while trying to determine whom to define as talented and who is not. Thus, the definitions of talented and giftedness continue to undergo changes and modifications in their concepts and explanation. Every while, the area of gifts and talents witnesses additional attempts of many scientists and educators who are trying to redefine the terms gifted and talented. Several scientists exerted efforts in this aim differently, like (Dr Dai, 2010) who suggested a new context for giftedness and gifted education. He accordingly asked three fundamental questions to

measure our knowledge regarding the role of natural abilities and the experiences in making gifts and talents thrive. Dr Dai's questions were like, "What we know about the role of the personal efforts in talents' development?" "How do we identify them?" "How are the objectives of gifted education achieved?" (Dai, 2010). Researchers then proposed a new definition intended to apply in all domains of giftedness(Subotnick & Olszewski & Worrell, 2011). They suggested that giftedness involves a high-capacity individual who has achievements among other high-capacity people in the same field of talent (Subotnick & Olszewski & Worrell, 2011). They also suggested that achievement is the measurement of giftedness (Subotnick & Olszewski & Worrell, 2011). This definition would be sufficient if it describes the importance of evaluation and if it explains how to assess the high ability and how to recognise it. The second major conflict is about not having a policy that dictates definitions for those gifted and talented individuals(AlObaidly,2006). Several educators urged the need to define the talented and gifted students to be able to educate them in special schools by distinctive curriculums and exceptional methods and tools (Heller, 2000). Then again, many other scholars said that these exceptional students should not be separated from others, but should merge with common students to benefit the larger number and to allow others to have confidence and exhibit their hidden talents in an encouraging environment. Several questions raised to enquire about the reason for not having a unified definition for gifted and talented while having a definition that nurtures and supports children with disabilities (Shaunnessy, 2003). These questions might find an answer according to the nature of each case, but it is worthy of tracing the history of the evolution of the definition to know how it transformed over time.

Hence, the next section presents the evolution of the definition introduced by several scholars throughout history.

2.3.3 History of Definition Evolution

In this section, a list of definitions demonstrates the definitions' use by several theorists in the field of talents and mirrors the evolution of this term based on time and time variables. However, the list does not exhibit a unified definition that everyone approves of using it.

The term (Talent) in the sixties of this century defined people with special abilities (Dodin & Jarwan, 2018). Some theorists considered talent as an ability that is a synonym for giftedness related to the academic field and limited within certain ages; others interpreted it as the distinguished performance in arts, sports, various craft areas, mechanical skills, and social leadership that exists in any age and at any time.

- (NAGC) Defined talents as synonymous with giftedness. It is according to them what exhibits in one or more areas such as intellectual, creative, artistic, leadership, or displays in a specific academic field like language arts, mathematics or science."

- Lewis Terman (1916) definition of talents is the ability to think abstractly.

- The American definition that was adopted by the federal legislation for talented individuals in the United States in 1971 defined talented or privileged children as Those who are recognised by professionals, and they show a high level of distinct performance, and they are more qualified than the regular school curriculum. School curriculum, therefore, does not meet their needs (Heller, Monks, Passow 1993, Kirk & Gallagher 2011, Sisk 2010, Novello, 2009).

- Renzulli (1977) explained giftedness as the communication between three groups of human characteristics. These consist of higher levels of general abilities, motivation, and creativity.

- The theory of (MI) Multiple Intelligences that was developed in (1983) by Howard Gardner. It identified nine types of intelligence. These are 1) Logical-mathematical, 2) Spatial, 3) bodily-kinesthetic, 4) existential, 5) interpersonal, 6) intrapersonal, 7) musical, 8) linguistic, and 9) naturalistic. Gardner related those different abilities and skills to moral intelligence. Gardner added moral intelligence as one of the nine intelligence.

- Beginning from the mid of the twentieth century, scientists began to evaluate intelligence differently, and this led to several changes in this field. (Daglioglu &Suveren, 2013).

- In the mid-1990, the terms "talented" and "gifted" appeared, but then again, both terms were synonyms. They used to replace each other and not to identify different abilities.

- (Morelock, 1996) tried to clarify the confusion by categorising the term talent and define it as the unconnected specialised abilities with the general intelligence and giftedness.

- The federal definition in the U.S exposes to additions, deletions, and impacts of other explanations.

- According to the International Encyclopedia of Education, the critical problems in the definition of talents are: (1) not distinguishing talents from giftedness; (2) several studies focused only on schoolchildren who excel in school subjects; (3) Combining giftedness with talents believing that talent is only a synonym of giftedness. (Husen & Postlethwaite, 1994)

- (Freeman,2000) said measuring gifts could be as intellectual features of development but talents cannot be measured because they are discovered and identified by individuals who should be experts in this profession.

- (McKinsey report,2001) related the concept of talent to the size of a persons' abilities and gifts, knowledge, experience, intelligence, skills, attitude, character, judgment, and drive in addition to the persons' ability to learn and grow in work.

- (Munro, 2002) Differentiated between giftedness and talents by indicating that gifted students show their giftedness by displaying exceptional understanding and abilities. Talented students, on the other hand, are those who possess extraordinary skills in other domains that they need to learn explicitly.

- In (The No Child Left Behind legalisation, 2002), students with high achievement capability and who exhibit this ability in intellectual areas and capacities such as creating art, or leadership or specific academic fields as gifted. Moreover, they need differentiated services and activities to develop their competences.

- (Colom, Karama, Jung, Haier, 2010) said it is a general mental ability for reasoning, problem-solving, and learning.

- The definition adopted in (HA) in the UAE is "Talented students are those who possess extraordinary abilities and show distinguished performances that exceed the performance of their colleagues in the intellectual skills, academic achievement and or leadership as evaluated by the local community.

- According to (Stephens& Kames, 2000), several definitions that describe gifts and talents seem to be there in the UAE, as every institution has developed its definition.

- (MOE) Description of the highly able students emerges from a combination of international definitions that describe the concept of giftedness and the UAE visions, the labour market needs, and the national agenda (moe.gov.ae).

Finally, the issue of the multiplicity of definitions leaves teachers and parents confused and unable to interpret the notion of talent and work on identifying suitable individuals to design unique growth programs for them. This confusion permitted several schools, universities, and talent development initiatives to interpret the meaning of talents differently and to develop their gifted programs in different ways. This difference might be reasonable to satisfy the needs of these extraordinary students for unique and unusual methods to learn; however, dealing with such disagreement creates more difficulties, especially when it comes to designing the suitable development programs that will be able to grant them the required progression. The central conflict in this subject revolved around the question about what happens if there is no appropriate identification of the skilled people and what if this inappropriate identification places these gifted or talented in different development programs that do not meet their skills(AlObaidly,2006).In fact, not having a proper definition will result in an inappropriate identification. Therefore, the gifted or the talented students will end struggling with others viewing them as underachievers and bullying them at times.

2.4 Identification of Gifts &Talents

The educators' voices that were demanding to apply different methods of identification and development for this category come to be louder. They said that these methods could be in the form of acceleration and allocation of some classes or even entire schools. It resulted in a complete shift from the beginning of 1990 until today. The 20th century accordingly witnessed the establishment of several gifted and talent development centres, activities, and conferences. Many training programs applied to teachers and more researches conducted in this field. This interest increased significantly in the 21st century. It changed the way societies view talented people and altered the significance of literacy and skilled programs (Siegle, 2004). However, the arguments

related to identification and development have been on the table since the nineteenth century and are still an ongoing debate until today(VanTassel-Baska, 2000). Such a discussion is causing a fading in talent development programs.

Consequently, such dispute reduces the services endeavoured for these children and adults with gifts and talents as seen by researchers like (VanTassel-Baska, 2000). It is not difficult to guess that identification, which refers to the action or process of gifts and talents identification, is the most critical stage in this area, according to (Oxford dictionaries,2019). It arranges the scene before implementing any development program. The fact that talented individuals need special, challenging programs, high-powered complex curriculums and flexibility in educational regulations, is what makes the identification process the first step towards success or failure. It is the first step towards the talents' discovery and development (Feldhusen, 1996).

The identification of these highly able individuals is progressively relevant across several different domains of talent (Abbott, Button, Pepping & Collins, 2005). Also, this area needs more attention because it predicts the future performance of the identified person. Upon evaluation of current physical, technical, and psychological qualities, identification should be able to find who is gifted and who is talented. It must not confuse between gifted and talented people who need services and people who do not need them(VanTassel-Baska, 2000). The talent Identification process has been going through a dilemma, and it faced many challenges that made it more complicated. The following points summarise the challenges in identification:

- The way people understand the concept of absolute talent versus relative notions (VanTassel-Baska, 2000).

- Most of the gifted and talented professionals regard talent as a stable characteristic belonging to an individual, while many researchers in the sector have recommended not to consider talent as a simple notion unrelated to anything else (Renzulli, 1980).

- How to identify talented individuals' differences? (VanTassel-Baska, 2000).

- Over-reliance on intelligence tests. The intelligence test is limited to precise measurements that exclude creativity for not being able to measure it (Perkins,1995).

- IQ test as an identification practice does not reflect the understanding of talent (Coleman,2003)

- Narrow conceptions of intelligence (Perkins,1995).

- Confusions appear in defining between talents and giftedness. (Tuttle,1988).

The identification process has always fueled the concerns of educators regarding how teachers, parents, or any related stakeholders identify gifted and talented individuals? How do they know if this identification is appropriate? The addressed issues related to the process and tools of identification emphasise the importance of reviewing and evaluating their ability and reliability. Described, as better tools for identification are those that help correctly identify who is gifted or who is talented, who requires services, and who does not need any special differentiated services (VanTassel-Baska, 2000). Furthermore, the appropriate identification provides equity for talented individuals when it comes to selecting and enrolling them in development programs or advanced classes (Borland &Wright, 1994).

Subsequently and to accurately identify gifted and talented individuals, according to scholars, the identifying programs must first understand the definitions of talents and giftedness (Hodge, 2013). When schools and talent development initiatives can effectively identify these individuals, they must be able to locate the school's domain of giftedness, describe the students' level of giftedness,

and the fields of talent. (Hodge, 2013). Once an individual identifies as gifted or talented, schools or other concerned organisations should know how to use appropriate developmental, educational strategies and plans that cater to them. (Hodge, 2013). Therefore, and once again, early identification of talented and gifted individuals is an essential mechanism because it provides a way to the full realisation of their potentials. According to (NAGC), no one program fits all-talented and gifted people. However, there are similar characteristics among talented and gifted individuals(Matthews, M.S. and Shaunessy, E.,2010). These differences help to realise gifted and talented students' needs and nurture them upon that.

The main issues needed to consider, according to (NAGC)are the following:

(1) Giftedness is not static, and it is changeable. (2) Identification of giftedness or talent must repeat. (3) One test at a time is not able to distinguish the talents of the individuals and should not say whether someone identifies as talented or gifted. (4) talents and gifts appear through all types, nationalities, races, ethnics, social levels, and diversity groups all over society. (5) Early identification improves talents and giftedness (6) Talents, and giftedness should be identified through different ways and tools as giftedness and talents may exhibit within a specific interest or category. (NAGC, 2019).

2.5 Development of Gifts &Talents

The term "development" used in this study relates to growth that leads to a significant result and describes what talented individuals undergo like training, processes, practising, professional development and evaluation. Development of gifted and talents is what individuals with high abilities and their teachers or trainers require to flourish and to sharpen their skills. They are such as Professional training and talented programs conducted by experts who know the appropriate

methods to serve talents potentials and to motivate them. Well-designed development programs will positively influence the talents of those who are exceptionally able (Lubinski & Webb & Morelock & Benbow, 2001). Scientists and scholars expertise widely agreed that the development of talents has a massive impact on talented individuals and helps them maintain their skills over time and to stay connected to the creative and productive work within and after the program (Matthews, M.S. and Shaunessy, E.,2010).

The study by (Park & Lubinski & Benbow, 2007) tracked (2409) talented adolescents assessed on the (SAT) at the age of (13) and received particular services for more than 25 years, and found that these participants have excellently progressed in their middle age, and their achievements were amazingly recorded (Park & Lubinski & Benbow, 2007). One of this study Participants, for example, got the medal in the field of mathematics, while another participant won (John Bates Clark Medal, encyclopeiedia2.thefreedictionary.com), which honours the most outstanding economist under 40. Among the rest of the participants, (817) participants were able to earn patents and to publish (93) books. Thus, the study by (Park & Lubinski & Benbow, 2007) found that talented individuals must undergo a growth journey to achieve their potentials. Talent development, according to (Csikszentmihalyi, 1996), requires more non-intellectual factors that exceed talented individuals' abilities, like motivation, personality, determination, and attentiveness.

On the other hand, (Neihart, 2002) suggested that talented and gifted individuals possess higher motivation and a stronger drive, accompanied by lower anxiety than other individuals (Neihart, 2002). (Greene, 2006) Stated that while talented individuals demonstrate superior performance, however, counsellors and trainers must be aware of those talented individuals' needs of a unique career and life development issues. These factors might hinder their plans and prevent them from

developing their abilities if they are neglected (Greene,2006). Greene furthermore indicated that these issues could be in "having more than one talent, the early emergence of talent and popularity, personality traits, the overemphasis on academics, and the higher expectations of others."

2.5.1 Stages of Talent Development

Depending on (Gagne, 1991) "basic giftedness," and (Gardner, 1983) nine intelligence, children's talents in early years can be viewed as incomplete and similar. However, the variations in environments at home, school, community, and other surroundings or experiences related to these children impose differentiated situations on every child. Such differentiation makes the child establish more talents, strengths and skills. On the contrary, and in case these circumstances were not supportive nor appropriate, they are expected to hinder the child's talent or weaken it. (Feldhusen, 1996).

According to the abovesaid, a few children could produce creative things in different domains of creative talents and continue their breakthrough successfully. Those innovators are often talented individuals who were inspired and motivated by their families or teachers or other people in their surroundings. They are also the lucky ones who were able to experience early development in their lives. (Feldhusen, 1996).

Moreover, several developmental theories highlighted the nature of the gifts and indicated that they are changeable. They as well indicated that different external factors might interact with the internal factors to help the student produce gifted or talented behaviour (Pfeiffer, 2008).

Consequently, this chapter will include a look at issues of talents' identification and development from a cross-cultural perspective presented in the final section of this chapter.

Table2. Developmental Theories

(Mönks, F.J., 1992) (Multifactor) model of giftedness.						
Mönks modified Renzulli's three-ring model. Mönks added the environmental factors including school, family, and peers, to the three factors such as motivation, creativity, and exceptional abilities. Mönks came up with the (Multifactor) model of giftedness.						
(Feldman, 1999) Seven dimensions of development						
Cognitive processes	Social-emotional processes	Family aspects	Education and preparation	Characteristics of the domain and field	Social, cultural contextual issues	Historical forces, events, and trends
4-10 years	Cognitive control through exploration and observation.					
10-13 years	Development through mentors, models, contests, apprenticeships.					
13-18 years	Commitment to development, idealism, blending self with talent.					
180-22 years	The crystallisation of talent with a career choice.					
Francois Gagne (2005) Differentiated Model of Gifted and Talented (DMGT)						
Enforces the important environmental influences: Home, school, parents, activities and encounters.		Non-intellective variables (Motivation and temperament), learning, training, and practising		To transform essential genetically determined gifts (intellectual, creative, sensorimotor.) into talents (language, arts, science,		
Abraham Tannenbaum (1986)						
Five psychological and social linkages concerning promise and fulfilment:						
Superior intelligence		Exceptional special aptitude	Non-intellective facilitators	Environmental influences		Chance or luck

2.6 Assessing Achievement

Assessment of the gifted and talented achievement is a vital part of their identification and development process. It helps ensure that the objectives contribute to the success of the process. The aim of the assessment should be "to educate and improve student performance and not to audit it." (Wiggins, 1998) Assessment can be in different types and forms, such as:

Ability and achievement tests: These tests provide scores to designate the performance. The tests should align with the students 'characteristics. Students' traits may require more than one assessment to distinguish them. Tests are standard assessment tools for identification, and they provide an objective way of identifying gifted children. However, tests are not supposed to be the

only source of identification, according to (NAGC, 2019). These tests become tools to benchmark requirements for enrolment into specific programs. The efficacy of the assessment, according to (Wiggins, 1998), relies on the assessment's relationship with the curriculum as well as how it represents it.

Contests and Competitions**:** Individuals competitions motivate talented individuals and build on critical interpersonal skills that help prepare people for success and boost their self-esteem and engagement.

2.6.1 Gifted education & Development Programs

Gifted Education includes a variety of programs and processes such as gifted and Talented Education (GATE), gifted and talented programs (TAG). These include a broad group of distinctive training, courses, activities, practices, procedures, and theories used in the education of these exceptional children. Most countries nowadays adopt policies to nurture them and provide them with services as an essential requirement in their development. This section will brief two of the highest advanced countries in the field of Gifted and Talented development. Their experiences may help the readers to understand what supported their advancement and how did they do it.

2.6.2 The US Experience

The United States' experience in (GATE) and (TAG) is a leading experience and one of the prominent ones. It was evident in terms of many programs that support this category and having a federal law to protect and serve their potentials. The long history and the advancements in education and psychology in US-led to credibility and trust to the field too. Moreover, the existence of multiplicity in methods used in implementing gifted education and programs, as well as many

institutions, organisations, and associations that sponsor this category makes the US as one of the crucial experiences in this field. The increasing interest in talents made people recognise their abilities or other related individual's skills.

Furthermore, this resulted from the development in the field since the beginning of the seventies of the twentieth century. Today, the US educational systems include a method for gifted and gifted education. This system comprises assembling, enrichment, and educational acceleration of early admission to kindergartens and primary classrooms. Another system is classroom or curriculum compacting that helps those gifted and talented pass the school systems in less than average years.

This history of care for this category in the US confirms that this type of care has not been formal as it is today, nor the tremendous momentum of attention it currently enjoys. The beginnings were individual experiences. Scientists tried to apply for some accelerator-based programs in 1886 while gifted students acquired a specialised curriculum and additional enriching teaching experience after their graduation in the city of St. Barbara, California, in 1898, as well as in New York in 1900, the city of Cleveland and Ohio, in 1920. This method of unofficial concern was due to the fearing of giving extra interest and care to the gifted and talented individuals, which would make them feel they are (elites). Such a thing would create a grouping of individuals who will line up together. The other reason is the belief that talented individuals could manage and develop individually without the need for intervention. These beliefs hindered the efforts to support this group; therefore, gifted and talented differentiated care was infrequent during the period 1925-1950.

In general, the studies of Lewis Terman and Lita Hollingworth were unique and distinctive in the history of psychology. The field of giftedness was one of the oldest systematic scientific reviews

that have helped draw the attention of educators, researchers, and public opinion in the US to the subject of gifts and talents, their physical, mental, emotional, and social characteristics. The educators and scientists gave their attention to the different orientation as well, the importance of their early detection, educational and psychological care, and special education programs for the growth of their giftedness and talents. These studies looked at the lives of academic and professional graduates, their problems, some aspects of their mental health, and their subsequent achievements in their various potentials and specialities. It also paved the way for further studies to reveal the personal characteristics and non-cognitive factors that contribute to increasing educational attainment and academic achievement, to explore the conditions and family and school environments suitable for talent growth and excellence, and to assess the impact of strategies and teaching methods on the development of talented children.

The attempt by (Terman, 1916) to translate and codify an English-language test in the United States published for the first time in 1916, is a vital milestone in the area of giftedness in the US and its history as well. Terman conducted his longitudinal study of more than 1,500 gifted students in various stages of research in California and published the first report in 1925. These results and subsequent reports have had a substantial impact on drawing gifted care, especially about their characteristics and problems. The experiments of (Lita Hollingworth, 1923) supported the attempts of Terman's as well. The results of her studies and the information contained in her books on the education and nurturing of highly educated talents drew attention to the importance of educational enrichment. Hollingworth's studies helped to study subjects, identify the most crucial scholastic, emotional, and socio-psychological problems of gifted students, problems resulting from their feelings of distress and boredom in ordinary schools, and their unsatisfied relationship with their peers and teachers. Hollingworth's studies have also shown the importance of psychosocial

counselling in solving most of the problems of this category. Because of such attempts and scientific studies, Westinghouse Company adopted in 1942 a project to discover talented secondary school students who can be creative scientists in the future. This project and its accompanying efforts led to exhibiting the value of exceptional students in the field of science. It drew US attention again to the importance of talents in their industries.

In 1947, the establishment of the American Association for Gifted Children (AAGC) followed in 1953 by the establishment of the (NAGC) that published "The Gifted Child Quarterly." (NAGC, 2019). All these events were signs of a limited orientation towards the care of the gifted. However, the most memorable event in the United States was the success of the Soviet Union - Russia - in launching the first Sputnik satellite in the fall of 1957. Since then, interest in the United States has grown in nurturing gifted and talented students with exceptional services and education as well. They started thinking about the ways to maximise their abilities and to ensure scientific superiority over the Russians. Such thoughts resulted in (1954) by establishing the National Association of Gifted Children (NAGC), Passing the National Défense Education Act (1958), (the Civil Rights Act passes. It emphasised the equal opportunities of this category, including those in education (1964). The Americans then achieved their fame by invading space and landing the first astronaut on the moon in 1969.

The federal government then funded various projects to improve educational programs to develop students' talents and preparations in science, mathematics, and foreign languages, and to develop mentoring programs. In 1970, Congress mandated the Commissioner of Education, (Sidney Maryland under Act PL 91-230), to conduct an extensive study that investigates the status of their abled children and the adequacy of the federal education assistance programs in meeting their needs and developing their skills. The report published in 1972 highlighted the following points:

1. The need to develop unique approaches that highlight the processes of higher thinking, innovative thinking, critical thinking, and high-level concepts.

2. The need to develop appropriate teaching strategies that will be able to teach this category and help them find successful solutions to the problems facing society and the nation.

3. The need to develop educational services systems and adequate administrative procedures to provide distinct services to groups of gifted individuals, such as individuals with unique talents. (Davis & Rimm, 2004)

The report also produced a broad and comprehensive definition adopted as the first federal definition to include multiple categories.

The Office of the Gifted and talented got its official statues in (1974); Congress passes the Act (Jacob Javits cation Act) in (1988). The issued report title "Nation at Risk" in 1983 prompted officials to accelerate the process of educational reforming. In (1993), The Case of Developing America's Talent issued by the US Department of Education defined how America abandonments the most talented youth. (NAGC) Published Pre-K -12 Gifted Program Standards in (1998). The Act of (No Child Left behind (NCLB) in (2002). A Nation Deceived report on acceleration strategies for advanced learners published in (2004). (NAGC) published (National Gifted Education Standards) (2006).

The scientific research has been active in this area when some academics rushed to research into the fields of nurturing talents and creativity, initiated by Gilford in the early fifties and then Paul Torrance and Calvin Taylor, James Gallagher, Julian Stanley, and Joseph Renzulli, The contributions of these researchers and others have a significant impact in the field of talents.

(Gallegher, 1994). These contributions urged a culture of talent's development through institutional action strategies at the local and international levels. Also, there was a movement at the family level, promoting the need to protect their gifted children whom their teachers and schools frustrated them by their negligence. The movement also promoted the importance of providing the teachers of highly able students with suitable training. The training was to increase these teachers' knowledge and qualify them to be able to support these students' progress. The National Foundation for the Gifted and Creative Children came then to defend and protect the rights of gifted and creative people. The gifted education area remains evolving since then to meet the varying needs of the country in a challenging varying globe.

Forms of development programs in the US:

(1) The Government provides flexible support to educational departments and schools. The disbursement of grants from schools related to the implementation of special programs and various additional activities that benefit students, including those with special needs and talents.

(2) Diversity of applied methods.

(3) Having many specialists, researchers, and researches in the field.

(4) Writing, publishing, and usage of experimental research methods increased.

(5) Schools provide services for able students, such as the provision of additional activities and decisions as personal arrangements and initiatives.

(6) Most high schools in the US offer elective courses accepted as accredited modules for students to cover the course requirements. These courses often focus on teaching foreign languages and physical education, and the provision of such courses depends mostly on the budget and physical status of the school.

Moreover, not all secondary schools in the United States are following the same compulsory system; other systems are created to satisfy the different needs of different categories in the US, such as :

- There are preparatory and secondary schools known as "Honor Classes" for creative students.

- Some of these schools apply a system of tests to determine the level, abilities, and tendencies to sort and accept certain types of high achievers.

- Some schools offer enriching experiences in various arts and crafts.

- In the case of adequate financial support, some schools offer courses in International Baccalaureate (IB) and Advanced Placement (AP) to support early university graduation.

- In some states, there are different community colleges. These colleges allow talented students at the secondary level to enrol in certain subjects in these colleges. These subjects accredited to them after they join the university, and thus, they can graduate early.

- Other alternatives for education are Early Admission in KG to colleges and universities, Grade Skipping, compacting, acceleration, correspondence courses, credit and skipping by examinations.

2.6.3 The Experience of China

In Taiwan, the word "talented" includes academically gifted and talented individuals and children with outstanding abilities in fine arts, music, dance, and sports. The year (1978) witnessed the establishment of Central schools to provide their exceptional students with special differentiated education. These schools are the schools established within the People's Republic of China, which

45

combines theoretical study with ordinary daily work and assigned their graduates of national cadres to relevant jobs to serve China. A law passed for these students in (1984), including the establishment of programs for academically capable students in all fields. An expanded program to develop these talents incepted and worked under the supervision of the leaders to adopt the Chinese culture with a general view of the Western culture. China's educational system is one of the oldest systems in the world, yet the modern forms of education from various western educational systems influenced it, and they copied many of these systems during the twentieth century. (Zhang, 2017).

The influence of the west on the Chinese educational testing system divided into two historical periods. (1905-1949) Post, (1980).However, the interest in these bright children in China dates back to ancient history (580 to 1905) when the famous Chinese script system was so prevalent that it made these children and young people the most important national treasure, and they held the hopes of the future. (Zhang, 2017)

Consequently, gifted children in China sit for examinations held in government palaces. Upon passing these special examinations, the gifted and talented students receive a study grant, which qualifies them after graduating to become senior government officials or qualifies them for a job in an advisory position.

The Chinese experience in the field of caring for gifted people was different and unique. The state of China incepted the Palaces of Culture with some reputable and professional institutions to nurture the talented people in the country. Those palaces provided all types of gifted, talented with the appropriate education and training. They offered this education to various groups of individuals, including children, youth, workers, peasants, and teachers, with all educational and appropriate services and programs in the evening. These cultural evening palaces contained

educational services and provided adequate care for talents in a systematically professional way. The attention given to talented and gifted individuals in China focuses on nurturing leaders in the domains of science, literary, technical, mechanical, physical education, and other areas of talents. The followed system in these palaces of culture is the method of grouping gifted individuals who show a tendency to excel in a domain or have the willingness to enrich their knowledge and develop their talents and abilities. The formal education system, however, provides all citizens with regular education without distinction between different abilities or groups of talents. Consequently, the ablest students are subject to the ability of their teachers who can identify them taking into consideration the individual differences of the students in order to identify them appropriately (Li & Delisle, 1990).

The Chinese government believes that education is the means of achieving the scientific and technical development needed by the People's Republic of China in a short period. Therefore, Chinese educational policy has focused on the quality of education at various stages. Accordingly, they developed newly updated programs to satisfy the needs of these individuals and equipped schools with all necessary modern educational tools and resources, as well as the development of the methods of preparing and qualifying teachers in universities. Thus, in a short period, China was able to make its significant progress when it was able to gain the time it lost during the Cultural Revolution, which resulted in the loss of many knowledge and scientific facts essential and necessary for its scientific progress.

In China, academic achievement tests have always been the main emphasis of the country since ancient times. They consider academic achievement as an appropriate tool to help them identify and distinguish those with gifts and talents.

China encourages and motivates gifted and talented students through different methods and structures. It applies a variety of ways, including classroom methods and non-classroom methods. Some of these methods mean establishing special classes for talented and gifted students in different educational stages. Early access to primary school helps to nurture those gifted children who can admit schools. Other ways are like: Implementation of scientific competitions in various educational stages; Early access to universities; Establishment of experimental and technical classes for youth that directly follow universities; Creating pilot classes with educational programs for talented children; Non-class study groups; The quality of the lesson. Chinese psychologists and educators consider the quality of the lesson more than anything else does because they see that it has a significant role in nurturing and encouraging talented students. These lessons identify and motivate this category. Moreover, and in order to raise the level of the lesson's activities, they consider the fundamental educational principles in the following:

- The role and the growth of the talented child, the complexity of the teaching tasks, the variety of illustrative examples, and the diversification of the positions of the assessments and test and others.

- Encouraging quick thinking, stimulating productive thinking, and the ability to articulate and discuss the problem by promoting direct dialogue and self-initiative of students and encouraging students to deal boldly with the contents of the lesson material.

- To provide diverse and in-depth knowledge, information, and mastery of necessary skills as a prerequisite for innovative achievement.

- To raise logical and creative thinking through ideas. Diversifying ideas and providing qualitative illustrations and encouragement through guidance and assistance.

- Tasks and duties assigned to the talented students to stimulate their thinking and to commensurate with their mental development that should be in line with their interests and tendencies.

Thus, China's experience shows that, despite their loss of knowledge and scientific facts necessary for their scientific progress due to the Cultural Revolution, China continues to focus on the quality of education at various levels and seeks to develop qualified programs to nurture the gifted and provide them with all services including materials and human resources. China achieved its fantastic progress in a short period because it stressed the quality of education and development programs.

2.7 Intelligence and talents

"Talent hits a target no one else can hit; Genius hits a target no one else can see." Arthur Schopenhauer.

Talents are special abilities of developmental origin. Intelligence is a mental quality. It consists of abilities to learn, adapt, understand and use knowledge to control the environment (Hilliard, A.G., 1994); (Pinker, S., 2010. Talent definition differs according to who and what it describes. In the world of management, talent is the naturally recurring patterns of thought, feeling and behaviour (www.Gallup.com.Retrieved). The managerial talent is a combination of leadership, strategies, emotional maturity, skills and abilities (Orleman, P. and Borner, H., 2008).In schools, the definition differs and changes according to the educational system and the philosophy of the country. "Children whose ability is significantly above the norm for their age are gifted."(www.nagc.gov)

According to some dictionaries, intelligence is the capacity of learning, reasoning, understanding and aptitude. It is in grasping truths, knowledge, relationships, facts, meaning and the manifestation of high mental capacity(www.dictionaries.com).

Consequently, and according to several scientists, talent and intelligence are different and detached from each other. They have no link because if a person is intelligent, this does not mean he is talented. Besides, some talented individuals may exist among the mentally disabled.

Thus, the term talent is used to indicate a high level of performance reached by an individual in an irrelevant field to intelligence, and subject to genetic factors. Such fact led some theorists to decline to use the term talent in the field of mental superiority and intelligence. Understanding human intelligence had been a significant issue in psychologists' debates for centuries. Some theorists have objected to the use of this term in the field of mental excellence and creativity because they intended to use this concept initially for those who reach a high level in non-academic fields, like arts and games. They considered mathematics, various crafts fields, mechanical skills, and other areas irrelevant to intelligence.

Table 3.Differences between talent and intelligence

Intelligence	Talent
Intelligence involves both genetic and environmental	A natural skill with which a person is more able to achieve.
The ability to understand and process information.	The ability to achieve something

2.7.1 Defining Intelligence

Psychologists at different schools provided various definitions of intelligence. Some related the definition to its functions and others related it to the way it works. As a result, multiple definitions of this concept led researchers to classify these definitions into three groups:

First: It highlights the organic basis of intelligence. This group defines intelligence as an organic physiological capacity in which genetic factors play a significant role.

Second: Emphasizes that intelligence result from the interaction between social factors and the individual.

Third: It is a category of definitions that depend on the identification and observation of behavioural manifestations to judge the intelligence of the individual.

With the growth and advancement of science, new views emerged, and the perception of things changed. What is new? A direct relationship between talent and intelligence exists. Whenever there is intelligence, talent is measurable. Mental talent is measurable by specific measures of intelligence. Through a careful reading of theories of intelligence, such as The "Renzulli's three Rings theory", "Sternberg Triple Theory," and "Gardner's multiple intelligence theory", the findings show that talent, according to them, is part of intelligence and a function of it.

Renzulli (1997) indicated that gifted behaviour results from the interaction of three interconnected episodes. These episodes are (above average intelligence, high commitment to challenging tasks, and high level of innovation) that clarifies how intelligence alone is inconclusive to the emergence of talent only through ability. However, there is a Commitment to the difficult tasks, as well as work in the spirit of originality and novelty and profound attempt to change. The skills of talented

individuals are within those three rings mixture. Sternberg's theory (1985) description of intelligence as being linked to the inner components of an individual and consists of a necessary information process occurring within the individual and consisting of other mental processes. These processes are like planning, control, and decision-making, coding, synthesis, comparison, and response, as well as the cognitive processes, acquired to learn things and to learn about their characteristics as well as everything related to them. As for Gardner (1987), he has divided the talent into several sections. He called his theory multiple intelligences, including mathematical, linguistic and logical, space and music, motor and social, and other names that describe the behaviour as a kind of intelligence characterised by a person only.

Like talents and gifted definitions, and despite going through a long history of research and debate, intelligence also has no standard description (Legg & Hutter, 2007). Intelligence, as known, includes the ability to abstract thinking, the collection, and coordination of ideas, the capture of languages, and the speed of learning. It also includes, according to some scientists, the ability to sense and express feelings and understanding the opinions of others. Even Though the general concept of intelligence for people encompasses all these things and may relate to the power of memory, psychology treats intelligence as a behavioural advantage independent of creativity, personality, wisdom, and even the power of the memory portfolio. The availability of many IQ tests could not help defining intelligence. Scientists, therefore, criticised and accused the IQ test of not being able to identify those with high and low intelligence because the theories that exist today confirm the existence of multiple types of intelligence, and these tests are not able to determine geniuses in all areas.

 A scientific fact says, "Humans, in general, do not use all parts of their brains to solve a problem or even to think. They use a specific part in the brain to solve the problem on their own".

Accordingly, we cannot criticise intelligence as one thing or one type because it is of "different types," so a person's performance will certainly not be the same as another. According to (Roth & Dicke, 2005)," the intelligence of humans is referred to as a combination of properties and enhancements found in non-human primates such as the theory of mind, imitation, and language."

There is not yet a specific definition for intelligence; even intelligence, in its general sense, differs from one location to another and from one environment to another. In the school, the intelligent student is the academic achiever and the one who gets full marks in his studies and has the highest qualifications among his or her peers. In the business sector, the intelligent is the one who can exploit business opportunities and achieve the best gains even if he or she had no education or academic achievements. Many athletes were and still seen as the geniuses of football today because they could read and predict the opponent's movements in advance and translate them by taking advantage of the best opportunities and win the game.

Intelligence, therefore, in general, is the tool that enables individuals and groups to better adapt to the surrounding circumstances by exploiting what exists in nature or other resources to solve a problem. In the 19th century, the prominent psychologist Francis Galton believed that intelligence was inherited from the father and was, therefore, looking for intelligence in the children of sons of great leaders. In World War I, the United States of America required those who wished to join the army to pass the Intelligence test to distribute them in positions according to their rankings in the tests. James Flynn in (2007) was able to arrive at a logical explanation that "the results of a person's IQ test are based entirely on the economic, cultural, and scientific and life conditions that existed in his predecessors, which will give a more significant, boost to a high score or vice versa. Latterly, in 1999, the scientist William Dickens of the Brookings Institution in Washington developed a theory that has almost complete consensus among scientists today. The method indicates that those

who had genetically inherited traits will have a preference in an area and would be creative if they could continue practising it. For example, if a tallboy can participate in a football team, he will improve his performance and abilities in this game and will have the opportunity to maintain high fitness compared to other children who do not have the same physical characteristics and are not as tall as he is. (Dickens, 1999). The tall boy in the previous example will invent and excel physically and mentally in this area because his traits would support him. Dickens concluded that those who have inherited qualities will enjoy preference in a field over others and will use their attributes to become superior to them. The inherited traits and the surrounding environment, according to Dickens, have a significant role in intelligence and the growth of personal mental skills (Dickens & Flynn, 2006).

Therefore, intelligence defined differently by writers and scientists, and in the study, it will represent the notion of talents, highlighted in this way to mark the reason why theorists linked intelligence with talents and making it closer to readers. Starting from the American Heritage Dictionary in its fourth edition, (2000), which defined intelligence as "The capacity to obtain and apply knowledge. "Intelligence, according to Lumpers, is a common unified capacity for obtaining knowledge, reasoning, and solving problems (Weinberg, 1989). Galton indicated that individuals possess a "g" factor, which is a general intellectual ability. The factor, according to him, demonstrates in various ways like navigating without a compass or programming a computer (Gardner, 1992). Howard Gardner said that intelligence constitutes of many separate mental abilities that work independently. He identified (9) different types of intelligence to prove his theory (Gardner, 1992). The definition of the" American Psychological Association" (APA) says, "there is a difference between individuals in how they understand the complicated ideas and how they efficiently adapt to the environment. How they learn from experiences, engage in various

forms of thinking, and overcome difficulties by taking thought." Encarta World English Dictionary, 2006, defined intelligence as:" The ability to learn facts and skills and apply them."

2.7.2 Nature of Intelligence

(Terman,1920) said that intelligence is inherited and that it cannot be nurtured by any development programs, while researchers, such as Hollingworth, who worked with Terman and agreed on a lot with his belief about giftedness and inheritance, though on the contrary that talents could evolve through practice and become impacted by environment and other educational factors. (Hollingworth, 1926). Such unsolved conflicts have resulted in losing many talented individuals who were unaware of their talents or are indecisive about the importance of deliberate practice to develop them. The opinions of researchers and theorists' regarding the origin of talents and the identification of individuals to get support or not were discussed and criticised for several years. Vast amounts of papers, articles, and longitudinal studies debated the issue, but this issue is unable to settle on one agreed opinion.

Complications arose from some of the prominent scientists in the field of intelligence like Francis Galton (1909). Galton was a child prodigy himself and worked effortlessly to prove that intelligence is inherited. He counted the number of relatives of intelligent men to obtain a wide range of data from many biographies. He disclosed that there is a connection between intelligence and inherit. Galton decided after studying multiple cases that evidence favoured nature rather than nurture. He accordingly invented the method of testing and named it "the hysteron meter" (Galton, 1874). Charles Spearman came after Galton and supported the theory of two factors intelligence, (the general intelligence and the private intelligence) (Spearman, 2005). He developed "the (g factor) of general intelligence and the (s factor) of specific intellectual abilities." Godfrey Thomson

in (1916) criticised Spearman's work saying that his evidence was not decisive, and it is not as it looks (Thomson, 1947). (Shrkin, 1998; Gladwell, 2008) Pointed at some prejudices and assumptions in Terman's studies as well. The complications of Lewis Terman's (1906) studies on gifted people led to criticisms of his work by many scientists. The criticism of his longitude researches and tests were for being (complex); therefore, many of those who worked with him pulled away from his tests, objecting that intelligence was too difficult to define or measure (Burke, 2016). Terman's test was also criticised by (Lippmann,) and by (Mitchell, 2000) for not having a generalizable sample and for granting his research subjects letters of recommendation for jobs and this made their lives' outcome not generalizable according to (Mitchell, 2000). However, Terman was praised for his contributions to the gifted education, his work to alter the Stanford-Binet Intelligence Scales and his initiative of Genetic Studies of Genius. He, according to them, enriched educational researches in the area of giftedness. Terman as well suggested that IQ tests help classify children appropriately, and it is the strongest predictor to know if the person will succeed in life or not (Warne, 2019). The relationship between gifts and talents links with high IQ scores due to such opinions; however, there is still much controversy and much research on this issue since the twentieth century. Classification of gifted children in the 20th century was often via IQ tests, but as other identification procedures are developing, this may help to identify more talented and gifted children who stood out of the crowd without being measured with the IQ tests, and they succeeded without being as intelligent as many others.

Since educators, parents, and talent experts commonly think intelligence is a significant component of high ability, it is crucial to discuss the nature of intelligence and how it impact gifts and talents to understand the relation between them and the reason for it being a highly controversial issue. The issue here lies in how the word talent and the word intelligence are both

used as synonyms in popular daily dialects, and thus like the synonym of gifted and talented. Such synonyms create numerous confusions about the notion of each word and its distinct characteristics. Intelligence studies on the other side were part of the twentieth-century advancements in the field of education and giftedness pioneered by Terman and Leta Hollingworth. They both conducted the first researches in this field and inspired future researchers at that time to investigate more in gifts and talents. These tests intended to support educators' measures of the children's innovations and differentiated abilities since the early stages of their lives. (NAGC, 2019). Plenty of theorists and researches latterly devoted time and money specifically to learn and understand intelligence (Feist & Runco, 1993). While searching in some chief talent development initiatives in the UAE, such as (MOE) and (NPGP), it appears that they were using intelligence tests as the primary tool to decide who is talented and who is not. Such note, therefore, guides this research towards exploring more about intelligence tests and the role of this globally used tool as one of the primary measurements to asses individuals' talent.

2.7.3 Intelligence tests

One of the methods for the identification of talented and gifted individuals is the Intelligence Quotient Tests known as the (IQ) test. The (IQ) test was formed first by a German psychologist named William Stern in 1912 (Stern, 1914) said it is a total score derived from several tests designed to evaluate the intelligence of humans. The (IQ) analysis is the most thoroughly researched and differed about among scholars. According to many of them, IQ is the most trusted test that measures intelligence, while others approve the opinion that confirms that intelligence is challenging to measure. The IQ test estimated a considerable number of individuals from all ages and categories and viewed their intelligence depending on its results. The most asked questions throughout the years were about the reliability of the IQ test and to what extent its effects qualify

those gifted and talented individuals who scored high numbers in the test to be more successful than the others with reduced IQ. This IQ test, or Intelligence quotient, was one of the first attempts to classify humans in a way that tends to be scientific. These tests indicate by a set of points the humans' location in the order of intelligence. The IQ test that was first invented in (1905) by the French Scientists " Alfred Binet and Theodore Simon" to assess the children's intelligence, was used for a long time by different entities as a tool for educational placement, assessment of abilities and as an identification of talented individuals for jobs and many other various testing needs. Spearman in (1904) developed his two factors theory of intelligence to measure general intelligence, and Terman in (1920) supported the theory that having a high IQ score means an outstanding achievement. Terman at that time leapt and developed Alfred's Binet's test that became a standardised measure to compare individuals' intelligence with others from the same age group. Consequently, Binet's IQ tests remain since then as the most reliable standardised tests used in education to measure an individual's cognitive ability (Benson, 2003).

2.7.4 Criticising intelligence view

One of the most critical questions asked then and nowadays is, "Can IQ be measured?"

This question about how intelligence is measured and if it is one of the testable traits, although it is originally hard to define, is still roaming around researches and studies, and faced by huge and intensive debated arguments. The other question is about being able to use certain criteria to classify humans from the brightest to the less intelligent. According to psychologists like (Ceci & Liker (1986), "IQ test is unrelated to realistic forms of cognitive problems that would confirm to some of what that scientists favour as the symbols of intelligent manners." Many factors, therefore, such as life experiences, activities, and structured learning, can change children or adults' IQ. It

suggests that IQ tests should not be the final proof of the person's talent unless repeated in every stage of the life of the talented individual to be reliable. (Ceci & Liker, 1986)

More scientists criticised the IQ method by saying that many "geniuses would drop out of the geniuses list if they tested their intelligence, and many of the people who make it to the top were not top performers in their schools(Sternberg, R.J., 1996)." Dean Simonton(2000) traced the origins and accuracy of intelligence tests, and asked one of the most important questions: "Can we rely on the IQ tests?" (Simonton, 2000). Simonton found four problems in Terman's and Cox 's studies regarding Intelligence (1) many individuals who scored high ranks in the IQ tests that were conducted by Terman had no ambitions to achieve better positions in their lives. (2) The achievements of some political figures who, despite displaying low ranks in the intelligence tests, occupied great positions in their lives, such as Napoleon Bonaparte (his IQ was only 145), but his achievements overpowered everyone around him (Simonton, 2000). (3) Simonton argued other influencing factors away from intelligence, such as the stable personality, which supports the low IQ rankers to achieve higher positions than those who scored higher ranks. (4) Catherine Cox & Terman's tests in the second termites' book were unequal, and both were not measuring the same thing. Simonton indicated that (Binet & Stanford's) intelligence test measures how the individual develops his basic skills such as memory, inference, and other primitive skills that humans expected to gain when they mature. Cox, on the other hand, focused her tests on measuring specific skills that may be rare even on matured people because they are limited to a specific domain of creativity. Others, like (Plomin & Craig, 2001), viewed intelligence in the way Terman has viewed it; however, (Esqierdo & Arreguin-Anderson, 2012) criticised them as being conservative in their views. Simonton cited Howard's Garner's Multiple Intelligence theory, indicating that this theory contradicts Terman's theory, who views linguistic intelligence and logical thinking, as the two

only criteria must measure intelligence. Terman's studies "Termites" criticised for being determined to show that highly intelligent children were the future leaders of the society, and Terman himself conducted the interviews on their behalf while he was supposed to separate himself as a scientist from the subjects. Many of these kids reflected the influence of being a Terman Kid by stating in a later time how this study changed the course of their lives. A famous Journalist named Walter Lippmann said that the intelligence testers were the "Psychological Battalion of Death." (Lippman, 1922). Lippman criticised the IQ test by saying that it was used to assess American Officials in the Army and reflected his opinion regarding making such IQ tests determine regular people's future and success. More critics from researchers like (Gould, 1996) argued and disputed the reliability of the IQ test by saying it cannot be reliable because it cannot predict some achievements, and it neglects other important aspects of mental abilities. (Stanovich, 2010) argued that IQ might not be as accurate as it is thought to be because it is unable to measure border definitions of intelligence, and it is only examining some areas of intelligence and neglecting others that are assumed to be as important as intelligence such as creativity and social intelligence. Stanovich argues that if the IQ test does not measure the rational thought, then it fails to give us accurate results because the rational thought skills and cognitive processes are as important as intelligence and should be valued as the high abilities are valued. (Stanovich, 2010). (Kamin,2012) indicated that the data generated from the IQ tests have always taken place in both social and political context, and the IQ test is the psychological contribution to the continuous efforts to blame social disasters on fixed biological causes. He added that psychology lost its political innocence concerning IQ testing.

Moreover, intelligence tests faced further criticism from (Maccoby & Jacklin, 1974) when they found differences in respect to gender in the verbal IQ tests. The improvement of scores on

standardised tests did not mean that the cognitive ability of the tested, such as memory, attention, and speed, were improved. The fact that many people become successful was because they were talented and not intelligent, while many others were not successful despite scoring high scores in IQ tests, which makes this tool criticized and questioned. Some scientists like (Renzulli, 2005) said that IQ scores are associated with high grades in schools' subjects, but this association accounts for only 16-36%. Others blamed the IQ tests users for extensive and independent use of these tests to identify highly able students, while the test itself was merely testing intelligence according to (Dweck, 2000). The IQ tests have affected several cultural minority students designated for development programs according to (Esquierdo & Arrefhuin-Anderson, 2012). Other writers such as (Eysenck; Jensen, 1972) believed that the ethnic minority's underachievement is due to the inherited nature of IQ. The IQ tests were in the debate to have shown differences in gender (Maccoby & Jacklin, 1974), although others like (Hyde & Linn (1998) rejected that argument.

After Terman's death and before the release of the fifth and final volume of his longitude study, there was a huge surprise over the fact that appeared to disturb him, when he found out that the children in his study did not become what he expected them to become when they grew up. The performance of those who ranked high scores in the IQ tests was average, and their high intelligence turned into natural intelligence; they became doctors, lawyers, and specialists in various fields. Just two of them, Robert Sears and Lee Cronbach were teaching at Stanford University, and these two continued the long study they were part of it. However, the story did not end here, but it bears a curious surprise according to (Simonton, 2012) when two of the children in the study whose IQ scores were not high scored extraordinary successes against expectations and became Nobel Laureates physicists: (Louis Alvarez and William Shockley.) This paradox

bothered Terman because he could not explain it, and Catherina Cox was no less worried than he was because she failed in her testing with several "geniuses" she chose. "Put it simply, if this test had examined Nobel winners before they win, they would not join the list of geniuses" (Simonton, 2012). Other Terman kids said the tests had negative impacts on their lives and complained of the unfair burden to succeed. The label as intelligent at an early age made many of them arrogant and unworried. In conclusion, the problem is the concept of intelligence is that a single dimension defined it earlier (Plomin, 2001). Finally, and although many researchers are exerting efforts to improve the concept and to find the range of inheritability in it, (Sternberg, 1985; and Dweck,2000) found that the injustices that came with this view of intelligence made these tests without credibility to be predicting the future success, on the contrary of what they were designed to do. Therefore, this means other ideas about the nature of intelligence should be thought about to lead to a more substantial understanding of it. "

2.8 Theories of Intelligence

Many theories deal with intelligence, such as the theory of (Jeane Piaget, "The theory of cognitive development"). Piaget's theory, in the area of developmental psychology, was very influential in the 20th century (Huitt & Hummel, 2003) as well as the psychometric theory for understanding the construction of human intelligence (McGrew, 2009). What combines these theories is that they agree that intelligence is an integrated structure that makes performance in a task linked to the performance in other jobs. Most of these theories focus on the external aspect (appearance) of the process of education and learning, and they did not reach the essence of the student and the analysis of his or her actual capabilities such as intelligence and the ability to address situations and problems and find solutions and descriptions of such issues and attitudes. However, in 1983, Howard Gardner came to break the mysteries of human intelligence. His observation of pre-school

children explained that these facts were not correct; saying that many pre-school teachers knew that a child has the skills of interpersonal relationships or so-called social intelligence, while another child has athletic intelligence. These tendencies do not appear suddenly but through the passage of activities comprising this intelligence.

Consequently, intelligence maintains to be a debated definition in psychology. Some researchers defined it as exceptional ability, while others said it includes a variety of talents, skills, and abilities.

The first psychologist, who invented the term (IQ) intelligence quotient, based on the work of Alfred Binet, was the German psychologist and philosopher (William Stern) who pioneered in the field of personality and intelligence. Francis Galton, (1869) pioneered in studying the human differences believing that humans inherit intelligence. He linked the concept of talent with intelligence (Jensen, A.R., 2002). Alfred Binet (1904) was the first to develop the intelligence test (Binet-Simon scale) (Binet.A. & Simon.T, 1916), (Terman, 1925) conducted a forty years study to prove the connection between talent and intelligence. Charles Spearman (1904) said that "intelligence defined as a general ability that can be measured and expressed in numbers" (Charles Spearman, 1904). More studies by (Hollingworth, 1926; Hudson, 1926; Vernon, 1971; Mortinson, 1972; Renzulli, 1977) linked talent to high IQ. In (1984) Renzulli introduced his "Three rings of giftedness theory" to prove that talent depends on the integration of three fields of high intelligence, high creativity, and the ability to implement ideas and solve problems with a high level of achievement (Renzulli,1984). (Davis, 2004) pointed at different characteristics that can identify talents better like curiosity, independency, obligation, and open minds. (Heller, 2004) developed the Munich Model of giftedness, to explain how talent can be developed based on four

differentiated dimensions dependable on each other such as Giftedness, performances, personality, and environment.

2.8.1 Robert Sternberg: Triarchic Theory of Intelligence

Robert Sternberg, in the past two decades, has developed several contemporary theories of intelligence (Sternberg, R.J., 2012). These theories had essential implications for detection and teaching of gifted people. The Triarchic Theory of Intelligence looked at talent from the perspective of leadership(Sternberg, 1997). Sternberg's theory constitutes of three consistent elements: Intelligence, creativity, and wisdom and developed two models of giftedness after observing intelligence from divergent approaches (Sternberg, 1997). Sternberg's Triarchic Theory of Intelligence looked at the factors of (context and cognitive) as what constitutes intelligent behaviour. The theory explained the connection between the individuals and the inner world. It described it as what goes between the inside and the outside world, and it highlighted three central aspects of intelligence (Sternberg, 1997). Its designated intelligence as located within the individual and his behaviour and the context of ethics. Cognitive, according to it, is the component that constitutes the basic unit of intelligence. In 1997, Sternberg presented an improved picture of this view, called the theory of successful intelligence (Sternberg, 1997). Successful intelligence means the person's achievement of success in his or her work life (Sternberg, 1997). Success should be according to the concept of talent and how this success defined in his or her socio-cultural environment. The intelligence helps talented persons employ their strengths and compensate for their weaknesses to adapt to the surroundings by shaping, modifying or changing in cooperation with their creative and analytical abilities(Sternberg, 1997).

According to Sternberg's theory, successful intelligence consists of four components or includes three types of intelligence: (1) The analytical Intelligence, which is the ability to analyse, judge, criticise, compare, evaluate, and observe. (2) Creative Intelligence, the ability to innovate, discover, visualise, and develop assumptions. (3) Practical Intelligence, which is the ability to solve well-defined non-school life problems that can have several solutions and several ways to reach these solutions and (4) Balanced Gifted is the person with proper levels of the analytical, creative and practical intelligences(Grigorenko, E.L. and Sternberg, R.J., 2001)- (Sternberg, R.J., 2005)

Table 4. Sternberg's classification of giftedness

Analytically Gifted	Creatively Gifted	Practically Gifted	Balanced Gifted
The talented person in this class usually performs well in school duties as well as in traditional intelligence tests.	The talented of this class do not require intelligence tests, but they need tasks or tests that require generating new and authentic ideas such as writing short stories and graphics and solving unusual mathematical problems.	The talented person in this category knows what he needs to succeed in his environment and reveals his intelligence in situations and situations with specific content.	Is the person who has proper levels of analytical, creative, and practical abilities, and knows at what time to use these skills?

(Grigorenko, E.L. and Sternberg, R.J., 2001)- (Sternberg, R.J., 2005)

The theory suggests that traditional intelligence tests, school tests, and school curricula are primarily analytical intelligence not related to the individual's experience of life, nor his creative experiences. Thus, those well-known intelligence tests mainly relate to academic skills and not to measure the applied and creative intelligence that is essential to success in the individual's working life. The theory emphasises that the adequacy in dealing with real-life situations depends on the implicit knowledge of the practical nature and not the academic one, not taught directly or systematically(Sternberg, R.J., 2005).

Sternberg and Grigerenko (2002) have reviewed the relationship between the gifted education model and other well-known models such as Renzulli's, Gardner's and Gagne's models that distinguish between talent and excellence (Sternberg, R.J. and Grigorenko, E.L., 2002). The theory of the general factor of intelligence has concluded that there is no contradiction between the theories of successful intelligence. Nor the theories and other models as the theory of successful intelligence may fill the deficiency in some of these models and may integrate with them. Sternberg (1985) presented a new trilogy of human intelligence that interprets mental talent more comprehensively than traditional intelligence theories and goes beyond what intelligence or achievement tests measure.

2.8.2 Criticising Robert Sternberg's Theory of Intelligence

Sternberg's theory not only concentrated on the skills of the people used in real life and stepped away from the high academic achievement, but also focused on the concept of intelligence domains and contrasted with the abstracting testing techniques used in the IQ tests. This theory supported the changes in the look at talents and giftedness. It boosted the importance of performance and the other abilities that constitute the concept of talent and how we should view it. Despite all the praise, the theory faced several criticisms, such as being difficult when it comes to applying it in the schools within an educational setting. Gottfredson (2003) criticised Sternberg's methodology, saying that there is insufficient data and that it is unsafe. Correspondingly, and despite the importance of this theory in the Western psychological and educational research, this theory does not seem necessary for the Arab world researchers except concisely and briefly. Accordingly, it makes the theory looks ambiguous and not familiar.

2.8.3 Howard Gardner. The Theory of Multiple Intelligence

In (1983), Howard Gardner wrote extensively about specific domains of talents and intelligence. He said intelligence makes humans able to respond to problems and value their cultural aspects and elements (Gardner& Hatch, 1989). He noted that IQ tests only support those who are familiar with tests and can answer them. He indicated that there are "different concepts of what intelligence means in different cultures" (Smith, C., 2006). In his theory of multiple intelligence, he wanted to blend a mixture of factors such as cognitive knowledge, biological, and cultural in intelligence. Gardner then came out with a different approach that distinguished him from the rest of the researchers by trying to explain the nature of intelligence. His theory, derived from his observations of individuals with exceptional mental abilities in some fields, who got low grades in the intelligence test or were below intermediate levels. Gardner thought that intelligence is composed of many separate skills, each of which operates independently of the other. The theory holds that people have unique patterns of strengths and weaknesses in their mental capacity (Gardner,2011).

This theory founded on several bases:

 (1) Intelligence is a group of intelligence developed to progress. (2) Each person has a unique configuration of multiple intelligences. (3) The intelligence differs in its growth within the individual or between the individuals. (4) Multiple intelligences can develop to varying degrees if available. (5) The various intelligence and mental cognitive abilities behind each type can measure and identify.

Therefore, the theory known as the (MI) Multiple Intelligence theory was born to define human intelligence by involving several abilities used to fix issues and to create and find questions to

solve them. Gardner's theory believed in the geniuses of the learner, his ability to give, produce, innovate and create, solve severe problems, and confront complex situations. It is why academic psychology and many educators widely accepted and embraced it (Gardner, 1993, 2000). It supports researchers' agreement regarding the ability of children to acquire competence at an earlier age than usual (Radford, J., 1991). It also helped the differences in talent abilities and their needs of the practice and their need for social and emotional development according to a group of scholars and researchers including as an example (Ericsson, K.A., Krampe.R.T. & Tesch-Romer, C., 1993). (Ehrlich, P.R., 2000), (Terman& Oden, 1959, Whybra, 2000), (Neihart, M., Reis, S.M., Robinson & Moon, S., 2002). This theory supports the identification of talents and highlights the importance of serving their needs for development by deliberate practice after identification (Tirri, K., Cho, S., Ahn, D. & Campbell, J.R., 2017). In his theory, Gardner devised a set of intelligence, which he did not claim to be comprehensive. The intelligence comprises (1) Linguistic intelligence, talents in the domain of languages that includes new languages and the ability of expression by speaking the language or writing in it (Gardner,2011). (2) Musical talent: that means the skills of performance and appreciation of music (Gardner,2011). (3) Spatial talent: The skills of realising shapes and the relationships of space objects (Gardner,2011). (4) Logical-mathematical talent: which means having a gift in math and any other activity that requires logical thinking (Gardner,2011). (5) Bodily-kinesthetic talent: This means the ability to solve physical problems (Gardner,2011). 6) Interpersonal talent: This means understanding the other's motivations and desires and work with them in a way that makes it beneficial (Gardner,2011). (7) Naturalistic talents are the talents of understanding living things and reading nature (Gardner,2011). (8) Existential talent: Is how the individual tackles the questions of (Why we live and why we die) (Gardner,2011), and (9) Intrapersonal talent: Self-understanding meaning asking

ourselves what we think, how we feel and what we want(Gardner,2011). Howard Gardner radically

reconsidered intelligence and its effects on the learning process by introducing his theory title:"

multiple intelligences" in his book "Frames of Mind" (Gardner,2011). He rejected the idea of one

intellect and asserts the existence of many mental abilities, which is relatively independent of each

individual called "human intelligence", each having its characteristics and features. This theory

has forever changed the concept of human intelligence and its impact on the educational system.

2.8.4 Criticising Howard Gardner's Theory of Multiple Intelligence

Howard Gardner's theory of (MI) (Gardner,2011) was an attractive theory for the educators, not

only for being a dynamic theory but also because it allowed educators and teachers to estimate and

distinguish more abilities in more children in classes and schools at any time. The theory supported

the assessment of skills away from the traditional way that has always emphasized on solutions

and answers to the questions. Gardner said that each intelligence from the nine bits of intelligence

that we have must have a distinct tool to measure it. Consequently, it focuses more on the way

students will reach all solutions or answers. Unfortunately, there are no specific tests to measure

all the multiple intelligences differently.

This theory, thus, offers a variety of differentiated practices and tools for every student with high

ability. It explained how children differ according to their different type of intelligence, their

culture and their abilities (Gardner,2011). By offering every child and assessing each of them with

different types of processes and methods, these differentiated tools enable the students to solve

various issues that may occur and need multiple intelligence to solve them. They also support the

theory's principle regarding intelligence development and culture. Several studies conducted on

the application of this theory indicated that the theory of multiple intelligences had been used

recently to support the identification and development of the gifted and talented in schools (Fasko Jr, D., 2001). It is supportive of highly abled students because it helps educators to see how different methods complement rather than contradict. It also helps to organize the usage of tools and strategies that would support all children and provide each of them a place and an opportunity to succeed (Armstrong,2003).

(1) MI points out that intelligence is not a phenomenon. It consists of different abilities (Armstrong,2003).

(2) Multiple intelligences correspond to the recent studies of the brain based on the segmentation and classification of brain capacities and their variation from person to person (Armstrong,2003).

(3) The theory of (MI) is also supportive in cases when teachers want to deal with many students using different strategies(cornerstone.edu).

(4) This theory encourages a differentiated educational environment in which students can achieve their potentials by unique aspects for each of them (Fierros, E.G., 2004). It also explains for teachers how to design new approaches in teaching for different students and how to provide them with a framework that helps them submit any educational content for many children with different abilities and from different cultures in different ways. It helps the teacher divers their teaching methods to consider the diversity of these learners and to help them reveal their abilities in their ways. It accordingly can eliminate and decrease student's violence towards their peers, school's environment and the society as well. It helps educators nurture sensible students and the teaching of intellectual skills. This theory as well contributes to students' grouping and determine their needs for scientific and psychological services (Fierros, E.G., 2004). The theory of multiple intelligences reduces the number of processes performed by teachers in schools. One of the

processes that benefit from this theory is the process of relocating students who have learning disabilities and special needs to different classes. Solving this problem helps teachers and students find a way to settle and feel secure in their places. Besides its role in increasing their self-appreciation and helping them to achieve well among students instead of being underachievers while they have hidden undiscovered abilities. Moreover, it should be easier to apply the theory of multiple intelligences and not to complicate any procedures according to it. This theory does not mean that the teachers should present the lesson in various ways and using many procedures or tools. Teachers do not have to try to develop all kinds of intelligence through one subject, but they need to be able to know what to apply and when. According to (Gardner, 1997) such thing is a misunderstanding of his theory and why it is there. The (MI) base that there are different intelligence and each of the intelligence responds to different content. It means that the capable teacher should be able to select the right content out of a wide range of them to teach the students accordingly. This content should include the suitable intelligence that matches the student's ability and help him or her progress through it, as well as the methods of teaching, and the proper educational activities (Gardner, 1997).

Other scientists criticised the theory by saying that the (MI) theory lacks support from scientific research; therefore, it lacks measurability according to them. (Waterhouse, 2006). Contrary to Gardner's assertions, in theory, there were strong correlations found between the intelligences, and this supports the theory of general intelligence, not the multiple intelligences, which means if someone is intelligent in one area, then he or she tends to be useful in the other field. Other scientists' arguments are about the solid relationships between diverse intelligence and how is this relationship. They say that although there are strong relationships between the diverse intelligence, however, each intelligence is different from the other. Again, the question is which test can develop

to measure which intelligent and how can any test measure which intelligence is dominant in the individual?   Unfortunately, Gardner himself admits that he has no empirical evidence for this theory. Furthermore, several theorists have criticised the association of multiple intelligences with multiple learning styles, which Gardner asserts are lacking in empirical evidence. However, this theory evolved and become popular within the field of education, and its success came from its equity and giving all children their opportunities for success (Hoerr, T.R., 2000).

A significant criticism of this theory is the definition of intelligence. Objectors criticized Gardner for using the concept of intelligence in a way that converses with the intelligence recognized concept in the field, (Davis, Christodoulou, Seider & Gardner,2011) Others say that this theory does not acknowledge the existence of intelligence, but the concept of intelligence to what is traditionally known as capabilities or competencies. (Sternberg, 1983). Defenders of the theory, on the other hand, claim that the traditional definition known for intelligence is inadequate, constricted, and narrow-minded that cannot use it within an area that is supposed to be flexible and intelligent. They added that the concept of intelligence must develop in a way to match the developing reality (Nikolova& Taneve-Shopova, 2007). The theory was also criticised by (Gottfredson, 2005) who as well criticised the Triarchic Theory on the same grounds.

Gottfredson Said that Gardner, in his Multiple Intelligences Theory, used untrustworthy data and interpreted this data in a way that is not challenging or even supporting the (g) factor (Gottfredson, 2005).

Conversely, researchers like (Visser, Ashton & Vernon, 2006) tested eight of Howard's intelligence. They came with the result that the (g) factor exists in most of the intelligence and not as what Gottfredson said. They concluded by indicating that "The multiple intelligence is secondary to the g factor". Another criticism was about how each learner has his style of learning,

and this means the teacher must correspond to this diversity by implementing a different teaching style. A criticism for this statement was about the absence of evidence about how different students learn in different ways and what makes this accurate. However, and on the other hand, no evidence that demonstrates how the customisation of the "teaching methods" to suit the "learning method" can be useful and is an approved way. Gardner personally had his doubts regarding the misconceptions related to learning styles, as previously mentioned.

Despite all criticisms that accuse this multiple intelligence theory of being on shaky grounds, the theory is prevalent and finds its way in the educational systems. The question if this means we should go back to the general intelligence theories and one size of education that fits all children.

An optimistic proposition indicates that there is enough evidence that proves how learning outcomes can enhance if children knew how to access the content using multiple differentiated ways and various methods and tools to learn and then to demonstrate their knowledge and skills. This theory can also benefit the educational field when the teaching differentiated methods would be able to provide students with their differentiated needs and help their development and the growth of each of them. It is an ethical theory that supports the identification of students who appear more talented in different areas and not in one only. It would be very beneficial to measure their abilities according to this different intelligence, as suggested by Gardner and to enhance their contributions by reflecting more on the prominent talent he or she has.

2.8.5 Gagne's Differentiated Model (DMGT)

Gagne believes that learning is a semi-permanent change in the behaviour of the individual because of the experiences or exercises in an educational position. He focuses on the content of the learning subjects as well as how to organise and present this material to the learners. Gagne emphasises the

quantitative side and the organisation of the information in the educational process. Therefore, he suggested that the learner's readiness to learn any new knowledge depends on the amount of this learner's preliminary information; and to what extent is this information necessary to support his or her experience. He believes that learning involves eight hierarchically arranged patterns from simple to complex, and each higher education in the pyramid depends on mastering the lower. The task analysis, according to Gagne, is fundamental to understand the structure and the sequence of information presented to the learner, which is what Gagne called the hierarchical construction of learning (Gagne's Differentiated Model of Giftedness and Talent (DMGT) (Gagne, 2009) indicates that talent is an innate readiness, and to help talents excel is the result of this readiness development(Gagne, 2009). He identified many aspects related to talent and put them in a theoretical context that determines the relationship between them and the aspirations of society. He said that the social factors, educational system, and other "inner and outer factors", are what will help to invest in talent and achieve remarkable achievements. Gagne sees talent as a natural ability, that can turn into a high-level performance with incentives, motivation, and support. The abilities are raw at the beginning; however, by receiving positive impacts that support the growth and development of the individuals' talents, this individual will excel. Gagne indicated that the individual could not be superior if he or she is not initially talented; therefore, if the factors influencing the development of the talents are not available, then even the initially talented person will not be able to become superior or to classify as talented. Not every talented person, according to Gagne, is excellent, but the opposite is accurate, and every superior is talented. The talents may remain invisible, and this will lead the talent to become a potential talent with ability or readiness. Gagne explained how the cause of many school dropouts, that may occur within high skilled people

in drawing or poetry, or other domains of talent are due to the lack of influential intermediary factors that would support identifying and refining these dropouts' talents(Gagne, 2009).

 Gagne clearly distinguished the differences between talent and giftedness in his recognised model, that was first developed in the year 1985 and later re-drafted in the year 2000. He named the model (The Differentiated Model of Giftedness and Talent (DMGT). This model consists of six factors; the first two are Talent and giftedness, while the other four interpreted as the factors affecting the talent, drive talents and giftedness to achieve excellence include:" the natural abilities, environment, intrapersonal developmental process and the developed competencies"(Gagne,2009).

Gagne's model differentiates between giftedness and talents by saying that" giftedness" is what a person possesses and uses one domain of his or her outstanding abilities (gifts). The use of this ability should help this individual to be one of the top 10% of peers in his age with skilled and unique abilities and immense knowledge in one domain or more of talent (Gagne, 1985). Gagne's model changed the common understanding regarding giftedness and talents by indicating that giftedness meant academic achievement and talent is the ability to excel in the fields of arts, sports, and other performing talents. Gagne (2005) model presented four different components. These components exhibit the complications accompanied with talent development and what happens during this development (1) (the intrapersonal catalysts: physical and mental characteristics: Personal qualities and self-management), (2) (Developmental Process: Informal, formal learning and practising), (3) (environmental catalysts: physical, parental or teacher, provisions, events involvement in the life of the talented individual), (4) (learning and practising: systematically developed skills) and chance.

2.8.6 Criticizing Gagne's Differentiated Model (DMGT)

The criticism of Gagne's model was around its recurrences and that it repeats the themes of Sternberg', (1985, 2000, 2002, 2004), Renzulli (2005), and Ericcson (1993 themes). They meant by their criticism to say that the learning and practising part in Gagne's model is repeated and is not providing any new thing. However, Gagne rejected that because he believed that his work was different and is not repetition for any other. He focused on his theory on the discrepancy between giftedness and talents besides introducing the prevalence rates (top 10%) and separating between the natural abilities and the developed skills. According to Gagne, this makes his model different and not repeating any other models.

This theory can be complicated according to researchers who thought the first five types of learning depend on the behavioural theory, which emphasizes that students need to be stimulated to receive response and reinforcement besides the difficulty the teachers face when they have to arrange for some subjects learning to be in hierarchical systems such as mathematics and languages. Another complication that occurs in this theory is about model complications. Such complexity in Gagne's model does not support teachers in classrooms, but on the contrary, it makes the usage of this model more challenging and complicated for teachers. The use of Gagne's model in classrooms requires the use of psychometric tests to help teachers assess the learners' potential. However, these tests should implement in the presence of a psychologist and while no educational psychologists would be available in classes when those tests are applied therefore it will be difficult for teachers to assess their learners as they should (Wellisch, 2016. (Wellisch, (2016) Studied and examined Gagne's model (DMGT) and indicated that (DMGT) mainly based on behavioural/biological research. It ignores genuine environmental factors, and its application relates specifically to gifted achievers who are already succeeding. The model, according to

(Wellisch, 2016), does not include the gifted underachievers such as those who have problems caused by environmental reasons without a legitimate claim for the identification or an appropriate educational pathway. (Wellisch, 2016) then proposed an expanded conception of underachievement and recommended that the Australian education department, guided by Gagne's model should switch to use a revised Model "Inclusive Gifted Identification and Progression" as a replacement for Gagne's (DMGT) (Wellisch & Brown, 2012).

In conclusion, Gagne's model, according to several theorists and scholars, is a widespread wide-ranging model. It helped to arrange learning subtasks that lead to final performance learning. The theory is cumulative learning, directly applied in schools as learning, and affects the rate of cognitive growth of students. It also helped in setting goals and identifying students to stimulate their motivation to learn. The theory also links previous and new learning to help students and make it easier for them to adjust their learning with their experiences. It is useful as well in building diagnostic tests used at the beginning of the teaching to clarify the learner's skills and their proficient. According to Smith & Ragan, Gagne's differentiated process by following new researches to refine and improve his model made him introduce a differentiated model from other theorists and not repetition as researchers claimed. He usually extends, develops and updates his theory based upon new research, and this differentiated him from others (Smith & Ragan, 1996).

2.8.7 Three-Ring Conception of Giftedness

Renzulli's theory was born after lengthy studies of large numbers of individuals who had extensive contributions to society. This theory, called the three-ring model, is a qualitative leap in the field of gifted distinction and a shift in the type of programs offered to them. This theory assumes that gifted behaviour is the result of three characteristics found in an individual. These characteristics

are high levels of (1) ability, above average (2) creativity, and (3) determination and commitment to perform specific work. Task Commitment and Motivation are basics in giftedness (Renzulli,2012). Individuals who exhibit gifted behaviour can usually combine these three characteristics and activate them to produce a spectacular outcome in one of the areas of benefit to humankind. Renzulli's perception of the nature of talent conveys the understanding of it as a mental or physical gift given to limited individuals who are able, because of that talent, to achieve the appropriate successes by using their abilities, that the talent of mind or body needs special care and attention invested as appropriately as possible. The presence of high ability in a domain of talent is not enough to achieve excellence, but there must be creative capabilities established through the development programs that develop their thinking and creativity. Also, a well-trained educator can keep the motivation for work and achievement high. Perhaps one of the essential things that can come out of this theory is that there are students in classrooms and children at homes seen as having limited abilities or achievements while they possess multiple talents. They only need a professional educator to get these talents to exist to start their countless successes further.

Renzulli' used different definitions to describe his model

- Model Triad Enrichment
- School-Wide Enrichment Model.
- Revolving Door Model.
- Multiple Menu Model

Renzulli indicated that there are two types of "giftedness" (1)-Schoolhouse Giftedness demonstrated through test results and (2) Creative Productive Giftedness. He identified three phenomena's: Brilliant, Personally Creative, and Creative. (1) Brilliant refers to unusual and

stimulating thoughts (2). Personally, creative means people who run-through diverse new experiences in the world in different ways; however, they may not share their experiences with others. (3) Creative refers to those who have changed the culture.

He as well defined the highly able students as those who possess some qualities or can develop and use a mixture of qualities in any valuable field of human performance. Children who appear to be interactive and can build interaction between the three groups require different educational services and other opportunities that the mainstream educational programs do not usually provide them.

2.8.8 Criticising the Three Rings Model of Giftedness

Renzulli's contributions were remarkable and supportive to the field of education. To propose motivation as a factor in giftedness was supportive and clarifying what it needs to make gifted and talented students thrive. He also looked at the interactivity of the three factors: ability, creativity, and motivation in a way that made them very useful and clear to adapt in classrooms. Teachers view his model of giftedness as useful and accessible to them in schoolrooms. The model explains the concept of under-achievement, and it is simple enough for teachers to understand it and use it to identify giftedness in their classrooms. However, (Gagne, 1985) argued this model and discussed it critically because he saw this interactivity as challenging. He could not as well understand why do we have to consider a student with an IQ of (130) as not gifted because he underachieves in the classroom due to not being sufficiently motivated or encouraged by any means to succeed (Gagne, 1985). Gagne said that the creativity element in this theory might need more interpretation as well to make it more transparent and understood. Gagne thought that Renzulli's model is limited to academic achievement and does not refer to other talents that need

to have the teacher's attention as well. Other critics assumed that even though Renzulli's definition combines some characteristics of educational-oriented definitions and definitions of features, it still suffered some deficiencies such as (1) ignoring the mentally gifted children with low achievement. It is implicit in the requirement for the effectiveness of each of the three components of talent and excellence, while studies have proved the existence of mentally gifted children at different levels of school whose low level in school achievement was a result of their lack of motivation to learn (Rimm, 1987). (2) The model does not explicitly indicate the level of performance required for each of the three components of talent and excellence. Saying "The overall ability is "above the average "or that the creative and motivated abilities are "high levels" do not solve the problem. However, and despite the criticisms of Renzuli's definition, he provided many additions to this field, including broadening the concept of talent and excellence, highlighting the role played by motivation in achievement and the importance of interaction between general, creative and motivational abilities for planning special programs for gifted and talented. Renzulli, as well, emphasised looking at talent and excellence as a developing progressive situation.

In summary, some of the models are complex and can be difficult and not useful if the intentions are for them to provide proper use in schools. However, the benefit of reviewing them and their criticism is to make identifying talented individuals reasonable and to stop the bias of the IQ tests. They also show how intelligence can improve and how they are helpful to decide which one to select for talented identification that will be the central issue in this study.

2.9 Employing the Theory of Multiple Intelligences

Despite the long extensive debate over the meaning and the concept of intelligence and the differences between gifted and talents, the field has not yet focused on a definition that conceptualises intelligence or talent as well as highlighting the importance of identification and development process. Theorists in this area are still not stable about a description that explains talented individuals' differentiated traits, such as being non-committed, in favour of loneliness and other emotional attitudes that make them seem strange from others. The main problem in being unable to achieve high grades in their academic careers is another issue that they should address too.

Therefore, and for the sake of this study, despite all the criticism imposed on Howard Gardner's Theory (MI), this theory is widely thought to be one of the essential theories of psychology and contemporary education.

The question put here is to what extent Gardner's theory can provide a useful framework for the educational institutions to plan, design and implement the identification and development programs to discover more highly able students in the UAE?

In the next section, a detailed description will try and identify how can this theory apply to gifted and talented identification and development in the UAE. Looking at Gardner's (9) intelligence, they all promise to be an effective way to identify different students abilities and to support multiple modes of identification and development accordingly. According to Gardner, the future technology will help in more development of intelligence (Gardner,2011), and this reflects on the ability of this theory to be a framework that can infuse the efforts in these institutions and the UAE's vision towards the future.

The theory of (MI) can serve the purpose of this study and support its aim towards implementing identification and development for different highly able students. The development process should differentiate to suit their differences and types of talents. The theory of (MI) believes in the existence of multiple, diverse and independent intelligence, therefore, this support the research aim to explore the implemented identification and development programs and to what extent they meet the differentiated needs of the gifted and talented students in the UAE. It is a fact that gifts and talents' thrive once they get the appropriate practice, encouragement, motivation, education, and training. Applying the concept of creating multiple initiatives to nurture different intelligence will help in satisfying the needs of a wide range of different talents if not all of them. Employing the Theory of Multiple Intelligences within talent development initiatives is crucial to set the educational and instructional goals to support teachers and other educators (Armstrong,2003). These goals are achievable and limited to the following objectives: (1) the theory believes that learners have multiple intelligences and it is possible to look at them in a way that allows more talents to exhibit. That intelligence includes a variety of talents that helps and supports the institutions' include more challenges and differentiated tasks in all their development programs. The variety of talents allows more identification of a variety of highly able students in the areas of linguistics and languages, logical-mathematical, natural intelligence, interactive intelligence, self-intelligence, existential intelligence, musical, motor, and visual-spatial intelligence that constitute the main domains of performing talents(Gardner,2011).

(2) This theory contributes to solving problems related to individual differences, and it seeks to develop genius, talent, production abilities, innovation, and creativity.

(3) The theory as well reveals the strengths and weaknesses of the learner, primarily as they address the obstacles and learning difficulties. Thus, if traditional intelligence theories focus on the

learner's flaws, the theory of multiple intelligences takes care of what is positive in the learner, explores other abilities of intelligence, ensures the development of smart skills, develops the capabilities of the learner to solve problems and work on his or her innovation, production and creativity. It invests in the intellectual abilities of the learners in their academic education through educational activities in the fields of this intelligence, and its validity represents itself in teaching programs for ordinary children and people with special needs.

The (MI theory), therefore, focuses on different abilities to practice various activities so that each child can benefit from any activity that suits his or her intelligence, and it allows each learner to achieve equality and to distinguish their unique aspects. Therefore, this theory of multiple intelligences will support the study by its most critical theoretical components, educationally and ideologically represented to identify more individuals that are talented and to make them better served and allocated to multi development programs with more planned strategic methods and tools.

The methodological mechanisms in dealing with multiple intelligences are as follows:

What are the objectives of the gifted development programs? What are the best methods to implement them? What are the mental competencies of the learners to whom the program aims?

How can each program provide different abilities with different development in different ways, considering the multiple intelligences of different talented learners? How are the goals of the talented student determined in each application to ensure that each program contributes directly to achieving that desired goals?

The methodology used to apply the multiple intelligences theory in the initiative must come to be planned while preparing the programs to include as many possible intelligences as possible. The

plan should consider the learners' different intelligence during the preparation of the plans. The content should consider how skilled individuals would familiarise themselves with the process of tutoring and how they can select the appropriate program to develop their intelligence. Trainers and talented individuals should be involved in the program's preparation and to discuss their views as well. It is not essential to introduce all intelligence in one program, but other intelligence can include within the next program.

Table 5. Summary of Theories of Intelligence

N	Theory-Name	Theorist	Year	Summary
1	Differentiated Model of Giftedness and Talent-DMGT	*Gagne*	*1985*	Stated that talent is an innate readiness, and to help talents excel is the result of how they develop this readiness. Talent development in this model presented by transforming natural abilities to become developed skills. Three compounds can support or hinder the process: 1) Interpersonal, 2) Environmental, 3) Opportunity.
2	Theory of Giftedness-Triarchic	*Sternberg*	*1985*	looked at talent from the perspective of leadership and its three harmonised elements: Intelligence, creativity, and wisdom
3	Multiple Intelligences	*Howard Gardner*	*1989*	Intelligence makes humans able to respond to problems, value their cultural aspects and elements, and become able to give, produce, innovate, and create, solve severe issues, and confront complex situations.
4	Renzulli's Three-Ring model	*Renzulli*	*1997*	Proved that talent is the integration of three fields of high intelligence, high creativity, and high ability. The ability to achieve highly in implementing ideas and solving problems.

Chapter 3. Institutions related to supporting gifted and talented programs in the UAE

Introduction

This chapter outlines the background of five educational institutions in the UAE. It explores the development of `programs provided for highly able students in UAE schools. This chapter provides a specific background and context to the primary research study around the educational institutions in charge of education in the UAE.

3.1 Rationale and Purpose

The aim of these five specific institutions selected for this study is that they are the leading institutions established to look after education in the entire UAE. The primary responsibility is to ensure making education available and accessed by every citizen and residence in school-age in the UAE. These institutions were the most suitable subjects for the current study. They could mirror the educational system and position of education in the UAE, including gifted education as well. This chapter focus is on how these institutions are providing the gifted and talented development initiatives and if these programs provided equally for all highly able students, knowing that such institutions located in different emirates, work independently. However, they follow the regulations of the government in the UAE.

The launch of the National Agenda in October 2016 within the UAE Vision 2021 coinciding as well with the UAE 50th National Day was to focus on transforming the educational system to become an excellent system in the entire UAE (Vision2021.ae). It requires a full revolution that changes the current educational system and the teaching methods from their roots. This National Agenda, as interpreted and explained in the (Vision2021.ae) website aims to build a smart system that adapts the new technology and uses the (AI) to allow schools, universities, and all regular and

highly able students use the updated technology and devices as the basis for their learning. It also aims to improve the teaching methods and execution of researches and projects by adapting this technology to support them and enhance their achievement. Another aim for this National Agenda is to promote and reinforce more enrolment in preschools in order to start investing in human talents and abilities from an early age. It plays a significant role in impacting children's personalities, support their plans and sharpening their skills with deliberate practising and motivation from early ages. Moreover, the UAE National Agenda targets students' achievements by making them ready to rank high among the best students in the world in various subjects and domains of talents such as artistically and scientifically talents. Students should be able to compete in several areas, such as the area of reading, mathematics, and science. They should be knowledgeable and fluent in the Arabic Language as well. The Agenda's objective, furthermore, is to raise the number of graduates from secondary schools and to reach the international standards in this aim. It also aims that all schools would have exceptional educators, with high-quality leadership qualifications as well as a globally accredited teaching staff. (vision2021.ae)

The concern in the National Agenda is on how to implement the best methods and structures to accelerate, activate, and update gifted and talented learners in schools to become ready 'for a competitive knowledge economy. The significant changes in the global economy were behind the UAE inspiration to launch this National agenda to help in putting the country in the heart of these coming economic changes. To main objectives of this agenda is to transit the economy from a regular economy dependable on oil to a knowledge-based economy that relies on the global advancements and goes with them. The UAE is urged to focus on various economic, touristic and commercial factors that will support the UAE as a capital for innovation. This Agenda views the importance of research as the support of the country's continuous growth. The Agenda would

support the strength of the framework of the regulations and raise legal awareness in the main sectors. It would encourage and stimulate the quality sectors to work for more improvements in the country by making it more appealing for investors. The National Agenda as well would put the UAE amongst the best countries in the world in the area of entrepreneurship(vision2021.ae). It requires encouraging the nationals to multiply their efforts and increase their skills by enabling them with different tools to become the economic driving force in the UAE.

Moreover, the Agenda's efforts aim to encourage and grow a culture of work success in schools and universities to enable the new generations with different skills and ambitions to thrive in the area of entrepreneurship. This Agenda would support the UAE's ambitions as well to become a leading country in the development of gifted and talented in several areas including leadership and entrepreneurship by implementing various processes and methods to support them and to make their skills easier for progressing. It targets high levels of national participation and involvement in the private sector workforce to increase their productivity in the creative industries sectors as well. The development of quality processes and procedure, as well as launching other supporting initiatives specifically for "gifted and talented" individuals, is an integral part of this Agenda's objectives and UAE's Vision 2021 (vision2021.ae). Therefore, the institutions' role is crucial to oversee this transmission. This transmission should start by reforming the educational system to achieve the required objectives. The institutions' role is associated with their responsibilities to design and launch innovative programs and initiatives to help the UAE identify and develop more skilled and very well-equipped talents. (National Agenda's Vision 2021)

3.2 The Role of Educational Institutions in the UAE

(MOE) Ministry of Education, (MCKD) Ministry of Culture & Knowledge Development, (ADEK) Abu Dhabi Department of Education and Knowledge, (KHDA) Knowledge & Human Development Authority in Dubai, and (HA) Hamdan Award are five main channels that extend from Government and private level to initiatives level. They implement gifted and talented identification and development programs. The primary research intended to look at how these institutions are functioning in the area of gifts and talents. How do they implement the gifted development programs and to whom this development is applied? The study will provide, for the first time, to the international literature, a local context on these institutions' roles and achievements. Noting while searching for more information and data for this research that the little available literature has focused on the implementation of development programs at schools' level and not at their evaluation or assessment of their achievements. The apparent shortage of research in this area might justify the growing number of similar initiatives and programs. This continuous establishment of initiatives might be assumed as the solution to fill unaddressed gaps. However, these gaps resulted are there due to ineffective planning, researching, lack of evaluation procedures and assessment and missing a policy that regulates the establishment of institutions or initiatives in this regard. This study is a limited exploratory study; therefore, it is an effort to redress the shortage of research in this area in the UAE while providing further illumination to the findings within it.

Table 6. List of UAE Educational Institutions

Institution	Abbreviation	Inception	Emirate	Type
Ministry of Education	MOE	1972	Abu Dhabi	Federal
Hamdan Bin Rashid Foundation	HA	1998	Dubai	Private
Abu Dhabi Department of Education & Knowledge	ADEK	2005	Abu Dhabi	Local
Ministry of Culture & Knowledge Development	MCKD	2006	Abu Dhabi	Federal
Dubai Knowledge & Human Development Authority	KHDA	2006	Dubai	Local

3.3 Sources of Information

Chapter 4 is a framework for the methodology used to support this study. Data used in this study came from different sources. These sources were: (1) library search: Reviewing the institutions' published documents, journals, other researches, books, official papers, e-booklets, and reports. (2) Interviews with stakeholders like experts, teachers, managers, parents of the gifted and talented, and highly able students. The acquired secondary data included policy documents, services, and programs offered online, published annual reports, evaluative documents, and all useful material available from various reports, newspapers, websites, and other UAE official platforms. Fortunately, "HH Sheikh Mohammed bin Rashid Al Maktoum, Vice President and Prime Minister of the UAE and Ruler of Dubai, adopted the Dubai Data Publishing and Exchange Act in 2015, (Law No. (26) Of 2015)" (ogp.dubai.gov.ae) which provides confidential data to UAE's public through an integrated platform. Researchers, investors, and service developers have access to this platform continuously. The law sets forth clear rules and mechanisms that obligate all departments in the UAE to open their data and share them with other departments in an integrated manner. The aim of unifying data is to provide an integrated service to the public as well as decision-makers. Open data is available free of charge and can be used, reused, distributed,

or shared with others without restriction. According to the United Nations e-Government study of 2018, open government data means the data disclosed and deployed proactively over the Internet without restrictions(government.ae). Official websites, interviews, document review all generated a rich source of information, despite their lack of different viewpoints of the participants. Data analysis resulted in four subjects that were apparent in the literature, the interviews, the focus group discussions, and the interviews. These themes analysis and discussions in depth exist in chapters five& six of this study.

3.4 An Overview

Before exploring the educational institutions, subject of the study, there will be an overview to have a look at the education in the UAE. It would be an excellent start, to begin with, a brief from the history of education in UAE order to pave the road towards the educational system's current position and its efforts for transmission. The concrete educational progress in the United Arab Emirates occurred in 1962. It started with some (20) schools, fewer than 4,000 students, mostly males. However, and according to (Wekipedia.org 2019-Education in the United Arab Emirates), education in the UAE started in the early 1900s when wealthy pearl merchants in Dubai, Abu Dhabi, and Sharjah, established the first local three schools. These schools staffed with foreign teachers who came from the entire Arab World to teach subjects like reading, writing and Islamic studies. The economic crisis of the 1920s and 1930s forced schools to close. The Japanese competition in the pearl industry incepted this crisis.

Different British schools reopened later in Sharjah in 1953 and Ras Al Khaimah and Abu Dhabi in 1955. Abu Dhabi began making significant profits from the oil in 1960(encyclopedia.com). The UAE emerged after that to transmit from a deprived country to become one of the richest and

vastly growing countries in the world (encyclopedia.com). Many essential social services were not available in its infrastructure in 1962. There were no hospitals, housing, and airports, and there was a significant shortage of workforce. However, the UAE was able to develop its public national educational system within thirty years. It is like what Western countries have established over a hundred years (encyclopedia.com). Few countries in history have experienced the UAE leap and its development shift that happened in less than four decades (encyclopedia.com).

The following summary of the historical systematical growth of the UAE educational system:

(1) Al-Mutawa's teaching based on memorising the Holy Quran and Hadith, as well as writing and knowing the pillars of Islam.

(2) The teaching scholars had a comprehensive knowledge of the fundamentals of doctrine, jurisprudence, interpretation, grammar, dictation, history. They held their various religious lessons in the corner of a mosque or the house of the jurist himself or the house of a merchant.

(3) New or semi-formal education appeared within the period from (1907 to 1953 AD).

(4) Pearl merchants opened Enlightenment schools in the cities. They brought scientists to manage these schools and supervise the organisation of the lessons and the progress of education.

(5) The first school in Dubai incepted in 1912.

(6) The establishment of the first school in Abu Dhabi was in 1930 as well as several schools of similar styles emerged in other UAE cities.

(7) Evolutionary education continued until the late 1940s, as many factors led to the suspension of these schools. The spread of the economic recession and the emergence of artificial pearls and the impact of the Second World War on trade reflected negatively on these pilot schools.

(8) The first school in Sharjah founded in (1935). It has developed into a system of formal education.

(9) By 1964-1965, Abu Dhabi schools were six including (390) boys and (138) girls, (33) teachers staffed them. In Dubai (3572), students in (10) schools and (137) teachers.

(10) During 2000-2001, 314,217 students, 710 schools, and 27,493 teachers existed in UAE schools.

(11) The development of formal education occurred in two phases. (a) The first based on the local governments and the knowledge departments during the 1960s. (b) The breakthrough of education took place on December 2, 1971, the day of the UAE's inception.

 (12) The (MOEY) Ministry of Education and Youth incepted in (1972). It oversaw the supervision of education. During that period, government public schools, state-of-the-art equipment, and educational missions from various Arab countries came to help in the development of modern education that is infused by the ongoing advancements in the UAE.

(13) The current educational system established in the 1970s in the frame of unity. It consisted of four-levels covering the early education for (KG-4-5 years old), primary education for ages (6-11), intermediate education that includes ages of (12-14), and secondary that include teenagers (15-17) levels. They formulate 14 years in total(uaecd.org).

3.5 Gifted Programs

Highly able students need additional gifted programs to satisfy their needs, match their abilities, and contribute to the development of their thinking skills. (NAGC) "organises advocacy for the highly able students at the federal, state and local levels" (www.nag.org). It appeals to other

advocacies who work at home, schools, and communities to support the highly able students and support its efforts to fulfil their requirements. (NAGC) Advocates for these gifted student's "need for day-day-quality programming, a supportive learning environment and effective laws and policies to promote programs and services in which these highly able students thrive" (www.nag.org).

Advocates for the needs of gifted students base their argument on the positive impact of schools and universities when all students, including gifted students, have opportunities to make continuous progress and reach their potential. The impact also reflects in imposing changes on policies, practices and laws that affect the education of gifted students(Purcell, J.H. and Eckert, R.D., 2006). Consequently, a guidebook to inform the educators about gifted education and how to design services and programs for high-ability learners composed by (Purcell, J.H. and Eckert, R.D., 2006) included different authors who shared their articles and their experiences and knowledge on the effective gifted programs and how to effectively advocate for gifted students' requirements. A story provided in one of the guidebook articles, cited an example of effective advocacy reflected in the attitude of a mother of a talented young girl who moved recently to a poorly serviced district that has no gifted programs in their school. This mother, who was concerned about her daughter's needs was aware that she had to advocate and prove that gifted students, including her daughter, need additional programs to thrive. This mother succeeded in launching a campaign after spending one year studying and searching in the subjects related to gifted children and school. Her first success was in building a new playground for the school children. However, she joined a group of advocates for gifted education programs and the need to implement them in schools. Through this group, they were able to educate school and district

administrators about the need to create a suitable program for gifted students. These defenders succeeded in reaching their goal (Purcell, J.H. and Eckert, R.D., 2006).

3.6 Definition of Gifted Programs

Gifted programs are tools used by teachers or educators in schools or community centres to educate those students with high abilities and gifts. These programs are supposed to be challenging to these students and enable them to progress in schools and life continually. These programs can be in different types and forms such as enrichment or accelerated. Highly able students need gifted programs because general education is not able to provide them with their needs to thrive. These programs influence students' futures by effecting their plans according to many studies that reported the impact of these programs on the gifted students and their achievements. Students who participated in gifted programs could maintain their interests and talents over time, and they continued motivated within their creative, productive work after school and university graduation.

3.7 Gifted Programs Requirments

"High-quality gifted programming should be planned, maintained and evaluated carefully (www.nag.org). According to (NAGC) practical programming standards, there are seven criteria to consider when planning and maintaining and evaluating the gifted programming and they are: "Program Administration and Management, Design, Evaluation, Socio-emotional Guidance and Counseling, Professional Development and Student Identification(nag.org).

According to (VanTassel-Baska, J., 2009) The services and education programs of highly able students should be consistent with the tools and the assessment methods used to screen students in stage one. The provided gifted programs should be regulated. The regulations include having an

accurate definition for each program and the service components and observing the following controlling guidelines:

(1) Gifted programs must include both the grouping and the resource room, transferring classes and individual classes. At least to provide one of these options in order to ensure the delivery of appropriate service to the gifted student.

(2) Programs and services duration should be at least (150) minutes per week with at least one hour per week for teacher planning.

(3) To modify the curriculum in a way that makes every subject in it related to gifted students. They must include pace, complexity, depth, challenge and creativity based on specific criteria that require the development or use of a curriculum tailored to the educational needs of gifted students.

(4) The measurement procedures used in gifted programs are matching the specific curriculum objectives including Standardized tests, performance-based tasks and personal portfolio datasheets.

(5) Develop an expanded program to accommodate gifted and at-risk students.

(6) Accelerated education for gifted students should be a permanent option in the gifted education program.

(7) Include emotional and social support for highly able students'development as part of the service delivery plan.

(8) Provide academic guidance and career guidance for ages from six to twelve with the need to participate in advanced courses and the use of student assessment data to guide them in terms of options for college and post-graduate.

(9) Establish a local advisory council that provides guidance on the plan for the provision of local or other services at the state level and is approved by the local educational institutions or councils.

(10)   Develop complementary policies related to gifted services and program delivery (VanTassel-Baska, J., 2009).

3.8 Gifted programs in the UAE

Ever since 1979, the educational system in the UAE depended on the (MOE) to oversee the different educational needs. UAE unity infused a unique collaboration among the seven Emirates by employing regulations and various plans and strategies (AlGhawi, M.A., 2017). It managed that with the aid of national planning and policy integrations in many areas. However, and according to what the unified UAE School Inspection Framework indicated; each emirate advanced its educational reform in its approach. The inspection framework supported the inspection of all schools in the UAE that provide education for students within (KG-12) (moe.gov.ae). The structuring of school inspections depends on six performance standards:(1) achievement ;(2) personal development ;(3) Teaching;(4) Curriculum;(5) Protection, guidance and support;(6) management and Leadership(moe.gov.ae). The definition of special Education is according to this framework, interprets it as the education provided for people with a disability or any recognised disorder named in the UAE as the "people with determination". (moe.gov.ae) "Therefore, the presentation of special education programs in the UAE only accepts and applies to individuals with disabilities. However, gifted and Talented individuals 'education might take place if the (MOE) develops a specific national policy to unify the gifted and talented definition, identification, and development services. Special education viewpoint according to the (School for all), that every student is a unique individual and needs to be surrounded by a thriving environment that keeps

him or her safe, takes care of his or her abilities and support his or her needs to thrive. This gifted education should look at the highly able students as the most valuable investment who need all types of support. It should also aim to provide them with the kind of learning that helps them study in a challenging environment to thrive. It aims to provide them with regular constant practice and equitable development, too (moe.gov.ae). The UAE undertakes using all available sites and sources to plan and implement the development programs that ensure each student has an Individual Education Program (IEP) or an Advanced Learning Plan (ALP) according to (the General Rules for the Provision of Special Education Programs and Services in private & public schools). Consequently, the role of the UAE educational institutions is to satisfy the country's potential and requirement. They should ensure implementing a proper education for all and to apply the appropriate identification and development programs and procedures to identify and nurture gifts and talents.

The development of gifted education is not only a new process in the UAE, but it is a relatively new strategy in the globe (nagc.org). However, the UAE is witnessing an increasing public awareness by the power of continuous exchanged debates in cultural and educational forums which resulted in a corresponding proliferation of gifted programming in the UAE. The definition of such programs is enrichment activities provided after school, in summer camps, at government educational initiatives, and other offered programs. These varieties of programs have sparked controversies and debates regarding what are they providing and if they are benefiting the highly able students'; how are they nurturing their potentials and to which category they should provide services. According to an international study, various facets contribute to the success of these programs such as optimistic expectations, focusing on mastery, cooperation, positive relationships amongst students and teachers, and embedding school elements within them (Martin,2005).

Therefore, this requires establishing policies and strategies that regulate these enrichment programs, or any other programs aim to form part of the gifted education.

Finally, gifted education has much to offer the UAE National Agenda. It helps the country face new challenges, meet their requirements for advancement in the 21st century and boost emeriti youth's future ambitions(vision2021.ae). Therefore, all controversies and underlying issues need thorough examination, such as the debates regarding the definition, identification, evaluation, and assessment of the identification and the development programs. Learning more about the UAE educational institutions and their role in the development of this category helps understanding how many efforts are collaborating to support this field and what are their methods in doing so.

3.9 Identification of the gifted and talented in the UAE

According to the General Rules for the Provision of Special Education Programs and Services in private & public schools and the Inspection Framework (moe.gov.ae), identifying and distinguishing between the highly able students and the other learners is not an isolated activity, but it drives through a range of methods. These methods are represented in a variety of tools and styles such as an accurate observation of the students; conducting parents' and students' interviews; using teachers 'screening checklists; applying student's surveys; using self-reports; standardised tests and assessments of cognitive development and ability that are conducted explicitly by psychologists. Lately, the (MOE), Ministry of Education, has ratified a cooperation agreement with the Hamdan Foundation in 2018 (moe.gov.ae). This agreement was intended to implement the Identification of talented students in many schools across the UAE. The identification is limited to only students in grades 4-8. (moe.gov.ae, 2019). Accordingly, highly able students will enrol in specialised development programs created for them. These programs

are supposed to provide the identified students with services that will be able to meet their requirements in line with the UAE National Agenda. (MOE, gov.ae, 2019).

According to (ha, 2019), the identification stage is the essential stage that guides and controls the highly able students' enrollment in the appropriate development programs(ha.ae). Once determining the type and level of talent, they will enrol in the suitable programs to nurture their needs. Giving them advice and guidance will help them receive the type of education and development that most suit their talents and gifts (ha.ae). The followed criteria in the identification process include the IQ tests and academic achievement as well. Quantitative tools used by (NPGP) include (1) measurement of the mental abilities, (2) Identification Kit created to identify gifts, (3) Achievement Tests used to estimate their academic abilities, and (4) Testing how candidates creatively solve the problems. Qualitative tools used by (NPGP) include (1) Portfolio, (2) Note Cards, (3) Behavioral Statements, (4) Personal Interviews, and (5) List of professional interests. The (NPGP) in (HA) has developed an Identification Kit to identify the academically gifted students by measuring their diverse abilities. This identification kit was developed in collaboration with international experts and designed to commensurate with the UAE environment.

Table 7. Three stages of the identification process by (NPGP)

NPGP	Screening	Narrowing	Inclusion	Quantitative	Qualitative
	It depends on teachers, parents, peers, or self-nomination.	Identification of nominated students.	Interview the selected students after the narrowing stage to assign them to educational programs.	IQ test -Academic achievement test	Portfolio Note Card Behavioural Statements Interviews List of professional interests and preferences

(ha.ae)

The advanced identification portfolio recently developed in 2019 is to care and look after each gifted student. A scientist is responsible for monitoring the gifted child throughout his educational

progress. It will tailor a development plan for the gifted student through his life journey according to (ha.ae).

3.10 Assessment of progress

The (MOE) inspection framework describes the assessment of the highly able students as an ongoing Pre and post-assessments to help teachers determine what students already know in order to provide them with more challenging programs. (moe.gov.ae) However, the post-assessment is not clear in the inspection framework, and it is not evident if educators should use the assessment before or after the programs in order to differentiate the curriculum, the teaching instructions, and to monitor the gifted and talented student's advance performance and development. The results of both assessments should enable the teachers to evaluate the programs and be able to amend and improve them as required.

3.11 UAE Educational Institutions

Background information regarding the five institutions chosen for this study is included in the next section to provide a context for gifted education and programs provided by these authorities. According to the latest update posted by the UAE Government on December 16, 2018, on the (government.ae) official website, there are two levels of authorities concerned on education in the UAE, (1) Federal level and (2) local level.

At the federal level

3.11.1 The Ministry of Education (MOE)

The Ministry of Education (MOE) oversees education through all phases and stages in public and some private schools in the country, including schools and colleges. Higher education is also within its field of supervision since 2016. The Ministry aims to build and manage an educational and innovative system for a highly competitive knowledge society that includes all age levels and meets the needs of the labour market(moe.gov.ae).

At the local level. Emirate of Abu Dhabi

3.11.2 The (Abu Dhabi Department of Education and Knowledge) (ADEK)

The establishment of (ADEK) in 2005 to make it responsible for overseeing development initiatives in all sectors of education from the foundation and secondary levels to higher education, technical, vocational, and education for the older students in Abu Dhabi.

Emirate of Dubai.

3.11.3 Knowledge & Human Development Authority (KHDA)

The (KHDA) established in 2006 to become responsible for monitoring private education and schools in Dubai (government.ae). KHDA, on the other hand, it inspects the quality of teaching, training, and other elements of schools' inspection in Dubai. It also works to provide different types of support for students, schools, universities, and relevant parties in this area. It includes several institutions, involving the school education institution and the school supervision system in Dubai.

Emirate of Sharjah.

3.11.4 Sharjah Special Education Authority (SSEA)

In November 2018, the Government of Sharjah issued The Emir Decree No. 45 of 2018 to establish Sharjah Special Education Authority in the Emirate. The Authority follows the Central Government of the Emirate of Sharjah and enjoys the legal and civil personality necessary to carry out all acts and legal acts to ensure the achievement of its objectives.

3.11.5 In the Northern Emirates

The (MOE) oversees schools in the northern Emirates as well. Schools in Sharjah, Ajman, Umm Al Quwain, Ras Al Khaimah, and Fujairah are all under supervision of the Ministry of Education (MOE). Each district in each Emirate is responsible for supervising schools within their area (government.ae).

3.12 Education in the UAE

 Present & Future

3.12.1 The UAE National Agenda

The UAE National Agenda launched to achieve the (UAE Vision 2021) when it is the UAE golden jubilee celebration in 2021 (vision 2021.ae). Education is a priority for the UAE as one of its essential focuses and objectives. The (MOE) according to this vision, has developed the Education 2020 Strategy that includes five plans for the intended educational improvement in the country. It aims mainly to improve the educational system and the style of teaching and learning (government.ae). The (MOE) strategy of (2017-2021) for all age groups is to "develop an innovative educational system to support the building of a knowledgeable and globally competitive

society"(government.ae).This strategy based on values such as equality and justice, science technology and innovation, commitment and transparency (government.ae).

Curriculum development planned from (2015-2021). The (MOE) implemented significant improvements and reforms in the curriculum to prepare the students for the future. This curriculum focuses on developing the student's skills and strengthening their abilities along with their national identity and innovation. Education will be according to (MOE) in two tracks, general education and advanced education. Such reforms would allow the students to meet the needs of the job market and facilitate the direct enrolment of the high school graduates in the international universities without the need for a foundation year (government.ae).

Therefore, eight objectives determined to be on this agenda as the primary factors and the sectors that would lead the UAE to be among the most prosperous countries in the globe. Providing an excellent education is one of the main objectives. These purposes target essential areas in education related to the development of students, teachers, and school leaders" (www.moe. gov. ae).

Currently, numerous educational authorities in the UAE oversee, support, and elevate the UAE's intended strategies for an excellent education. The leading institutions, the focus of this study, are responsible for setting and developing education policies and strategies for schools in the country. They are responsible for the gifted and talented development as well.

Therefore, this chapter will look deep in these institutions concerning their role in implementing the identification and development programs for the highly able students. The exploring approach will be in case studies methodology. All information obtained from and about these institutions will follow a form that makes it possible at the end of the chapter to discuss and compare their roles towards these extraordinary students in the UAE.

3.13 First: (MOE) Ministry of Education

(Information accessed through the open data provided by (government. ae)

Ministry of Education (MOE) responsibility is to elevate and implement development, improvement, and radical changes in the educational frameworks in the UAE. Its philosophy is in line with modern educational philosophy. It builds an educational system for the whole country based on establishing the skills of the 21st century through the curriculum, interactive activities, and scientific exploratory trips. It enhances innovation in UAE schools. The Ministry furthermore works to adapt its curricula according to the requirements of the labour markets in order to keep up with the country's plans. The Ministry has provided a path for vocational education through the establishment of vocational and technical institutes.

The (MOE) establishment reflected the values of the UAE that appears in the strategic plans, organisational structures, and development initiatives that achieve the indicators of the national agenda. The ministry accordingly has exerted enormous efforts to sharpen and strengthen the youth skills from an early age. The (MOE) vision that links with the UAE's vision was to provide these gifted and talented with the required skills to enter the future labour markets. It provides the best systems for intelligent learning by working on two tracks. The first track is to deliver the necessary infrastructure, rehabilitation, and development of youth skills through the training portal. The second track is to enable students through specialised curricula and Pioneering activities that mimic the future and equip young people with the skills of their time.

Table 8. MOE Vision & Mission- Strategic Objectives 2017-2021 *(government.ae)*

MOE Vision	MOE Mission
Innovative education, a pioneer in knowledge and a leading global society.	Developing an innovative Education System. Enhancing knowledge and globally competitive society, including all age groups, to meet labour market demands. Ensuring the quality of the ministry of education outputs. Ensuring the quality of the (MOE) provision of best services for all internal and external customers.
Ministry of Education Strategic Objectives 2017-2021	
- Ensure implementing equal education, including pre-school level.	-Attracting and qualifying students to enrol in higher education institutions, commensurate their skills with the needs of the labour market
- Achieve outstanding efficiency of the leadership and educational bodies.	-To foster a culture of innovation in the institutional work environment
- Ensure implementing a quality, efficiency, and governance of educational and institutional performance	- Enhance scientific research and innovation capabilities according to globally competitive standards
- Ensure safe, supportive and stimulating learning environments.	- Ensure the provision of management services following all standards of quality, efficiency, and transparency

Self-education is the legitimate form of education practised in the emirates of the United Arab Emirates. It started long before the existence of unity, while educations are the means of transferring to a skill-based knowledge. The transmission of education from a traditional style and method to a further modernized style undertook four iterations of development including the "Mutawwa" who is the old name of the teacher who used to teach in the traditional classes named "Katateeb", (2) The improved educational Circles, (3) The organized systematical Education, and lastly (4) The Modernized Educational System (Alnabah, 1996). In (2008), the (MOE) implemented the primary education system in the country to organise public education. This system involved the 14 years of education starting from (KG-12)(Alhebsi, Pettaway &Waller, 2015). Currently, UAE established a wide range of public and private schools for pre-university education that consists of: (639) public schools with the total of (287,725) students, (23,146) teachers, (580) private schools with a total of (793295) student, (46,870) teachers from (187) different nationalities. Higher education becomes within the (MOE) field of supervision since 2016. It aims to build and manage an educational and innovative system for a highly competitive

knowledge society that fulfils the needs of the graduates and open the doors for them towards the labour market (gov.ae.ae-open data).

3.13.1 Emirates Foundation for School Education

The year 2016, witnessed the establishment of the Emirates Foundation for School Education as an independent organisation to facilitate public-private funded initiatives that aim to improve the welfare of youth across the UAE. The foundation, following independent powers under the Council of Ministers Decision No. 8. Established to promotes the education sector and its efficiency. It provides schools with the required education and implements policies, strategies, standards, and controls related to the education sector, including vocational, technical, and continuing education(emirates foundation.ae).

3.13.2 Development of Gifted and talented

Special education in the (MOE) is only concerned about providing the disabled individuals a unique environment that helps them grow and mature socially and emotionally. It comes within the (MOE) objectives listed in the School Inspection Framework and the General Rules for the Provision of Special Education programs and services in the UAE. The (MOE) role is to provide highly able students with services in all public and private schools. It is also responsible for providing schools with qualified professionals to educate these unique students. The (MOE) as well must exert efforts by implementing an ongoing professional development for the teachers. They need consistent training by the best internationally acknowledged practices and education in the areas of special education (moe.gov.ae).

The (MOE) according delivers various services to these highly able students, including development programs and any other enrichment courses or training given to them inside or outside the regular classes. Some other services, assigned to the (MOE) involves giving students assignments as individual projects and studies to challenge their abilities. Another method involves providing them with specific educational plans and lectures, along with debates to sharpen their knowledge and skills. Enriched Activities involve independent studies and employment guidance (moe.gov.ae).

The gifted student that needs gifted education according to (MOE) is the one "who exhibits willingness, ability, or performance in the fields of (STEAM). Performing arts like painting, music, and sports comprise the general framework for highly able students and what identifies them according to the (MOE) standards and requirements. Development cognitive skills include" critical and creative thinking, decision-making, and problem-solving, and personal and emotional development skills". These skills develop through personal self-skills, learning skills, listening, observation, the use of research skills, reference materials, research projects, the use of a desk and electronic references, and the use of community resources(moe.gov.ae).

3.13.3 MOE Definition & Identification of Gifted and Talented

Gifted students, according to the "Differentiation Model of Giftedness and Talent" refers to the "student who is untrained and spontaneously expresses exceptional natural ability in various areas of human's capacity"." Giftedness includes "intellectual, creative, social and physical ability" (moe.gov.ae). These students' display exceptional potential, though, they might underachieve. The talented student is "the able student to convert his or her "giftedness" into performance and utilise it." Talented students usually demonstrate exceptional levels of competence that shines in the

particular domains of human ability." (Inspection Framework (moe.gov.ae). The students'
identification is an isolated activity that aims to define students with extraordinary abilities.
However, the identification stage is the first stage. A range of other following provisions will
provide these highly able students with customised learning programs in the next stages. Certain
aspects are taken into consideration when preparing these developmental programs. They should
follow an individual plan to provide these gifted and talented students with their equal education
according to the gifted education international standards (moe.gov.ae). These aspects comprise of
diversity in methods and programs, pace, ongoing assessment, groupings, the level of work, and
enrichment programs.

3.13.4 Example of a development program at (MOE)

(1) Masterpieces Program

In 2017, the Ministry of Education collaborated with local and international partners to work on
the "Masterpieces initiative".It aims to evolve and improve students' talents and capabilities in
specific fields of arts. Its goal is to uncover students' talents in six fields of arts and culture such
as Music; Theatre; Visual Arts; Culture; Cinema, and Poetry. This initiative, according to
(moe.gov.ae), provides specialised workshops and training seminars to help develop and nourish
students' talents and skills through local and international professionals. The Masterpieces
received the number of (1300) applications for registration in 2017 that marked its first launch.
However, the jury ended up identifying 183 students as talented. (al bayan. ae, 2017)

(2) Our Ambassadors Program

The establishment of this initiative was to employ active, talented students who can represent the
UAE talents in the areas of art, music, theatre, and heritage. In 2018 it launched its third round. It

targeted (1080) students from both public and private schools, universities and teachers. The (MOE) developed eight programs included within this program: Ambassadors for the Future, Innovation and Giving programs, the Education ambassadors Program, Ambassadors of Diplomacy, Sports Excellence, Masterpieces, and Higher Education Ambassadors Program for university students. Participants in these eight programs will travel to visit community service centres in 10 destinations in the world within the US, Europe and Canada(moe.gov.ae).

Talents Identification for Masterpieces

To enrol in "Masterpieces" programs, talented students must register through the (MOE) website and wait for the jury decision. This jury is responsible for identifying the eligible participants in this program. There is little information regarding the sequence of the identification process or the development programs displayed on the (MOE) official website.

3.14 Second: (MCKD) Ministry of Culture & Knowledge Development

(Information accessed through the open data provided by (government. ae)

Table 9. MCKD Vision & Mission

MCKD Vision	
The UAE should be a knowledge hub and a pioneering model that cherishes its national identity and culture around the globe.	
MCKD Mission *(mckd.gov.ae)*	
To promote the UAE culture and to preserve its national identity through the empowerment of creativity and innovation.	
Persevere the national cultural identity.	Enable the UAE cultural sector.
Enhance the contribution of the cultural and creative sector to support developing a sustainable knowledge-based economy.	Strengthen the UAE's position on the global cultural map.

(mckd.gov.ae)

The Ministry first incepted in 1972 in the name of the Ministry of Information and Culture. It was under the Interim Constitution of the United Arab Emirates in Article (58, the Federal Decree No. (1) for the year 1972 on" the terms of reference of ministries and powers of ministers." In 2006, Decree No. 1 of 2006 amended some provisions of Federal Law No. (1) For the year 1972. The Ministry of Culture, Youth & Community Development created to replace the Ministry of Information and Culture. In February 2016, a decision issued by the Council of Ministers to add some competencies and change the name to the Ministry of Culture and Knowledge Development (mckd.gov.ae).

3.14.1 Gifted and talented identification and development
Policy for Talented

The UAE Government assigned to the (MCKD) the development of a national policy for talents' identification and development in the UAE. The seven main themes adopted within its tasks intended to start the achievements of the first cultural agenda of its kind. It represents the strategic framework for the development of the cultural sector in the UAE (2018 to 2031). The policy aims to support the development of talented people in cooperation with competent authorities basis on the differentiated needs of talented individuals in the fields of Arts & Culture. The policy is a regulator for discovering, supporting, training, and motivating this category to produce creative industries. Such a policy is a crucial support for talented people in the cultural sector in the UAE. The (MCKD) held several workshops and brainstorming labs in collaboration with the concerned institutions, authorities, and other stakeholders to oversee the policy needs and support its formulation (mckd.gov.ae).

Table.10. (MCKD) Talents' Nurturing Policy Themes

Identification	Support	Train	Motivate
Talents' unified definition that reflects the concept of talent in the cultural sector, including all categories of talents, develop a plan for discovering and implementing development programs and establish a gifted and talented comprehensive database.	Talented individuals need a differentiated supporting system. This policy regulates and facilitates all types of support required and needed by these talents.	The policy develops a plan to help these talents train and sharpen their skills. It provides diverse and sustainable quality training programs within and outside the UAE for all talents in all domains of Arts and Culture.	To motivate talented persons in the sectors of Arts and Culture. To create a thriving environment.

3.14.2 Example of an (MCKD) Development program

Nurturing Talented Authors

This program is a practical application for The "National Reading Strategy "launched and adopted by the Ministry of Cabinet Affairs in the UAE. The program responses to the issue of weakness of reading in the Arab world and the UAE. (O'Sullivan, 2004). The strategy launched in May 2016 - 2026. The launch of the program was in 2017. It aimed to support a promising generation of talented writers and authors in various fields of literature. Talented writers need support and cannot make it by themselves, according to the (MCKD). Talents' support within this program takes a systematic and thoughtful form. The program aimed at enhancing the value of reading. It motivates young people to write and produce literature. The Ministry seeks to involve all talented people in the program. It, therefore, built the program in cooperation with universities, schools, and local authorities in relation. This program is an integrated curriculum that includes several authors, academics, and supervisors from different domains of talents. It includes a set of basics of literacy curriculum, writing theories, workshops, training, re-reading, and drafting of writings in the presence and supervision of a group of illustrious writers who will reveal their writing methods

and secrets. The program also provides an opportunity to translate the book into several languages and to promote the winner internationally (mckd.gov.ae)

The Nurturing Talented Authors program is for the young writers who display talents in all types of literature. The program has two levels: Beginners and advanced writers. It constitutes an integrated literacy curriculum prepared with essential experiences of training and education.   It targets school and university students and creative writers from the age group 15 to 35 years. The cultural centres, traditional media, social networking sites, schools, and universities announce the program and call for participants. Applicants must be UAE nationals. The submission of the filling will be through the MCKD website. The application is subject to approval by a jury. A committee forms to investigate all applications that will nominate the suitable and eligible participants according to the sample extracted from their writings. Another way of identification will apply during the «Cultural Summer Camp." The formulated committee by (MCKD) will observe the participants during the program through all the emirates. The committee identifies several talents, listens to the views of their peers, and gets recommendations from the camp supervisors. The committee discusses the possibility of developing these nominated talents during their attendance in the camp (MCKD.gov.ae); (al-Ittihad. ae, 2017)

The development process constitutes a series of practical writing workshops.

(1) Training on publishing and distribution. (2) Training on communication and marketing. (3) Acquiring valuable critics' opinions. (4) Communicate with skilled writers. (5) Communicate with auditing and proofreading. (6) Communicate with nature and learn how to reflect. (7) Get support to become a member of literacy associations. (8) Getting the translation privilege to be able to communicate with the world. Furthermore, the program paused currently for essential

improvements. It will undergo a thorough transformation to convert to a digital online development program.

3.15 Third: (ADEK) Abu Dhabi Department of Education and Knowledge

Table11. ADEK Vision & Mission-Strategic Objectives *(adek.gov.ae)*

ADEK Vision	
They are providing a world-class education system that will thrust all students to take full advantage of their potential and abilities to qualify them to compete globally.	
ADEK Mission	
Graduates of world-class students, possessing a keen cultural and heritage awareness, and qualified to meet global challenges.	
The core values of the Board at ADEK are the developed rules and principles that will ensure the continuous improvement of performance levels.	
ADEK Strategic Objectives	
To develop the strategic and executive plans for education in Abu Dhabi. The approvals received from the Executive Council that supervises their implementation as well.	Supervision of the education sector following internal regulations, legislation, and conventions in force locally and internationally, in cooperation with the concerned authorities.
Monitor the commitment of the entities in the Department of Education and Knowledge in implementing strategic and operational plans for the education sector.	To license all private educational institutions in Abu Dhabi and monitor their commitment to providing high-quality educational services following the existing regulations. Collaborate with the relevant authorities.
Supervising all the departments of the Education and Knowledge Department concerning their revenues and expenses, and the extent of their commitment to their terms of reference and their approval of the strategic and operational plans.	Provide recommendations and suggestions regarding fees and approval by the Executive Council following established procedures.
To regulate the education sector through the development of policies, standards, regulations, and executive and operational decisions.	Prepare periodic reports and analytical studies related to the competences of ADEK and submit them to the Abu Dhabi Executive Office.
Other functions or functions assigned to it by the Executive Council.	

On September 10, 2005, His Highness Sheikh Khalifa bin Zayed Al Nahyan, UAE Supreme Commander and Commander-in-Chief of the UAE Armed Forces issued Law No. 24 of 2005 establishing the Abu Dhabi Education Council (ADEC) (taleem.ae).

In September 2017, H.H Sheikh Khalifa bin Zayed Al Nahyan, President of the UAE, issued an Amiri Decree to change the name of the "Abu Dhabi Education Council" to the "Department of Education and Knowledge". Accordingly, Law No. (9) Of 2018 on establishing the "Department of Education and Knowledge", to replace the "Abu Dhabi Education Council" (taleem.ae).

Under the law, the primary role of the Department is to develop the education system in the Emirate of Abu Dhabi, to foster a culture of creativity, excellence, and sustainability and to focus on humans' development, and their social, and economic capabilities as well(taleem.ae).

3.15.1 The role of (ADEK) in Education

The Department of Education and Knowledge has been responsible for the management, direction, adoption, and implementation of developments in the education strategies in the Emirate of Abu Dhabi(adek.gov.ae).

3.15.2 (ADEK) Gifted & Talented Development Initiatives

3.15.2.1 Definition of gifted and talented

A talented student is an individual who possesses unique skills and abilities in areas such as speech, poetry, painting, handicrafts, sports, or theatre(adek.gov.ae) The individual's high ability to possess or have significant abilities in one of the areas that highlight intelligence, creativity, or academic excellence. The talented student usually performs exceptionally and needs circumstances to enable him to meet his educational needs in the regular classroom. Teachers as well provide these highly able students with support and their essential needs from education(adek.gov.ae).

3.15.2.2 Development Programs & Initiatives

ADEK development services include enrichment programs in regular classrooms or educational resource rooms, assignment of students to individual projects and studies, lectures, discussions, or seminars and to participate in educational competitions. Consequently, (ADEK) has launched several initiatives to develop the educational system in Abu Dhabi and help talented and gifted students obtain the necessary skills and abilities to participate in the socio-economic development of Abu Dhabi. (ADEK) Ratified a joint agreement with the "Special Education Department" at the Faculty of Education at (UAEU) University of the United Arab Emirates (cedu.uauu.ac.ae). The program includes a professional development program for teachers who work in Abu Dhabi Public Schools. This program is in cooperation with (MOE) in order to identify the highly able students and nurture them. The program targeted (55) male and female teachers in various disciplines. This program aims to develop the capacity of Abu Dhabi schoolteachers to teach these students with high abilities. The program enables them to identify these extraordinary students in order to provide them with alternatives and the unique experiences that respond to the particular requirements of the country. The program enhances teamwork skills and spirit through various activities and workshops. Teachers participating in the program get educational film samples, guidance on how to implement the strategy, educational activities, assignments, duties and tasks, evaluation criteria for lesson plans, final projects and papers, articles of impressions, and personal opinions, as well as additional sources(Adek.gov.ae).

3.15.3 An example of a development program at (ADEK)

3.15.3.1 Mawhibaty Programs

(ADEK) Launched Mawhibaty program in collaboration with "The Department of Culture and Tourism in Abu Dhabi" (DCT). This program aims to nurture talented students who exhibit abilities in the area of visual and performing arts. This program is to all talented students in arts from grades 1 to 12 in public and private schools in Abu Dhabi. The program aims to discover and develop these students who are outstanding and possess talent and desire in the fields of visual and performing arts. Talented students get support from specialised technical centres throughout the academic year. Talented students fill out an online application form Parents or teachers of talented students may register the talented student too. The application will not go through unless the electronic form contains samples of the student's work (artboards, audio recordings, and video clips). A team of experts and specialists will arbitrate these applications and nominate all students who are eligible to join the program. The program includes a clear plan of action that contains all the expected outputs, such as the timeframe, required resources, and the development of the identification tools. The design of the program follows a model for evaluating potential candidates. (ADEK) Electronic platform for the registration of talented students in English and Arabic from grades 1 through 12. The electronic platform is open for the enrollment of any talented student. After filling the electronic application form, a team of experts will evaluate all applications and communicate with eligible students for further evaluation and interviews. Art experts will perform the selection procedure. The two phases of evaluation and selection are (1) the arbitration of students' works of art (visual and performance) by a group of specialists from each of the "Department of Education and Knowledge" and the "Department of Culture and Tourism" in Abu Dhabi. (2) Interviewing the nominated students to allocate them in workshops conducted by local

artists and specialists. (ADEK) has already organised workshops for (600) teachers in Abu Dhabi schools to develop their professional abilities and skills to identify talented students and design talent development programs in specific domains of talents(Adek.gov.ae).

3.16 Fourth: (KHDA) Knowledge & Human Development Authority

Table 12. KHDA Vision & Mission-Strategic Objectives

KHDA Vision	
An integrated educational system.	
KHDA Mission	
To improve the quality of education and access to knowledge and human development through community partnership(*khda.gov.ae*).	
Strategic Objectives	
To improve education and its outputs in all its stages and forms in line with the economic and social development witnessed by Dubai and the UAE, thus contributing to the transition to the knowledge economy.	To launch a range of projects and initiatives that will benefit all stakeholders in the education and human development sectors, from students, parents, teachers, and institutions of both" public and private sectors".
Access to knowledge, education, learning, and human development through community partnership.	

The (KHDA) was established by (Decision 38 of The Dubai Executive Council in the Government of Dubai in 2007) to be responsible for elevating the quality of education in private schools in the Emirate of Dubai. Its responsibility is to provide support to all stakeholders and sectors related to education in Dubai. These include "schools, universities, students, parents, educators, investors and government partners". Its role is to collaborate with them to develop a high-quality education sector that promotes happiness and good living. A Supervision Agency established in the (KHDA) issued by the (Dubai Executive Council following Decision No. 38 of 2007), to provide comprehensive information on education standards in Dubai and to support planning for school-level development and policies. Several methods, including annual school inspections, meetings

with parents, and dialogue groups, as well as questionnaires aimed at teachers, parents, and students, will help (KHDA) to achieve that(khda.gov.ae).

3.16.1 The Role of (KHDA) in Education

(KHDA) Provides a comprehensive and reliable School Monitoring System to assess the standards and the performance of private schools in the Emirate of Dubai (khda.gov.ae). The educational standards are developed and regularly reviewed by the (KHDA) in collaboration with qualified educators and supervisors for this mission. These educators represent a broad spectrum of the different educational curricular in Dubai. (KHDA) Seeks to participate in the international assessments with the support of the school supervisory body and through school inspections. It collaborates with schools to provide Government of Dubai, and many other stakeholders a detailed and accurate study of the quality of Dubai schools' education compared to the performance of education in the world-leading countries(khda.gov.ae).

3.16.2 KHDA definition & Identification of gifted and talented

(KHDA) Adopts the (MOE) definition for gifted and talented. The definition considers the "Differentiation Model of Giftedness and Talent (moe.gov.ae)." The definition of giftedness refers to a student with new and spontaneously exceptional natural abilities. These abilities are displayed and expressed in one or more domains of human ability. They include the intellectual, creative, social, and physical abilities(moe.gov.ae).

A talented student refers to" a student that could transform his or her giftedness into exceptional performance through hard work and within the appropriate environment." The identification methods depend on a range of tools indicated and specified by the (MOE) Rules and provisions

handbook. The methods administered by psychologists include accurate observations, interviews with parents, and interviews with students with higher abilities, teachers' checklists; student interest surveys; self-reports, in-depth student's interviews, standardised tests, standardised assessments, evaluation, and assessment of cognitive development, and ability (khda.gov.ae).

3.16.3 (KHDA) Gifted & Talented Developmental programs

3.16.3.1 Examples of (KHDA) development program

(1) Human Talent Map

(KHDA) Works currently on creating a human talent map in Dubai. The first phase of the project named "It is me," targets government employees in the public sector. This smart platform expected to launch by the end of 2019. It aims to enable every employee in Dubai to document his/her talents following specific government accreditation standards. The participants will document all their accomplishments, such as certificates, experiences, and accreditations, or any other appreciation or honours received. It will also include any lessons, courses, and conferences attended, and the development of any plans commensurate with health and physical condition. The map includes documentation of skills and experience gained, training programs, conferences, courses attended, and recognition. Through this platform, it is possible to identify the skills of the employees and their needs in the future. It aims to become the employees' lifelong educational support. The second phase of this project will include students and retirees to make use of their talents, keep them up-to-date, and guide them to strengthen the areas where they need more training and skill-building.

(2) The National Institute for Vocational Education (NIVE)

This "National Institute for Vocational Education" (NIVE) established in (2006) by the guidance of H.H. Sheikh Mohammed bin Rashid Al Maktoum, the Vice President, Prime Minister, and Ruler of Dubai. Its responsibility is to provide students with skills in the field of vocational education. It provides them with the opportunity to develop specific vocational qualifications that enhance their access to the right jobs in the future(nive.gov.ae). The institution that is an affiliation to the (KHDA) offers a range of programs that comply with the latest local and international standards. All these programs, locally accredited by the (NQA) the national qualifications' authority in the UAE and internationally from Pearson-BTEC in the UK represent a new and clear vision for education, which powerfully highlights the importance of vocational education to lead the future of the economy in the UAE(nive.gov.ae). This vision links to providing a knowledge base, creating a competitive spirit, and supporting economic development that can keep the UAE economy progress with the global economy. This vision also aims at promoting vocational education and providing real opportunities for UAE nationals to be able to develop their skills and match them with the required jobs in the market(nive.gov.ae). To serve this objective, the National Institute (NIVE) adopted a clear structure for vocational education and its future, through which it provides a gradual and clear pathway. The various levels in this education accept and qualify different levels of students who would contribute effectively to support the new economy in the UAE.

The Institute aims to build a highly qualified and flexible workforce that is the key to innovation, productivity and competitiveness amongst the levels of the Arab nations and the globe. Its basis on (1) Providing the labour market with qualified labours. (2) Achieving the ambitions of UAE talented nationals. The basis for the selection of knowledge and skills acquired by the students at the Institute was to enhance their abilities and career development and to meet their needs.

(3) Young editors

(KHDA) has collaborated with Gulf News to give students in private schools in Dubai the opportunity to publish their newsletters in a national newspaper.

This program aims to identify talented students in the fields of writing, photography, and design skills. The newspaper will publish the best 16 entries every Thursday for 16 weeks. Selection criteria depend on creativity and originality, content, consistent in style, attractive visuals, and explicit videos. Submission is through the email, and judgment will be upon the determined criteria.

3.17 Fifth: (HA) Hamdan Foundation for Distinguished Academic Performance

Table 13: (HA) Hamdan Foundation Vision & Mission-Strategic Objectives. *(www.ha.ae)*

The Hamdan's Foundation Vision	
To pioneer the leadership of Academic Performance Excellence, Gifted Education, and innovation.	
The Hamdan's Foundation Mission	
To develop the academic performance in gifted, innovative, and talented education through best national and international programs that lead to the distinguished academic society.	
The Award Strategic Objectives	
To upgrade performance in the education domain	To encourage initiatives, innovation, and excellence
To support and nurture the gifted and innovators.	To highlight and strengthen the status of the foundation nationally and internationally.
To develop performance, institutional excellence, and customer satisfaction. (ha.ae)	

3.17.1 The role of (HA) in Education

March (1998) witnessed the issuance of a decree to employ this award to support the educational sectors and enhance their performances in the entire UAE. It aimed to work under the supervision of the Ministry of Education (MOE) in order to support the educational levels and sectors within the regulations of the Ministry of Education in the UAE. The council is the supreme body responsible for drawing up the organisation's policies, organising them, and approving their needs,

programs, and projects. The first version of the Hamdan Bin Rashid Al Maktoum Award included nine categories, but it became fully qualified in 2000 to act following its purposes and statute. In 2001, His Highness "Sheikh Hamdan bin Rashid Al Maktoum" ordered the establishment of a "Centre for the Care of Gifted and Distinguished People" to become affiliated within the award and to provide it with a practical lab that supports practices and development of all students who joined the award. The Centre obtained membership at the World Council for Gifted Education (WCGTC)(ha.ae). The award expanded its services later to include the entire UAE and to include the Gulf States as well as. The aim was to develop a prize that nurtures the educational research sector in the UAE at the level of the Arab world. In 2010, they announced another exceptional award for Higher Education. Hamdan award is currently targeting 21 categories. (Dubai. ae, 2019).

The foundation announced on (April 22, 2018 (Decree No. 16)of 2018) as a non-profit organisation with a legal personality and a legal capacity to conduct business within limited to its objectives, statute, and provisions(ha.ae). The Foundation aimed to strengthen governmental and community efforts to highlight the importance of education. It also worked to promote the culture of talent, innovation, excellence, and quality in education. It contributes to enhancing the quality and level of performance and creativity in educational institutions. It also aimed to establish and support centres of innovation and scientific research. It supports highly able students in the fields of academic and science. It works to develop their capacities by providing an incubator environment for them. The (HA) develops specialised programs for talented students and encourages the promotion of educational and scientific research. It exerts efforts to promote the field of excellence and talent. It encourages and motivates creators, innovators, and distinguished students in the field of science and academic achievement and the educational as well. (dmi.gov.ae)

3.17.2 The Role of (HA) in implementing Gifted & Talented Development

Definition & identification of the gifted

The definition of highly able students at (HA) is" those who have extraordinary abilities and who perform more distinctly than their peers in mental abilities, academic achievement, and leadership, or any of them which the community appreciates."

The process of gifted identification at (HA) is a critical stage before preparing any development programs. In the initial phase, they develop a field survey. Gifted students will take tests that measure their motivation, abilities, learning, and the learning environment. The selection process will build forms and a personal interview guide for gifted students. The design of the development programs intends to fulfil their essential needs of development, challenge their abilities by smart programs and tools, and enhance their development as well. This process helps to adjust the enrollment system in the programs of gifted students. The programs provide high ability students who deserve these services with access to their educational services. They will be identified to determine the type and level of their abilities and to support them with their different needs(www.ha.ae).

3.17.2.1 Stages of identification

Nomination: This stage aims to accommodate as many students as possible into the screening procedures. Different methods of identification applications are by teachers' nominations, parents and peers or self-nomination, Test results, achievement files, teacher's reports, and background information(www.ha.ae).

Selection: This stage aims to decide the inclusion of the screened students in the second stage of the program. This stage tools include personal interviews with the students, lists of tendencies and list of interests. Used criteria are Intelligence standards, creativity criterion, and academic achievement criterion.

Table 14: Tools and Metrics for Gifted Students at (HA)

First: Quantity tools	*Second: Specific tools*
Measurements of mental abilities (intelligence).	Record of achievement Portfolio.
Battery Detection Gifted Identification Kit.	Note-cards to record the behavioural aspects - leadership).
Educational achievement tests.	Behavioural lists (self - paired - teachers - parents).
Test problems in creative ways.	Interviews.
	Professional interests and trends.
	Discovery bag for gifted students

3.17.2.2 National Plan for Gifted programs

The gifted education is a significant educational priority in the UAE. However, the interest in educating talented individuals by a differentiated education and programs is a new trend in the country. Consequently, this required establishing a framework to organise the gifted education and development programs. Hamdan Awards accordingly developed the (NPGP) to provide the ideal framework for gifted programs and to facilitate their planning and implementation in the UAE. Designing the National Plan depended basically on the latest practices adopted in the field of gifted education. It aimed to make it a reference and a systematic framework that organises all practices and enhance quality by promoting the standardised programs. This plan comes from the belief of

the Hamdan Foundation regarding the importance of caring for gifted people. It aimed to provide the necessary support to the national and social trends in raising the level of human talents (ha.ae).

Table 15. (NPGP) Programs *(www.ha.ae)*

Discover	*Sponsorship*	*Develop*	*Awareness*	*Partnership*	*Center*	*Schools*
Gifted students	Development programs	Cadres and teachers	Scientific dissemination	All relevant institutions.	Center for talent and creativity	Hamdan schools for gifted education.

3.17.3 Examples of (HA) development programs

(1) The Professional Diploma Program in Gifted Education

This program incepted in 2010 as the first professional diploma program for teachers of gifted and talented students in the Arab world(ha.ae). It aims to develop and qualify the teachers by encouraging professionality in the field of gifted education(ha.ae).

Table 16: (PDPG) Objectives *(www.ha.ae)*

To prepare cadres of specialists who possess the knowledge, abilities, and necessary skills to implement and teach programs for different types of gifted learners.	To build a scientific reference advisory that provides educational and training systems for schools and institutions with expertise.
To provide on-the-job training alternatives for general education teachers and teachers of special education, enabling them to acquire practical teaching skills by carefully examining carefully selected courses that provide theoretical and practical frameworks for classroom instruction for gifted learners.	To provide diverse models of creative work in the field of distinguished teaching for private groups, benefiting all stakeholders and gifted and talented students in the UAE.
To prepare professionals to lead the educational development improvement to promote and develop the creative child in public and private education in the United Arab Emirates and the GCC countries	

The (PDPG) duration lasts for about six months. It targets teachers and mentors of special education and other educational constituents. Enrollment in this program is limited to UAE nationals who hold a bachelor's degree in any areas of study and teaches in public or private schools

who have three years of experience The teacher who is nominated by (MOE) or any official employer in the UAE should have an annual performance assessment that ranked (2) for the last three years and possess a good computer and some e-learning software skills with distance learning. The candidate should pass a personal interview and be ready to commit to (undertake) training and all requirements for graduation from the program(ha.ae).

(2) The Hamdan Center for Talent and Creativity

The establishment of the (HCTC) was to cater the gifted students from Grade 4 to 12 who pass the gifted identification tests. It provides students, teachers, and parents with specialised scientific programs, training workshops, and counselling.

Table 17: Hamdan Center for Talent and Creativity -Objectives

To meet the educational, psychological, and social needs of students in order to fully develop their personalities.	*Increase learning opportunities for gifted students outside the classroom.*
Provide specialised programs aimed at supporting students' abilities and supporting their interests.	Provide the gifted students with an attractive learning environment
Spread the culture of talent and creativity in society.	

3.18 The relevance of the Institutions Focused Study

The purpose of this chapter was to provide a framework for the research. This research aimed to explore five of the educational institutions responsible for implementing and developing gifted education and programs in the UAE. This chapter had the opportunity to review (5) educational institutions that were launched to look after the highly able students' programs in the UAE, in addition to their primary role as in control of educational reforms and improvement in the UAE. These issues and the information obtained from their portals were to investigate the process of identification and development, and the effect of these processes and procedures on the

stakeholders, which is the focal point of the Case Study. However, and due to little information available in this regard, this research aims to recommend conducting more investigations on this topic for future researches.

The chapter explored the role of each institution, its vision, and mission, its leading development programs, processes and procedures of these programs, and their provisions.

Chapter Four: Methodology

4 Introduction

This research is exploring the role of five educational institutions in the UAE in charge of implementing gifts and talents development programs. This chapter describes the methodological issues relating to the present research. It involves research objectives, its design, the choice of the qualitative approach, the choice of the case studies, issues of validity, reliability, trustworthiness, limitations, data collection and data analysis methodologies.

4.1 Research Approach

The question of what we mean by methodology is a constant significant question and can be challenging to answer. It is the reason researchers give on why they want to conduct their research in a way or another. (Clough and Nutbrown (2012) indicated in this regard that the methods used in doing research, for instance, questionnaires, interviews, focus groups, and any other ways, are like the ingredients in a recipe, whereas methodology is the way that makes the final product. (Robson, 2002) Formerly said that beforehand researching, the researcher should consider several cautions. These cautions, according to Robson, including a lack of theory, the use of a specific method, how to start the research, and if it starts quickly and for what aim (Robson,2002). Things like these can make the research unsuccessful if not considered before starting the research.

On the other hand, and according to Robson as well, the successful research usually develops from the involvement of different factors such as field participation, merging activities with interests, and having an insight with a concern for theory (Robson,2002). Therefore, this chapter outlines the methods, and all efforts made by the researcher to make the study successful. Choices of methodology in this research originated from the availability of information and to what extent the

researcher can gather the required data. According to (Scott & Usher, 2010), research is not just to follow the right procedure, but as a social practice, too (Scott & Usher, 2010). The research will be complicated if it is applied or explored by international methods plus that the educational field research is not like the other types of research in natural science as (Robson, 2002) claims.

The researched in the educational type of researches have their ideas and perceptions about the world around them(Mertens, 2014). The researcher who adopts a constructivist/ interpretive approach in educational research integrates these beliefs into the research methods with the idea that people build the knowledge, and this should make the researcher exert efforts to understand people and their ways to view the world(Mertens, 2014). The researcher in the educational research looks at ends of value and not ends of facts according to (Scott & Usher 2010). The influence of this research is by what Mertens indicated about the reality being a social construction and the ability to hold multiple realities together even if they conflict with each other. In this method data, the collection is more social and interactive than the methods used by a positivist researcher.

The approach criticism was for being not reliable due to its reliance on the honesty of the participants. Although the researchers try to ensure the participants are honest, what if participants are not honest, and they did not want to reveal their actual views? It is a limitation of this approach as known. However, some researchers see that this type of research, regardless of the participants' defects, may help policymakers find vital ideas that will help them drive forward initiatives. The incompleteness of this type of research may be challenging, too according to (Scott & Usher, 2010). As this approach's objective is to help the researchers understand and not to change anything, it is a weak approach. However, this research aims to understand in a hope to contribute to the literature on a subject that is not yet explored and in need of more researching that might lead to a change, if appropriate, in the future.

This research will adopt a descriptive-analytic approach as the most suitable method. It will support the researcher to address the issues related to identification and development of the highly able students in the UAE and to ensure this research has sound underpinnings. Many researchers like (Bassey, 1999) believe that educational research should improve and influence the educational system in a direct aim. However, educational research is educational because it intends to inform. It critically informs educational judgments and decisions that will improve the educational activities. (Clough & Nutbrown, 2012) Added that educational research should be able to persuade the readers, and its purpose should be clear in addition to being positional, and political as well (Clough & Nutbrown, 2012). They additionally indicated that the excellent methodology is not the confined one within a brief chapter, but it is more a critical design that will always exist at work throughout the study.

4.2 Research Strategy & Design

This chapter constitutes of two sections. The first is the research objective and research strategy. This section describes the research approach. The second section deals with the research design. It discusses the reasons for selecting five institutions: data sources and data analysis methods discussed in this section.

The research (1) explores the role of five educational institutions who are responsible for implementing programs to nurture the highly able students from the perspective of experts, teachers, parents, and students.

(2) Determines the position of these five educational institutions and if they act as facilitators of identification and development programs besides their educational role.

(3) Examines the views of experts and leaders who oversee the identification and developmental programs and the factors that may promote or hinder them.

(5) Collects and analyzes data about the development programs in these institutions.

(6)Interviews selected participants to obtain more data regarding the initiatives and programs designed and provided for the highly able students in public schools in the UAE.

(7) Interviews parents, their gifted and talented children, and to get more data regarding the effect of implementing these nurturing gifted programs.

(8) Traces challenges and places suggestions that might help in supporting decision-makers in their future decisions regarding Current gifted and talents' provisions; Identification and development programs; Challenges; and social awareness.

To achieve this study's objectives, it attempted to answer the following research questions:

1. What is the role of development programs implemented by governmental, educational institutions to develop gifted and talented students in the UAE?

Sub Questions:

2. How are gifted and talented students defined and identified in the UAE?

3 How is the development of gifted and talented students implemented in the UAE?

4. What are the main challenges facing the gifted and talented identification and development in the UAE?

This research design followed the qualitative loose structured design with data that is not pre-structured. The field interviews conducted at different sites where applicable. The primary data

collection techniques used in this research study came from "individual interviews, focus groups, documentation analysis, and library search".

4.3 The Case Study Strategy

The Case study method, according to (Denscombe, 2003), gives the researcher a chance to focus and investigate in-depth in the natural setting of the subject. It also provides insights into how things are processing in the subject of the study. He added that it is a comprehensive approach to social research (Denscombe, 2003). Boundaries of the case study should be known and understood according to (Stake, 1994), even though the case is simple or complex. The researcher should set the boundaries at the beginning because the case, according to (Miles and Huberman (1994), is in effect with the unit of analysis, and there should be a focus that helps the researcher builds outwards. Moreover, a case study has several standard features with social research illustrated as (1) Attention is focusing on one instance, (2) it is an in-depth study,(3) focuses on relationship and process, (4) using multiple resources and methods and (5) The research takes place in a natural setting. However, only some case studies are explanatory. They may be an inquiry tool by employing a positivist ontology (Miles and Huberman, 1994). Yin (1994) advises not to confuse case studies with qualitative methods. He said that using the ethnographic method needs a more extended period to conduct and very detailed evidence, while case studies are within a limited period, plus they do not necessarily imply the use of ethnographic techniques(Yin,1994). The case study, according to (Schwartman, 1993), helps the researchers obtain more knowledge and identify actions and instruments utilised daily by the participants. The most supporting thing for the researchers conducting case studies that they do not have to visit the institution under study, but they can collect their data from secondary sources such as documents and websites or by interviewing participants from these institutions by a telephone call or emailing them the

questions(Schwartman, 1993). The case study approach is useful in critical situations where the researcher can not control the contextual conditions of the studied events, and they require specific techniques for data collection. However, sources of collected data should be diverse to ensure their honesty and truthfulness. The different types of case studies according to (Stake, 1993) are (1) Intrinsic case study which is unique, (2) Instrumental that provides insights to existing theory (3) Collective case study that encompasses to more than one example. (Stake, 1993). (Yin, 1993), as well, defined three types of case studies;

 (1) Exploratory case study's first stage is to define the researched issues. In this type of case, the allocation of data is before theories or before formulating the research questions. This type of case leads to a systemic approach. (2) The casual case studies for the relation between cause-and-effect (3) The descriptive case study that requires a speculative theory that helps to guide the collection of data. Case studies can be multiple or single, and they can be embedded or holistic. (Yin, 1994). This study involves five educational institutions' boundaries. Therefore, it adopts a case study method to collect more data regarding their role in the identification and development of highly able students in the UAE. This research uses one of (Stake's, 1994) explanations, the Instrumental Case Study. It provided an insight into the role of each institution, how it implements developmental programs and the effectiveness of the implementation of these programs within and outside the institution.

Table 18: Denscombe's Elements of a case study

Denscombe's Elements of a case study Denscombe (2010)	How are they addressed in this study
It focuses on a few instances of the phenomenon. It provides an in-depth description of events, relationships, experiences, or processes occurring in the instance.	Five educational institutions are the subject of the study. The collected data allowed a greater depth of the study.
A detailed study.	Interviewing different participants from different categories generated more information about the institutions.

133

| It is also possible to do a comparative case study. | Studying different institutions supported the researcher's belief that they need more collaboration to succeed. |

4.3.1 Case Study advantages & Limitations

The collected data for this study were from multiple sources that vary between interviews, focus groups, documentation, and digital resources. The use of the data was to build up the roles of each institution in implementing gifted and talented development programs. (Cohen & Manion 2011) Thought that the Case Study approach is an advantage for the accessibility of the language, and this makes different viewers utilise the research (Cohen & Manion 2011). Another advantage is how case studies are aiding the researcher to explore more about the definition of gifted, talented, and different types of identification used in these educational institutions. It makes the study useful and beneficial to the educational institutions subject to the research. It helps them find more about their programs and use the collected information for their future improvements. This study, on the other hand, is a contribution to the area of gifted and talented in the UAE.

However, and despite the above, according to some researchers, finding an appropriate case study to suit all subjects could be a problematic approach. The Case Study approach contains several disadvantages, as well. The major criticism of this approach was by (Bassey, 1999) who claimed the generalizability of the findings in the case study method. (Denscombe, 2003) As well mentioned the reflexivity in a case study, which allows the researchers criticise and reflect their thoughts and biases in addition to the observations and perceptions of the researcher that can completely miss other aspects while presenting it in one manner. Case Studies, in general, are time-consuming if compared to other instruments, and they may not be suitable for studies that require

shorted time. However, the advantages of the Case Study approach far outweigh the disadvantages

by knowing a case study is a great tool that supports many studies and researches.

Table 19. Advantages & Disadvantages of a Case Study

Case study advantages	Case Study Disadvantages
- The case study approach allows an in-depth analysis of data. - The case study approach explores the issue in its natural setting. - It allows answering questions like (how and why). - It allows defining the complexities and more exploration. - The case study approach is flexible. - Methods of data collection, data analysis, are not limited, and it allows for the usage of multiple sources of data. - It can use either quantitative or qualitative methods.	- The major criticism of this approach was by (Bassey, 1999) about the generalizability of the findings. (Denscombe, 2003) talked about the reflexivity in a case study. - According to some researchers, finding an appropriate case study to suit all subjects could be a problematic approach. - The Case Study is the study of observations and perceptions of the researcher. - Case Studies, in general, are time-consuming if compared to other instruments. - They may not be suitable for studies that require shorted time.

4.4 Data Collection Methodology

The data collection methodology included different tools and techniques to collect the required

data that will benefit the purpose of the research. The research methods differed for diverse types

of inquiry (Walliman, 2017). The selection of the accurate method ensemble the research

objectives and guides the researcher to answer the questions accurately. This section explains how

the researcher divided the components into two: Data collection and data analysis. Several sources

of evidence can be used in qualitative research to collect data, including documentation,

interviews, observation, archival records, and physical artefacts (Yin,2009). However, researchers

who usually use the case study approach can differ their methods of data collection according to (Bassey,1999).

The researcher in this study applied three methods for data collection discussed in detail in the following section:

4.4.1 Library research and document analysis

Organizational and institutional document analysis has been an essential tool used in qualitative research for many years. Documents mean Public Records that include any organization's activities; Personal Documents that mean the first-person accounts of an individual's actions or experiences; and Physical Evidence, which means any physical objects found within the study (flyers, posters, agendas). The researcher interprets the documents to clarify an assessment topic, and many researchers have used this method in recent years. (Bowen, 2009)

Furthermore, and despite the frequent use of this method, some indications argue that document analysis has not always been successful because of the ineffective use of it in the research process, even by experienced researchers. The literature related to this study is the primary source of documentation, too (Denscombe, 2003). Documents analysis as a method of data collection has advantages and disadvantages (Yin, 2009). The illustration of strengths and weaknesses displayed in Table (24) below.

Table 20. Strengths and weaknesses in document analysis

Strengths	Weaknesses
Documents analysis is an efficient method.	Not suitable to evaluate users' values or needs.
It is less time consuming and more efficient than other research methods.	Many documents are not publicly available and can be challenging to find.
It requires the researcher to select data than to gather it.	They may have any bias if they reflect the unknown based on the author.
Stable and can be repeatedly reviewed.	Some documents were difficult to access.

They cover a more comprehensive range of topics, settings, and events. They contain exact names and correct information.	

The documentation in these educational institutions might have strengths and weaknesses as well. A significant weakness in the UAE is the absence of researches and studies that discusses the highly able students' needs and issues. Most of the published documents on the internet include decrees, laws and regulating documents, inspection reports, private school policies, and the institutions' launched initiatives or plans, registration forms, applications or other news.

The quality of the gathered data needs an assessment before using it (Robson, 2002). It means the researcher must check up on the assembly of this data or documents and how each institution gathers data and select which data to publish, plus, to check on this data and make sure they are updated.

Table21. Some of the documents reviewed for the sake of this study

The essential documents reviewed for the sake of this study included and not limited to

• *School for All. (MOE)*	• *United Arab Emirates World Data on Education.*
• The KHDA's Private Schools Inspection Reports.	• United Arab Emirates Constitution of 1971.
• NPGP.	• The Current State of UAE Education.
• Professional Diploma in Education of the Gifted Module and Requirements.	• KHDA Inspection Key Findings-2018-2019.
• MCKD Draft of the Talents' Nurturing Policy.	• Dubai well-being –better.
• UAE Model for Government Leadership	• UAE National Innovation Strategy
• UAE Vision 2021	• Government Achievements
• Government performance management framework	• MOE Schools statistics 2017-2018
• MOE international Tests Management	• MOE National & International Assessments
• Licensing and Accreditation-ADEK	• Qualification-ADEK
• Abu Dhabi Vision 2021	• Abu Dhabi Plan
• Talent Policy-MCKD	• Cultural Agenda-MCKD
• Education Journal Middle East	• UAE's Fourth Industrial Revolution Strategy

• Global Economic Outlook	• The Role of International Assessments and School Inspections in the Reform of Education in Dubai. *(Cambridgeassessment.org.uk)*

Dealing with documents required the researchers to be very cautious about their trustworthiness and the quality of data and their purpose. According to some researchers, this data needs evaluation and assessment, especially if this data is for a promotional purpose. Such worries would make any researcher very careful in selecting the documents for the research. However, the researcher in this study was familiar with the way these institutions compile their documentations. The documentation protocol in the government, as mentioned previously, is encouraged to be transparent and useful to allow people or any researchers to benefit from them. The researcher downloaded the documentation used in this study from official websites, and they are trusted resources. These resources include the UAE government portal, the institutions' official websites and e-libraries, the official accredited newspapers or media websites, and the articles or interviews with UAE officials regarding gifted and talented issues. The researcher considered each document used in this study to guarantee its appropriateness.

Library research deals as well with the analysis of historical records. The required data obtained from books and other library materials, both published and unpublished such as the academic dissertations, journals, articles, conference proceedings, and theses. Library research includes both real and virtual online libraries. Researchers usually read books, conduct an internet search for articles, journals, and other dissertations and thesis that have discussed the same topic. Web search can substitute challenging to access populations (Cantrell & Lupinacci, 2007).

On the other hand, researchers should be cautious and consider how they will collect the data from the web, which websites are guaranteed and approved and the quality of the data that will be the

required to validate the findings. However, library research provides data that is available for everyone who needs it. It is the utilised data by any researcher or students or anyone who requires information regarding the selected populations. The researcher collected the secondary data from different sources such as online published documents and paper published. While this secondary data is not what the researcher aims for, but they are useful for the base of the study and to understand the history of the institutions under exploration. The secondary data formulated the literature review in chapter two. The literature review includes the secondary data gathered from several journals, articles, books, and any other documents regarding gifted and talented issues from all over the world. Such data is required to clarify the processes and procedures followed by the educational system to nurture the highly able individuals in the UAE. The secondary data in chapter two was to describe and explain the theories of intelligence, the definition of talents, and the description of gifted programs implemented in and by these UAE educational institutions.

4.4.2 Field research: Focus groups and interviews

Field research contained two methods to help answer the research questions. These were focus groups and interviews. (Walliman, 2017). The researcher selected the participants for each of the interviews and the focus groups. The selection of the participants, according to (Hackett, 1998), supports the study with the required information. The collected data focused on the extent of knowledge the participants have regarding the definition that describes gifts and talents, the identification process and the role of the development initiatives and programs in these students progress. The interview method helped the researcher to obtain the primary data. The employment of the interviews and the focus groups contributed to the researcher's aim to obtain primary information with prepared written questions.

4.4.3 Designing the interview

The interview questions were bilingual. This bilingualism considered the importance of making the interview easier and accessible to everyone.

The designing of the interview questions depended on the following:

-Analyses of the literature and all available documents related to identification and development processes and programs used in these institutions; Referring to the research questions; Self-reflection by identifying assumptions, and Preparation of a provisional guide for that.

 The interview questions consisted of four parts:

- The first part dealt with preliminary data to know how the interviewed define gifted and talented people, and why they think that definition was the proper definition. What identification methods they used or how they identify highly able students. All participants answered the starting question about the definition of these highly able students and how do they define them.

- The second part was about the role of the development programs towards these individuals' progress. How do they come to know about these programs and how they evaluate them?

- The third and last part consisted of the questions about the challenges faced by this category from the perspective of the interviewed stakeholders and to poll suggestions regarding the responsibility to support talents' development in the UAE.

- The fourth part constituted the recommendations on how to overcome any challenges and by whom.

4.4.3.1 Participants in the interviews

- Different groups participated in the interviews such as teachers, experts, managers, highly able students, and their parents in case they were minors. These stakeholders' categories helped the research obtain real data through verbal communication and by stimulating them to give information about the situation of the gifted programs and to what extent do they serve the highly able students.

- The design of the interview questions was in a way that helped the researcher obtain more information regarding the development programs, how do they define and identify the highly able students, what were the challenges and how did they overcome them, if they did.

- The researcher defined the objectives of the interviews with the participants before conducting the interview.

Pre-preparation of the interview include,

A) Identifying and preparing the questions that the participants can answer according to their category and personal experience.

B) The researcher listed the intended questions and queries for the interviews and sent them to some of the participants by email before interviewing to give the participants an idea about the subject considering the clarity of questions, and by making, they direct with precise wording.

(c) The selection of the timing of the interview was according to the participants as the plan of the interviews was to be in proportion to the circumstances of the interviewees and their obligations to do so.

(d) Conducting some of the interviews in the researcher's place of work reflected a feeling of satisfaction among the interviewees who felt more relaxed away from their workplaces.

4.4.3.2 **Conducting the interview:**

In order to make the interview useful, the researcher took the following procedures while conducting the interview:

A) Created an appropriate atmosphere for the dialogue by the first impression with an appropriate appearance and by choosing the appropriate phrases for the interview. The conducted interviews in either Arabic or English were according to the interviewee's satisfaction and desire. This bilingualism was helpful and welcomed by the participants who were able to choose which language is more satisfactory and helps them express more. English language interviews were beneficial with those who were part of private schools and institutions, while the Arabic language helped candidates from the public schools and the institutions.

B) The research topic created an atmosphere of cooperation with the respondents who felt it is addressing their real challenges for the first time. The setting away from the office most of the time ease the environment for the interview and to allow the conversation to run spontaneously without making the interviewees feel that the interview is an interrogation.

(C) The researcher gave a clear description to explain the questions and to reform them if some of the participants did not understand them.

(D) The researcher obliged with the time required to gather data and finished them in a timely fashion.

E) The researcher conducted the individual interviews separately in isolation from the rest of the staff, and this was very helpful, especially in an environment where offices crowd with more than one employee.

F) Respondents did not see any impression that their answers are not correct in cases when some of the participants gave unneeded answers. They could complete the answers or add to them, and then the researcher tends to ask them to explain their answers and to give examples for what they mean.

4.4.3.3 Registration and recording of information

A) While conducting the interview information, the researcher tended to record the answers immediately on papers and sometimes printed the answers directly on the computer. The distribution of questions came in the form of sections in an organised way to make them easier to add before or after each question, as well as the need to take additional notes if required (in cases the participants illustrate or tell a story about what happened to them). It was better (however, not welcomed by the interviewees) to use a recorder.

B) The researcher recorded the information using the same words and language, as said by the interviewees and printed the handwritten information.

(C) The researcher did not interpret the answers provided by the interviewee, and nothing added to them; however, some of the statements were subject to reinterpretation by the researcher when that was necessary. The researcher, however, had to translate the interviews conducted in Arabic in a way that tried to keep them as they said.

D) There was a balance between dialogue and comment and recording and writing answers, and this helped the researcher obtain the required data.

E) The researcher's colleagues were conducting interviews with different participants, which helped to get different views and participation.

(F)The researcher revised the answers and observations with some participants and sometimes sent them to the other colleagues' researchers after the final draft to review them.

4.5 Research Design-Structure

Research design means the formation of the plan on how to execute the research in order to get the needed data that will help the researcher answer the research questions. (Punch, 2013).Therefore, the research design is the most significant part of the research. It includes the four principal contemplations such as the" strategy, conceptual framework, identification of subjects, and the tools and procedures for collecting and analysing the required data". The division of research design can be into different types, such as qualitative, quantitative, and mixed methods research. (Holmes, Dahan, Ashari, 2005). The development of the qualitative method in social sciences enabled researchers to study social and cultural phenomena. The qualitative method helps them observe feelings, thoughts, and behaviours and believes of people in societies (Babue, 2008). The qualitative method as well includes different examples such as "action research, case study, and grounded theory". The sources for collecting data in the qualitative approach include observation, interviews, questionnaires and documents reviews (Burns, Bursn, 2000).

The usage of a qualitative method in this study relied on the nature of the educational research that entails research in human phenomena and the interpretation of results through researchers' perceptions. As the researcher needs to interpret the field of human activity and examine people's

experiences and search for the answers to questions that concern why, what, how, and which method to explore and understand the effect of implementing the developmental programs, therefore, qualitative research is the most capable of understanding and interpreting problems related to humans and searching for the causes and beliefs of the research problem and aims to understand and interpret the contexts related to the problem. In addition to the fact that qualitative research is the best source of information and data that we urgently need in the UAE in the absence and lack of research, studies and clear data. The qualitative data that can be collected includes the qualitative empirical materials that comprises the different types of data resources and how the qualitative research can benefit from as many as resources such as Interview transcripts, documents, records, audio-visual materials, and personal experience materials such as diaries, journals and narratives, emails and instant messaging conversions.

This research employed the method of individual interviews and focus groups. These methods were always essential means to obtain more in-depth insights from the participant, therefore, they helped the researcher to determine the extent of awareness of stakeholders regarding the development of the highly able students and the services provided for them through the educational institutions, subject of the case studies in the present study (Frankel, Wallen, Hyun, 2012). The involved categories included teachers, experts, parents of the students, and highly able students.

This study, henceforth, aimed to gather data from stakeholders' interviews and obtain more information regarding their awareness concerning the fundamental factors and criteria's that surround and support the successful implementation of such programs.

Additionally, the researcher also explored how these institutions collaborated. Whether they provide all students with equalised treatment and services through the entire UAE, and if their programs nurture all types of gifts and talents from different ages and domains. The researcher,

also, inserted the practices and procedures on how the identification procedures are used to select these students and nominate them for development programs. The interviews explored the extent of social awareness about the availability of these programs and the extent of involvement of the teachers, experts, parents of the students, and the highly able students as well.

According to the researcher, most of the past researches conducted in this area and on the gifted education, and development programs adopted all forms of methodologies in researching, and all the approaches contributed to the issue of development of these students. Therefore, this research will use the case study to enable the readers to understand how these institutions are fulfilling their roles and how they create and implement identification and development programs for the highly able students in the UAE. The researcher's intention to use a case study technique was to collect all the available data and to view the similarities and differences of these institutions' roles regarding the development of gifted and talented. (Coleman, 2007).

Several researchers and educators strongly supported the idea of conducting researches using qualitative methods such as interviews and observation in addition to case study tools when the research is dealing with humans' interaction such as (Coleman, 2001, Babu, 2008, Reise, 1995, Zabloski & Melacci, 2012). Therefore, these methods supported the research accuracy and helped it to deliver more truthful precise findings.

4.6 Research paradigm

All primarily collected data for this research came from individual interviews, focus group documents, and open data published on their official websites to understand the issue and to identify which information would help formulate the discussion. The obtained information helped the researcher write the results and the final recommendations in chapters (5 & 6). Analyzing data

was in an inductive way that emphasised on the meanings mentioned by the participants of the interviews and the participants in the focus groups and described the process in a convincing expressive language as intended by the researcher to interpret how the interviews and focus groups participants reacted to the questions. Such method helped the researcher understand the extent of knowledge and awareness people have about the importance of gifts and talents and regarding the development initiatives and programs offered through these educational institutions. It also provided a naturalistic description of provisions from these programs, validated and generalised the results.

4.7 Population, research sample and sampling methods

Reid (2013) describes and defines the population as "all units who possess specific characteristics." These features are of the interest of the researcher's study (Reid, 2013). This definition interprets what the researcher target out of the population by saying that they are the community or group of people who are essential and useful to add valuable information for the study. When in the hunt for the required population for this study, two main types were to consider. The use of probability sampling in a quantitative method is to support this type of research, while non-probability helps to collect views from groups of people. Therefore, and as this research is adopting the qualitative type, only individuals who form the essential stakeholders in the lives of the highly able individuals and are involved with the issue of their development were the appropriate sample that must constitute the population in this study. The questions suggested by (Punch (2009) were used in this research as the leading questions while trying to decide the population of the research: (1) How big will the sample be, and why? (2) How the researcher will choose the sample, and why? (3) What will the researcher claim?

Consequently, and for the sake of this study, the researcher selected the population from teachers, managers, experts and parents who are familiar with these educational institutions and related to the highly able students.

In this study, the researcher employed a purposive sampling method to select the participants required for obtaining specific information. These participants constitute of teachers, experts, parents of these students and the highly able students who are involved in development programs in these institutions. Purposive sampling according to researchers refers to the method that the researcher intentionally chose to select the research sample according to their knowledge about the study and its requirements(Palinkas, L.A., Horwitz, S.M., Green, Wisdom, J.P., Duan, N, and Hoagwood, 2015). The researcher deliberately selects some participants to suite the research aim, and because of their willingness to participate in the study as well. The study strategy focuses on obtaining relevant and useful information that will accurately answer the research questions.

4.7.1 Purposeful sampling

Selecting these five leading educational institutions in the UAE was a careful selection that depends on the following criteria:

- Their position as the regulating bodies for education in the UAE besides providing development programs and initiatives to nurture different types of highly able students in schools in the UAE.

- The conducted individual interviews were face-to-face. Focus groups were through groups divided into categories. However, some of the necessary information came from documents, newspaper articles, and interviews, the institution's websites, and anywhere in

which there are reliable and validate available documents and open data concerning the same issue.

- The sample included gifted and talented from several schools, programs, initiatives, domains of giftedness and talents, and age groups.

- **Participants**

- Responsible for the implementation of development programs like teachers, psychologists, supervisors, and sometimes parents.

- Users (talents, experts, program managers, and sometimes parents)

- **Site**

The conducted interviews were at different sites in the UAE.

The study community consists of:

A selection of educational institutions and Stakeholders according to their direct relation to the subject.

4.8 Ethical Considerations

When a researcher uses a qualitative method, according to (Scott & Usher, 1999) and other writers, ethical issues usually occur. It means the researcher must distinguish between what is right and what is wrong while conducting the research. Ethics also refers to thinking about rules and what ought to do, what is acceptable, and what is not. Researchers face several ethical necessities, as they must meet professional and institutional standards for conducting research that involves human participants. Research ethics involve informed consents, beneficence, respect of anonymity and confidentiality, respect of privacy. However, the researcher has chosen to declare the names of the institutions as the research topic focuses on exploring the methods and tools used by these

institutions in implementing development programs for highly able students. The research depended on their official open data and published documents information. These publications are downloadable and free for use, reuse, and sharing by anyone, including researchers according to the government's open government data policy (government.ae). The UAE government has a transparency policy to support improvements for all its institutions. It is accordingly exerting efforts to implement all requirements to benefit the society and the development of these students too.

Moreover, these institutions, launched by the government to oversee their role, need to estimate and evaluate the extent of their achievement and how much did the targeted population benefit out of their efforts. Therefore, it is the researchers ' role, to support these institutions' development by the findings and results obtained from various methods such as document reviews, interviews and focus groups. Recommendations as well would help them implement their educational development system in a better manner. The researcher's role is to help decision-makers become aware of what makes educational improvements more beneficial and fruitful in the future. The findings would provide these institutions with an in-depth view of what are the stakeholders' needs or how they view their efforts. The given opportunity to the researcher to interview and obtain data throughout stakeholder's perspectives or expectations formulates massive support for these institutions and decision-makers. It is the research role to evaluate, explore and transfer the accurate information to the concerned entities in order to make improvements and modifications wherever required.

Ethical issues appear in all stages of a study. According to several researchers, the inclusion of anonymity, informed consent, and confidentiality impact participants and participant's potential impacts on the researcher (Sanjari, Bahramnezhad, Fomani, Shogi, and Cheraghi, 2014). Since the

nature of the qualitative research, forces the researcher to deal with human participants, the research needs more guidelines, and the researchers must take the necessary steps to clarify their role in the research process. However, ethical issues occur in three stages: The recruitment stage, the fieldwork stage and reporting, and the four layers such as utilitarian, relational, ecological, and deontological (Flinder, 1992). Other models named the four layers in different names such as external, consequential, deontological, and individual; others like (Mertens, 1998) looked at it as beneficence, respect, and justice. This ethical study framework will refer to (Flinders' model, 1992).

4.8.1 Utilitarian

Utilitarian means: If the action makes the highest good for the most significant number, then it is ethical. The action includes obtaining the informed Consent, avoidance of harming any participant and assuring confidentiality for them (Flinder 1992). Informed consent means that participants understood that the conducted interviews are for the sake of research that seeks to explore their knowledge regarding talented programs and what kind of challenges they face when it comes to benefiting from these programs. They were open and ready to answer the interview questions. Avoidance of harm means to avoid harming any participants who are involved in the research interviews, (Flinder 1992) stressed on the responsibility of the researcher to protect participants from any harm that may occur because of that. In the present study, it expects no harm to occur due to its nature. However, the researcher ensured that all participants felt relieved and prepared for the interviews in addition to protecting their anonymity.

4.8.2 Confidentiality

The researcher addressed this issue by making the interviewed anonymous and by using the available already published open data within the institution's websites or in, their documents and they include most of the required information and data. Besides, the researcher did not discuss most of the interviews conducted with any personals who work within these institutions, although sometimes debating some of the general themes that had come from the discussions in other meetings with later participants.

4.8.3 Relational Ethics

Relational Ethics means deriving moral behaviour from people's attachments and regards for others and not from rules and obligations(Flinder, 1992). The researcher used Flinders' ethical grid to evaluate ethical processes like others, such as (Stutchbury & Fox, 2009).

Ecological Considerations: Flinders' definition of environmental ethics is a set of moral principles that govern human attitudes towards the environment. The researcher in this study interviewed the different stakeholders to learn more about the talent's community and their opinions regarding talent as a definition and a concept.

Deontological Ethics: This is about how to make decisions regarding whom to interview and when to interview them. The availability of participants related to the subject studied in this research.

Reciprocity: The researcher made some verbal agreements with the interviewed about periods and sharing their interview information in research conducted to explore the reality of talented' identification and development in the UAE.

Avoidance of wrong: This research has used some information derived from the conducted interview data, focus group discussions for the (DOT), and the information downloaded or searched in the documents regarding the institution's activities in this regard.

The researcher fairly reported the findings at the end of the research. They derived from the answers and the discussions obtained through the interviews and the focus groups. Fairness means treating the institutions in a balanced way in this research. As the researcher is familiar with these institutions and works in one of them, possible bias, however, may be unintentionally there. To avoid this, the researcher also used the interviews and focused groups obtained for the (DOT) as documents review in researching for answers.

Various guidelines used to set out ground rules to help inform the practice of research. These guidelines were,

1- Responsibility to the research profession: The researcher avoided fanaticism or bias in the selection of the study society and was accurately represent and reliable in generalizing the results. The research findings were not false, fabricated, or misrepresented. No exploited personal benefits from these institutions. The researcher did not compel others to participate in the research as a sample.

2-Responsibility to the participants: The participants were aware of the interview objectives and aims. The researcher ensured they understand the objective of the study and the importance of their part in it and the participants understood the aims and purposes of the interviews. Participants had the opportunity and knew that they were free to withdraw from the interview at any time they wish or when feeling unable to continue. Anonymity and confidentiality to participants ensured too. The

researcher took into consideration the policies and guidelines of the research conducted within government institutions that have their own rules and require special attention and care.

3-Responsibility to the public: The researcher reported the findings in a clear and accessible way relevant to all stakeholders.

4.8.3.1 Validity, Trustworthiness, and Reliability

Validity and reliability are among the most critical topics of interest to researchers in terms of their profound impact on the importance of research results and their ability to disseminate results. Reliability and consistency relate to the instruments used in the research, their ability to measure, and the accuracy of the readings from those instruments. (Campbell and Stanley (2015).

To elaborate, validity, for example, in community, research relies on the use of questionnaires; research may be looking at the prevalence of a definition for talents. In order to ensure that the tools used in this research are credible and reliable as well, they must meet several conditions or criteria. The simplest of these criteria is the sincerity of the arbitrators because the arbitrator is a competent person in this field and has the scientific and practical background to qualify and to assess the questions set in the questionnaire. They must ensure that they measure what they have to measure.

4.8.3.2 Types of validity

Apparent honesty: The appearance of the tool indicates its ability to measure what it should measure.

The validity of the content: If the content of the tool questions of various forms measures the scopes of the study.

The validity of the concept: Relates to conceptual construction, which means that the tool measures the concept of the subject of the study.

Factor validity: Concerned with the analysis of the adjective measured, in the sense that the sub-elements of each adjective pour all in measuring the attribute.

Test validity: This means the extent of the meter to a specific criterion (test); the test is successful if the test is sincere in disclosing the test.

Predictive honesty: It depends on the extent to which the scale predicted by reality.

Telemedicine honesty: The agreement of the results of two measures assessing the same capacity while one is honest and consistency.

Validity then refers to the extent of accuracy of the phenomena represented by the research.

4.8.3.3 Reliability

The use of reliability and validity is usual and familiar in quantitative research. However, the idea of reliability and validity is common in all kinds of research. Reliability is misleading in qualitative research according to (Golafshani, 2003) who indicated that it is essential to redefine reliability, validity, and triangulation to reflect and suit the ways that the qualitative research is reliable and valid and telling the truth. (Golafshani, 2003). The way of obtaining information requires testing the quality of this information, and to which extent it generates understanding while the quality in the quantitative research reliability is its purpose of explaining (Golafshani, 2003).

Therefore, reliability is the instrument's ability to give the same results in the case of repeating the measurement on the same person multiple times within the same conditions (Carmen's and Zeller, 1979). In most cases, it is a correlation coefficient and is the extent to which readings of repeated

measurement results correlate. In many types of research where the use of a measuring instrument is for the first time, the test will be first on specific people, and then the same people retested and then calculate the correlation coefficient of the measurement results the first time with the next time. If the instrument is very reliable, the results of the first or following times will be identical. More arguments discussed the concern with validity and reliability to contain some relevance to qualitative research and not only in the tradition of quantitative research. The concept of reliability is providing a degree of confidence related to the possibility of a research procedure for repetition and its ability to produce identical or similar results(Coleman and Briggs (2007). Two types of errors may occur with validity and may occur at the data analysis stage too, according to (Silverman, 2006). The two types are (1) to believe that a statement is true when it is not valid and (2) To reject a statement that is not true (Miles and Huberman, 1994). The use of the concept of validity as a judgment is to find out if the research has described the phenomenon in an accurate way intended by the researcher. All the research design, the methodology, and the conclusion need to have regard to the validity of the process. Validity has two main types: Internal validity concerned about the accuracy of findings representation and external related to the ability to generalise to a broader population.

4.8.3.4 Construct validity

Construct validity refers to how well data collection methods were able to measure the phenomena that are supposed to be measured. It verifies by comparing the data to other data that measure similar qualities to see how these two measures are connected. There is a need for multiple proofs to ensure their validity (Yin, 2009). One way is by lining the outcomes of the interviews with the other results obtained by another method of the instrument.

This study has interviewed (161) participants who have different perspectives and the emerged themes accordingly based on more than a point of view.

4.8.3.5 Other measures of validity

- The researcher allowed the participants to evaluate the interpretation of the data by being open about the values and revising them.

- DOS feedback granted. Modifications made based on the remarks and opinion of the DOS.
- The researcher conducted a sample interview to verify the genuineness of the instrument and to improve them through feedback after identifying the existence of some problems in them, such as the wording of questions, the length of the interview, and its legality.

4.9 Reliability of the study instrument

Reliability depends on the ability of the replicated study to reproduce the same results under a similar methodology (Joppe, 2000). It assesses the instrument and the procedure used for data collection. The tool must be reliable as one of the fundamentals in the evaluation of an instrument that measures concepts, psychomotor skills, or practical values. Validity is the instrument's ability to measure (Tavakil, Dennick, 2012)

4.10 Reliability in the Cases Studies

Reliability can be difficult in the Case Study method, because in a case study approach what is right in one setting may not be accurate in another as the case study settings are unique (Stake,1994),. However, while this does not invalidate the research, it may consider it as less useful.

To establish reliability in a Case Study, the researcher should follow its protocol that includes an overview of the project (Yin, 2009). In this research, case studies follow the same strategy by writing them all in the same method, collecting data by the same tool and using the flexible methods intentionally to ensure consistency between the institutions through their presentation. Moreover, the researcher paid attention to data collected over the months. The data collection was through interviews, library search, analysis of documents, official websites, and prominent, well-known journals and publications. This data allowed the researcher to review these five institutions' processes, as well as the development programs and the individuals involved with them. They gave the researcher and the research more trustworthiness and reliability.

4.11 Triangulation

The research used multiple methods of data collection in this study to ensure the validity of the findings and results. The researcher did not implement the triangulation process in the case study method because it is inappropriate for that method. Case studies in this research were only to demonstrate the roles of the five educational institutions and to compare their systems, processes, and programs. The use of triangulation in research is to ensure that the collected data to answer the research questions are valid and reliable. The different types of methods allowed the researcher to ensure, crosscheck and compare data. The interviews, focus groups, and document review ensured that. Respondent triangulation achieved by asking many different participants the same question to ensure its validity. Researcher triangulation achieved by getting support from the researcher's colleagues to collect and analyse the data that ensures comparability. Discussing the answers and clustering them by the used digital software (Mural) invested in analysing data and obtaining results.

The researcher as well used the themes obtained from the interviews to form the focus groups'
scenarios.

Table 22. Summary of advantages of Triangulation

Advantage of Triangulation	Different methods are used to ensure the reliability and validity of data.
More data	Data obtained from individual interviews focus groups and documentations.
Different perspectives and opinions	Different methods helped to find out different perspectives and to hear different opinions about one issue.
Allows corroboration	Matching perspectives of different stakeholders regarding the same issues (themes).
Enhances validity	Gathering data across multiple methods enhances the validity of the data and the results.

Using different types of methods was a beneficial method in this study to develop the converging
lines of inquiry. The individual interviews were constructive to explore as many as possible
perspectives and unexplored community attitudes and to include as many as possible participants.
Moreover, the advantages of multiple methods in the research to gather more data at a particular
time. (Denscombe, 2003). The second benefit was the ability to corroborate by comparing data
from these different methods.

Table 23. Key themes addressed by the interviews

Participants'' Groups	Key themes addressed by the interviews
Managers, experts, and teachers	The definition of talent, factors influence talent development, community awareness and knowledge of talents and giftedness, Identification tools and programs, development tools, and programs, challenges faced by talented individuals, program challenges, funding challenges, enablers challenges, and recommendation.
Parents	Definition of talent, knowledge, and awareness regarding talents' identification and development programs in the UAE, identification of child's talent, Development of talents, Challenge faced by parents - child, suggestions, and recommendations.
Younger gifted and talented students Matured gifted and talented	Definition of talents, identifying self as talented, knowledge about identification and how they got to know about the development programs, how they want

to invest in their talent and what did they achieve, participating in different programs and functions inside and outside the UAE, who encouraged and supported their talent, challenges faced by them, suggestions and recommendations.

4.12 Focus Groups & Protocol

The second method of data collection was the focus groups. Focus groups were to provide supportive data and information to add to the complementary data (Robson, 2002). The primary purpose of the focus groups approach was to gain in-depth information and understanding of social issues (O.Nyumba, T., Wilson, K., Derrick, C.J. and Mukherjee, N.,2018). The attitudes, feelings, expressions, stories told about the experiences, and the spontaneous reactions of participants during the discussions were more helpful in a way that was not feasible in the interviews. Playing the scenario games while discussing the major issues, helped a lot in generating an original spontaneous type of data.

A focus group usually refers to a who gather to discuss an idea. For this research, the selection of focus groups was from the categories considered as the main people surrounding the highly able students and who have the most impact on their lives and talents. Those participants came to share their ideas and views around the development of this category in the UAE, and the impact of this development on their progression. The topics of the scenarios allowed the researcher to know how much they know about the development programs and how much these students benefit from them. The note-takers recorded their responses in order to measure the likely reaction of the more extensive conducted interviews. The purpose of the focus groups was to see what people share and what they would say or reflect upon the introduced situation that they had to plan.

4.13.1 Facilitation & Note Taking

A Note Taker in each focus group had to record the whole scene and the brainstormed discussion. Those note-takers who are the trained teachers managed the registration of the discussions as well as capturing the generated ideas through small and large group discussions. They recorded the interactions and the outcomes for the group on a notebook and a flipchart. They were timekeepers too. Note-keepers should moderate their notes with the facilitator's notes to ensure full coverage for the generated ideas.

A Facilitator in each focus group had built rapport; be direct; Use reflection; Probe with questions, be comfortable with silence or conversational lulls. Check-in with participants and Remain neutral. During the Focus Groups Ideation sessions, each facilitator had to:

1. Welcome the group & share the strategy they are using, such as the theme/ story/ challenge and apply the rules, including active listening, one talks at a time, respect, learn from each other, positive, criticise the idea and not the person.

2. Propose the small groups and amend if required

3. Manage the discussions (ensure it a dialogue and Not a Q-A session),

4. Observe body language.

5. Empathies with others, show understanding for every contribution, concerns with the participant's feelings, views, and attitudes, but should avoid answering or giving directions, or showing any personal feelings towards the ideas.

6. Record the ideas and appreciate every contribution.

7. Plan Wrap-Up, support the group to summaries the ideas and priorities and assign people tasks (when needed)

8. Designate who will be giving feedback to the facilitator.

After the focus group sessions were over, the facilitators worked to define the Problem Statement, which involves synthesising and making sense of all the available information the note-takers gathered during the focus groups by discovering connections and patterns.

The focus group scenarios were short and not multi-pronged or overly complicated; concise and concrete and did not use technical terms or jargon; conversational and open.

The advantages of the Focus groups that they make it easy to measure the people's reactions, and it usually provides immediate ideas and helps identify and provide insights into the current position. Its condensed nature makes it possible for any issue to solicit several opinions and feedback on multiple aspects. It allows researchers to expedite their researches and the findings (O.Nyumba, T., Wilson, K., Derrick, C.J. and Mukherjee, N.,2018).

The disadvantages of the focus groups that they did not cover determined depth compared to individual interviews. The members of the focus group may hide their honest opinions when they are in a group. The group may make them not able to oppose the views of the other participants. Besides, if we compare the focus group responds with surveys or questionnaires, it will appear that focus groups might not express as much as they do within an individual interview, and they need a longer time for setting the place and the logistics. On the other hand, facilitators might affect the results from the focus group if they insert their personal biases intentionally or inadvertently while the participants are discussing their ideas. It might result in getting the unneeded data and the wrong information that will not support the research in any way. The facilitator can also guide the focus group towards personal assumptions, and the participants may follow the facilitator's opinion by not disclosing their genuine and honest opinions (O.Nyumba, T., Wilson, K., Derrick, C.J. and Mukherjee, N.,2018).

Table 24. Summary of Focus Groups (advantages & disadvantages)

Advantages of Focus Groups	Disadvantages of Focus Groups
Easy to measure people's reactions. *Provide immediate ideas.* *Identify and provide in-depth opinions.* *Their nature makes it possible to solicit many opinions and feedback on multiple aspects.* *They allow researchers to expedite their researches and the findings.* *They help to know the end user's needs.* *They help identify other needs not addressed by questions.* *They provide different insights on the issue.*	*Not efficient in covering maximum depth compared to individual interviews.* *Members of the focus group may not be honest in a group.* *The group may make participants hesitant to express their thoughts.* *Compared with surveys or questionnaires, focus groups are more complicated.* *Facilitators' biases might affect the discussions.* *The bias can result in inaccurate data and wrong information* *The facilitator can guide the focus group to reach his assumptions.* *The participants may follow the facilitator's opinion.*

In this research, the researcher participated as a facilitator, and the focus group participants already knew from this that the researcher was gathering data and asking them to discuss and express their opinions regarding the development of the highly able individuals and the challenges they face. Moreover, the design of the focus groups was to gain a more comprehensive view of the opinions discussed during the discussions. The researcher analysed the collected data by coding to avoid note-taking bias.

For this reason, note-takers took notes while observing the session moving on, and not to leave out any comment or remark said by the people attending the groups.

These notes added to the facilitators' notes and remarks. The type of recording used was a descriptive observation of the discussions. They were in the form of notes and visuals.

Descriptively written notes helped to make the notes look like observations and allowed for an overview of what happened during the discussions while recording the notes in a structured way.

4.13.2 Data Collection Challenges

Four different categories describe data collection challenges; Researcher, data collection, participants and instruments design (Rimando, Brace, Namageyo, Parr, Sealy, Davis, Martinez, & Christina, 2015). Therefore, in this research, the most expected challenges were:

- **The Researcher**

-As employed in one of the researched institutions and the other researching (DOT) this would make it difficult to criticise the process without biases.

- **Participants**

    -Some participants refrained from the interviews.

    -Participants did not disclose preliminary data.

    -Participants did not know about development programs and were not aware of how they work.

- **Instruments design**

    -Some questions required explaining sometimes.

    -Some questions gave different meanings and allowed multiple answers.

- **The nature of the subject**

    This subject is the first of its kind in the UAE. Investigating five educational institutions programs is challenging. This type of research faced different obstacles at the beginning, such as ignoring the researcher's request for interviews or delayed responses. Furthermore, and due to the researcher is involved in establishing the (DOT) at the (MOP), the similarity of the topic and the research approach made the researcher exert efforts to split the interviewing timing and types to fulfil both projects equally.

4.14 Data Analysis

Each qualitative researcher interprets data analysis differently according to (Punch, 2013), and this makes data analysis conducted in different methods. Punch believes that analysing qualitative data can be right in any way. However; this depends on the research purpose to decide the appropriate usage of the methodological framework. The methods of analysis should follow a systematic discipline, describing, and transparent way to allow the reader see how the researcher concluded from the data and to represent the participants' views objectively and impartially as much as possible (Punch, 2013). This method will make the reader understand the undertaken process in a transparent way. Therefore, data analysis section is a significant part in the qualitative type of research, knowing that data analysis carries more negative implications than any other single part of the research process according to (Drew, Hardman & Hosp, 2007). Data analysis described the steps that take the research from being specific to become general (Creswell, 2017). It ascribes that to the fact that in the qualitative type of researches, data is words, opinions, explanations, expressions and feelings and not numbers like the quantitative research method. (Drew, 2007).

Moreover, data analysis is what most differentiates quantitative research from qualitative research (Donald et al. 2006). Researchers arrange their collections of data in order to present what they obtained, found and learned through them to others (James, 2004). Researchers also arrange the data to separate each theme and to unit them later into operative units. There are different types of data analysis, and there is no model that has common characteristics for this process (Miles and Huberman, 1994).

4.14.1 Choice of data analysis

To analyse the obtained data from both interviews and focus groups, this required deciding upon the approach at first. The data collected from the interviews followed the same questions. They were accordingly easier to sort and code. On the contrary, the data collected from the focus groups. It happened because different note-takers performed the note-taking and the varsity of facilitators. The different approaches used by each of the note-takers and the facilitators resulted in obtaining more unnecessary data and information. Moreover, as the participants in each group were from different categories, this supported the differences in the approach and the quality of the collected data. The current research adopted the grounded theory analysis approach with its open coding in analysing the interviewees' outputs. Codes arise from data, and another secondary coding of the data processed. The data arrangement was in a way that helps the researcher create explanations and generate new findings, but without summarising them (Miles and Huberman, 1994). The researcher consciously revised the collected data and worked more on reducing them by illuminating the repeated answers. Grouping of the data was by (Mural) application to focus on the main themes, find the patterns in answers, and select the responses that help to answer the research questions. (Miles& Huberman, 1994).

At the first stage of coding, the data coding was according to the categories of the participants. It helped at a particular time to know if they could answer the research questions. It also helped to clarify which type needs more interviews. However, in the second stage, the coding changed to be according to the themes. The themes become more explicit and more focused on the answers required for the research questions. It allowed the researcher to include any new ideas that came from the data of the analysed interviews. Codes were the coloured labels that assist the researcher in assigning units of meanings.

In this study, the researcher used the Mural digital program to aid the analysis of data. Computer software packages make data analysis easier and support the storing and locating of qualitative data in an organised way (Creswell, 2017). The ability to store and analyse the obtained data helped in discovering their relationships within the required themes. The usage of Mural technology to explain and relate the data was a helpful method. The organisation of the collected data and having them in one place helped to organise and manage the study in a more natural way. It gets things running very smoothly and creatively.

There were (5) types of head codes under the themes created from a list prepared before the fieldwork. These codes were identification, development, awareness, challenges, and participants' recommendations.

The researcher divided the page into four sections according to the main categories used in the interviews. Notes types differentiated by colours. Through data analysis, the main theme code was the purple label that centred on the heading page. Other subdivisions were the yellow labels that represented the quotes, or the issues derived from the interviews' dialogues and focus groups' discussions. The orange label was the pattern, which refers to answers or opinions repetitions during interviews and focuses groups. The blue label contained the questions derived from the interviews. For example, the Identification label explained the issues related to identifications and any quotes derived from the interviews. The purpose of this data was to verify the findings.

Table25. Summary of stages for data analysis

Data reduction	Data Display	Verification	Data Coding
Collected data revised, reduced, and coded. The reduced data in a separate folder	Tables and charts used to display the data in an organised and transparent way.	Continuously examining the implemented process and referring to the notes and interview papers to develop conclusions.	Themes identified and organised sequentially. Each theme assigned a code that distinguishes them by a category or a label.

4.15 Conclusion

In conclusion, this chapter discussed the methodology of this study and outlined the constructivist approach that was the philosophical position of the research. The researcher gave a rationale for the qualitative methods; ethical considerations explored, with a description of the processes used to collect data and to analyse it.

Chapter Five. Presentation of the data

Introduction

The purpose of this study was to answer its questions that wanted to explore the impact of the development of the highly able students by five Governmental Educational Institutions' in the UAE. It aimed to suggest the applicable recommendations for improving their services in the future. The study also intended to investigate the beliefs and perspectives of different stakeholders who are involved in the study. These stakeholders are the people around the gifted and talented students, and they are influencing them. Stakeholders in this study include program developers, experts, teachers, and parents. The investigation was to know how gifted and talented are defined, and the identification and development methods and processes applied to achieve the goals of education in the UAE. The researcher used multiple methods to draw data and obtain the required results, including an interview, focus groups, and document review.

Table 26. Alignment of data sources, participants and research questions

S	RESEARCH QUESTION NUMBER	SOURCES OF DATA	PARTICIPANT GROUPS WHO COMMENTED ON THIS QUESTION
1	What is the role of development programs implemented by governmental, educational institutions to develop gifted and talented students in the UAE?	Interviews Documents Focus group	*Gifted and talent experts -Managers-Leaders-parents-gifted and talented students /adults.*
2	How are gifted and talented students defined and identified in the UAE?		*Experts in gifted and talented.* *Managers-Leaders-parents- gifted and talented students /adults.*
3	How is the development of gifted and talented students implemented in the UAE?		*Experts in gifted and talented.* *-Managers-Leaders.*
4	What are the main challenges facing the gifted and talented identification and development in the UAE?		*Experts in gifted and talented.*

5.1 Results from the Interviews

As discussed in the methodology chapter (3), the interviews intended to add to the findings by document review and the other method of focus groups. The conducted interviews on six different categories using four types of interview questions to guide the discussions. The discussions covered some (96) participant who constitutes stakeholders in the life cycle of these highly able students. Following is a summary of the interviews' participants.

This study will not disclose the participants,' and it protects their anonymity.

Table 27. Participants in the interviews

Participant Group	Code	Number of participants
Experts including psychologists	E	6
Teachers	T	6
Managers	PM	9
Parents	P	14
Young talents	YT	26
Adolescence talents	AT	35

As shown in table (27), (96) participants contributed to the interviews that aimed to obtain the opinions and answers from different categories in the ecosystem around the highly able students. The selection of categories included several individuals related to this area, and the choice depended on their closest relation with the gifted and talented; therefore, they were a mix of experts (6), teachers (6), managers of programs or institutions (9), parents of gifted and talented students (14), and gifted and talented students and adults (61). The considered choice was to obtain a broader scope of opinions as the participants in the interviews are from different backgrounds and different educational institutions. They had long experiences in the field of gifted and talented in and outside the UAE, and they are familiar with the UAE educational system and environment.

Some of the selected participants are experts and teacher who perform the identification process and implement the development programs for the highly able students. Parents are the most significant stakeholders in the identification and development of these students. Their role is essential in the first stage and at a very early age. They are the first to realise their child's giftedness. Therefore, the most critical data and information come from parents regarding their children's behaviour and development. Parents of these highly able students are those who decide on whether to allow their children to participate in development programs or not (Colangelo & Dettmann, 1983). Other participants comprised experts, including psychologists, teachers, and managers aware of the development programs implemented in the UAE by the educational institutions. The study aimed to investigate these educators' experiences on discussing how these governmental, educational institutions implement their various gifted programs in the schools of the UAE. The study also wanted to explore the teachers' professional development and how do they train to implement development programs for this category. Participants in the interview were highly able students selected from different ages and stages. The interviews intended to solicit their views and to obtain an informed perspective and a broader view. Their participation was essential to know to what extent these institutions' development programs are influencing and motivating them. These participants could answer the most critical questions regarding recent emerging trends and concerns in the development programs because they represented different educational entities across the UAE. The most significant number of participants were from the direct stakeholders to give trustworthiness to the study as their responses will shed light on the actual status of development in the UAE.

The interview questions consisted of a structured approach designed to explore more responses and in-depth information concerning the study topic. The differentiated questions guided the

conversations with the different categories to answer the research questions. The data obtained

from the interviews were within the themes, which in return helped to guide the researcher in the

findings and recommendation sections.

5.2 Findings from the interviews

For consistency and clarity, the following section will display the main themes obtained from the

interviews' analysis. The themes provide a more general view of the results and ensure drawing

the main findings from the collected data.

5.3 The Interviews Analysis

Four main themes emerged from the interviews and focused groups.

Summary of the findings from the interviews according to the themes :

(1) Knowledge and awareness

Research question (1) -what is the role of development programs implemented by governmental,

educational institutions to develop gifted and talented students in the UAE?

Table 28. Interview questions in alignment with the RQ(1)

	Do you think the talented youth in the UAE are ready to adapt to the postgraduate requirements and the job market needs?	Experts-Teachers-Managers
	What opportunities are there to promote talent investment in the UAE?	Experts-Teachers-Managers
Knowledge & Awareness	How well do you know about gifted programs and talent care programs in the UAE?	Experts-Teachers-Managers
	Have implementation of the development programs contributed to the development of talents in the UAE?	Experts-Teachers-Managers
	To what extent do you know about talents program in the UAE?	Parents
	To what extent you think the UAE student is ready to travel and study abroad?	Parents

172

How did you know you are talented?	Gifted & talented
How do you want to benefit from your talent?	Gifted & Talented
In your opinion, what qualities of talent that facilitate their identification?	Experts-Teachers-Managers
What are the characteristics that made you recognise your child's talent?	Parents
How can talented people be supported in terms of developing their talent / connecting them to the labour market/universities?	Experts-Teachers-Managers
How your child's talented abilities are invested?	Parents
To what extent did the UAE support your talent development?	Gifted & Talented

Table.29. Interviews' results in alignment with (RQ1)

Knowledge and awareness	Participants
The family & community do not have adequate knowledge about the importance of giftedness and talents, which negatively affects their support for their children.	*Parents*
In several interviews, parents, gifted and talented students are not aware of the existence or the importance of a policy that regulates the identification and development programs.	*Parents, gifted and talented students*
Parents prefer and encourage their children to look after their academic programs over artistic talent programs due to the insufficient understanding of the significance of performing talents for the UAE national and international profile.	*Parents* *Experts, teachers, and managers.*
The reflection of society's perspective was apparent in the interviews. The interviewed from all categories and different ages or types of gifts ad talents agreed that the community still finds art talents as a complementary component, and it is just an entertainment category. There is no investment directed towards artistic talents, according to them.	*Parents, experts, teachers, managers,* *Gifted and talented students and adults.*
There is a lack of adequate guiding and mentoring given to the students on aligning their career options with the needs of the workforce. It is also another challenge in awareness reflected in the interviews by all categories and several partners.	*Parents, experts, teachers, managers,* *Gifted and talented students and adults.*
In some interviews, there was consent among gifted and talented females regarding males are still dominating their parents' concerns. However, there is no appreciation for their artistic talent.	*Gifted and talented females.*

The question aimed to explore the role of these five selected educational institutions in the UAE, in implementing development programs that have influenced the emotional, cognitive and skills development of the highly able learners.

It also explores the extent of knowledge of people in the UAE regarding the availability of different gifted and talented development programs, how these various programs would be able to nurture different domains of talent as well as their ability to evaluate and assess their achievement. A general question in the interviews was about the definition of the gifted and talented from the perspective of the participant. The information in this regard gained from the experts and specialists who are familiar with development programs and how they are implemented were beneficial and informing. However, it was almost challenging to obtain such information from the students or their parents who are not able to understand the development process in-depth and do not usually give their insights as the experts and specialists do in these issues. The interviewed experts, teachers, and some managers were generally familiar with these developmental programs, relying on their overall experience in this field. They pointed at the lack of definition that leads to missing awareness among families and people, including many educators as well. They indicated other problems in development programs that make them unqualified to meet the needs of these highly able students. Some problems referred to the lack of configuration and the inability of some imported programs to support the differences in the environment or the different needs of these learners. Some managers were unwilling to participate or disclose any information. However, many other experts and teachers expressed their theories about what they think regarding educating and the development of these students along with their parents who should be more knowledgeable and aware of many issues related to their children's development such as the definition, identification, and developmental programs and the issues of funding. For example, an expert at one of the institutions' said:

"Many parents of gifted and talented students are not concerned, not even worried about having

a law or a policy that regulates the identification and development of gifted and talented

students. They do not view the policy as an essential tool or an instrument that protects their

children's rights to receive their needs.

According to the expert, there is no awareness regarding the importance of having such a policy because many of parents and sometimes teachers assume that:

(1) Gifted and talented are not in need of any support, (2) gifted and talented can help themselves if they are gifted and talented (3) gifts and talents for them constitutes academic achievement only. (4) their children need more education and homework, and they do not need development or enrichment programs. They usually point at people who succeeded on their own, and they view them as role models to follow."

Another finding that emerged from the interview with a program manager:

"Many schoolteachers, including some managers, showed little awareness about the content of a

gifted and talented policy. They even do not realise its capacity to regulate the gifted and

talented needs such as development programs' or any other initiatives that aim to nurture the

gifted and the talented. The behaviour of teachers in this issue widens the gap of awareness and

knowledge among parents and the gifted and talented students as well. However, some of them

thought it was easy to guess what it entails based on their understanding of the policy of the

special needs."

The interviewed experts were very much aware of the impact of not having a national policy that would organise the gifted and talented definition, identification, and development programs and enable them, as well as impose training and development on those teachers who oversee implementing such programs and dealing with this category. A few participants understood the national concern about the extent of the developmental achievement of these programs and

assumed that having a national policy would help to unify the definition and the other institutions' activities." It will regulate the identification and development programs and enable them to achieve better and higher results. "

Considering the gaps in the programs requires identifying the enablers. The enablers are the strategies, methods and professional development used to make these programs more beneficial and efficient for the end-users. The problems in some of these programs referred by several participants to the absence of a regulating policy; some participants expressed disenchantment with the existence of multiple institutions that oversee implementing gifted and talented developmental programs. This dissatisfaction, according to them, refers to the negativity of the non-collaboration that would reflect on all of them. The idea of supporting a non-collaborative system enhances undesired systematic competing and lessens the benefits desired.

A talent expert, who is also programs' developer, commented to that by saying:

"I know that every institution in the UAE has implemented different programs and initiatives to support gifts and talents' development in the different emirate, but I know that there is a need to equalise and regulate these programs under one national policy and within the context of the UAE. There are no enablers to empower these programs and allow them to work well in a sustainable manner, we are blessed to have several types of the latest trends in gifts and talents' developmental programs, all of these are able to support them, and they receive fund from the government, but we do not follow programs assessment to ensure their continuity and improvement, we don't have either many qualified experts or teachers to empower these programs or conduct their evaluation".

Participants in the interviews were mostly unsatisfied with the misrepresentation of the programs in the UAE. They were also unaware of the existence of many of these programs and any benefit from them. The parents, gifted and talented students, were uninformed about what to do in order to overcome the challenges faced by them regarding skills training and development issues. One expert talked about a new policy intended to launch by the (MOE) as the first of its kind. It will be the first national policy in the UAE to regulate gifted education, identification, and development. The expert said:

"An international team of specialists experienced in gifted and talented issues revised the policy along with many other educational institutions in the UAE. They all were involved in the review sessions to finalise this policy.

However, and because the (MOE) did not announce or publish this alleged policy, it is not for discussion in this study.

Another expert who works on the development of educational strategies and policies said that the national underdevelopment policy would only focus on talents in the field of culture.

"Unfortunately, and in my opinion, this is not the federal policy that has been long waited to cover all types of gifts and talents and regulate their ecosystem in the country. "

Another expert explained her view regarding having the importance of having the policy to regulate the gifted education and development programs in the UAE.

"Our main concern is about having a policy that mandates having an ongoing training strategy to qualify not only teachers and enable them to perform the proper implementation of gifted and talented identification and development programs, but in addition to parents, who need to be familiar with such programs and should be a solid part in their gifted and talented children's

development. Once we make parents aware of the methods and we give them the directions and how to identify and develop their children, we save much time, and we stop the leaking of gifted and talented students due to this ignorance. We want to regulate the functionality of this training. We do not want to have a policy that will not include all types of enablers such as parents and accredited packages of comprehensive programs with tools related to all types of gifts and talents as well as teachers and skills."

Several teachers use their limited knowledge obtained from their sole experience in regular teaching and general training, but this was not enough and had an effect of transferring poor awareness and understanding that is disadvantaging the more recently qualified teachers and preventing them from practising and applying their skills. It is demotivating gifted and talented individuals and reducing their enthusiasm as well.

An expert who was involved in the development of several educational policies more than once said:

"Gifted and talented programs cannot achieve their objectives towards spreading awareness and changing the attitudes of people in the community regarding the importance of gifts and talents and their development if teachers who are in charge of the implementation of these programs are not qualified enough and do not have enough literacy for the task. What will the teachers do if they do not have the basic required knowledge on how the program function and what they should expect from it in the long run? How will they implement any program if they do not know that they have to assess its functionality and progress to measure its success and achievement? How can they provide the gifted and talented with their needs for development if they do not have any background about the basic gifted and talented needs? How can a program

fulfil that need and nurture it if the teacher is not aware of many aspects of development or not

fully convinced about the importance of development for gifted and talented students?"

Finally, and from the above said data, extracted from the interviews, not only teachers need professional training to implement development programs and gifted education, but parents also need intensive training to understand the concept of identification and why their gifted or talented children need development. They must attend continuous and regular courses to exercise and know the process of identification and development for their highly able children and to be online with the occurring changes in fields of education and development. Parents should help teachers as well to identify their highly able children and to select the type of program that relates to the gifts or talents and suits their abilities. Teachers' awareness and knowledge regarding identification and development processes is a challenge that can harm the entire ecosystem surrounding the gifted and talented if they were not sufficient and adequate for their jobs.

(2) Definitions and identification of Giftedness & Talents
Research question 2, How are gifted and talented students defined and identified in the UAE?

Table 30. Interview questions in alignment with RQ (2)

Definition & Identification	What is the talents' definition from your perspective?	Experts-Teachers-Managers Parents Gifted & Talented
	How did you discover your child's talent	Parents
	What are the identification tools that are used to detect talent in your institution?	Experts-Teachers-Managers
	How did you come to know about the talents' identification programs in the UAE?	Parents

Table 31.Interview results in alignment with (RQ2)

Definitions and identification of Giftedness & Talents

The participants, in general, differentiate their definitions regarding (giftedness and talents), and they do not know if there is a unified certified meaning for these categories from any of the (5) institutions.	*Parents, experts, teachers, managers,* *Gifted and talented students and adults.*
b) The majority of participants (parents, gifted and talented) were confused regarding how to define talents and differentiate them from hobbies.	*Parents.* *Gifted and talented students.*
c) The other confusion among (parents, some gifted and talented students) was in differentiating between academic giftedness and artistic talents. This confusion was due to the absence of an official policy that provides them with a definition that identifies each of them differently.	*Parents.* *Gifted and talented students.*
d) The absence of policy was also one of the main issues mentioned by all experts, teachers, managers, and gifted and talented adults. The policy would provide the institutions with the appropriate unified definition of gifted and talented individuals.	*Experts,* *Teachers, managers, and gifted and talented adults.*

This question explores the description of the gifted and talented and the identification programs implemented for this purpose in the UAE. This analysis indicates that the definitions of the talented and the gifted in the educational institutions differ, and accordingly, this assumes that the identification programs vary to suit the definitions descriptions.

A-Definition
One of the interviewed experts indicated:

"To derive a definition of gifted and talented, we researched more than 21 definitions and derived our own from them. However, declaring this definition is not possible yet because it is in the new policy, which should undergo more intensive reviews before publishing it or discussing its context in this interview."

All participants, in general, answered a unified question in the interviews on how they define a gifted or a talented individual, and where from did they learn about this definition. Experts, teachers, and managers said they represent their definition following their institutions that derived the description with the cooperation of researchers and experts who visited the theories in the field

of gifted and talented education and development, the values and various concepts applied in the UAE such as innovation and creativity to obtain their unique, specialized definition.

According to this research, giftedness is the skill and the abilities in the academic and scientifically domains, while talents are the performing skills in the cultural and artistic realms.

The mixed views regarding the differences between talents and giftedness reflect the amount of ambiguity in them. An expert who develops identification and development programs explained his opinion in the interview by saying "

"Some teachers do not see or believe in the differences between the two terminologies because they do not have enough knowledge. In his opinion, this was not a surprise because teachers require intensive continuous training and more in-depth readings and researching to grasp some knowledge about this complicated area."

Another manager explained his opinion in this regard by saying:

"Some teachers and even some parents do not like this differentiation because it puts more effort into them when asked to nurture or support their children in any way. However, and regardless of the manager's opinion, some interviewed parents for this study were in favour of this differentiation because this helps them understand why their child is underachieving academically while they are showing other amazing abilities in arts or sports. However, this does not change the parents' perspective on how they view gifts and talents. They accept it if their children are talented in music or arts, for example, if they score high marks in their academic subjects."

Another expert with four years of experience in this field defined talents as:

"The gifted person is the one who can think outside the box and think in an unfamiliar way. The

characteristics of a gifted that he/she relies on self and does not return to any official (parents,

teacher, coach).The gifted often introduces a new and a right decision that differentiates between

what is right or what is wrong, even in the provision of solutions."

An expert who oversees strategic planning of development programs said:

"A talented individual, in my opinion, is the one who enjoys extraordinary abilities that develop

and become an investment.

When it comes to defining gifts and talents, parents had their definition that reflected what they

culturally know and experience from their tradition, community, or children's behaviour.

A parent of a gifted child said:"

His mother and I could see his talents because we know that a child who makes something

different from his brothers or peers is a talent. The talented children's work will be different, and

it will shine by itself."

A teacher said, *"For me, talent is the ability to perform and deliver a mission to make people*

happy and satisfied, especially if this favour affects the underprivileged people. The talent is

what makes our work unique, and people love it."

A talented musician defined talent as:

" It is what I am passionate about doing all the time, and what I want to be more skilled in doing

it every day."

Accordingly, there is a consensus among experts, managers, parents, and gifted and talented that

the definitions at different institutions are very narrow and do not reflect the future's needs. There

is a need for a more broadened and flexible definition adopted by all institutions and at the same time used to interpret all types of talents. Another consensus among the interviewed participants that there should be a more clarified definition, which differentiates between giftedness and talents. These differences should be more transparent for the regular people who are not experts and do not prefer scientifically complicated explanations to use each definition.

Another concern is about how the different definitions do not reflect the reality about talented and gifted abilities away from their skills. The confusion of definitions has made some of them define the skills of the students while others described the competencies and not the talents.

Additionally, some students do not find what describes their abilities included in the definition. Although such a shortage does not mean that they are not gifted or talented, it might confuse them and hinder their development that requires planning according to their talents or gifts needs besides, the definitions of the gifted and talented cannot be a sole decision taken by any person. It is the role of a committee that consists of teachers, experts, and managers in educational institutions.

B-Identification
An expert who worked as (Head of the gifted programs department) for ten years indicated:

"The talented person is identified through several methods. First, parents, friends, teachers, schools, and the ministry of education identify him/her through the forms of talent screening (nomination, direct submission), and objective achievement tests. These tests will recognise the identification of the tested giftedness. There is no doubt that there must be an objective sequential program aimed at the talent to be refined and highlighted correctly and to receive support through the mentor who may be able to turn any gifted student into a scientist, thinker, researcher or an expert."

Another expert who worked as (Administrative of tests and measurements) for more than ten years said:

"Talents need nurturing after identification. Using appropriate test tools to discover their talent, helps them to go through varied training programs. These programs include (lectures, games, issues, activities, trips.) The differentiation of methods is beneficial, so the talented individual does not feel bored while he/she wants to practice things out of the ordinary. It is necessary to provide a development training program for all of the parties around talented individuals and a rewarding system to provide a motivating environment that suits his/her development needs."

An expert who is a psychologist pointed at the identification programs or the used methods to identify the gifted and talented students in schools and even at home. She said,

"These tools or techniques might be sometimes misleading or do not prove to work well. What makes her say that is due to her experience in the field, and what she has been facing for a long time? She noted that some children might suffer other problems such as hidden physical problems in hearing, sight, or even psychological issues that impair their achievement. Their physical or mental difficulties prevent them from declaring their talents or gifts if they have any of them. They usually feel restless, confused, and sometimes bullied by others. Such problems would make them look like underachievers'.They hide their gifts or talents if they were gifted or talented.

A manager who is in charge of monitoring the identification said:

" The identification tools might not be accurate if most of them are very easy to the extent that they do not reflect the real abilities of highly talented students. Some problems in the identification cause wrong enrollments for those who are untalented. They may enrol in a talented program, but

they would not continue in them. The other problem here is parents. They will not understand that the identification was wrong, and they will misunderstand the issue or the institutions' intentions. The focus on (Math and Science) as a measurement criterion is not fair, and it can neglect other hidden talents. The language is also an obstacle as many of the students are not good in English; the language used by some introduced identification programs is English, and this causes them to be unidentified as talented.

Finally, experts in the interviews, in general, were adhered to their institution's definition and identification methods. However, not all of them were satisfied with how they describe or clarify the meaning of talents. The consensus among the interviewed regarding the conflict between giftedness and talent was apparent. On the other hand, most of them were not able to explain or even to define the differences. Experts' participation in the formulation of a definition is critical. However, most of them admitted that they did not share in this formulation, and only a limited number of experts formulated the definition. Many experts, teachers, managers, parents, and even talented individuals were not aware of the existence of any descriptions, and the importance of the definition. Most of the teachers did not even know that there is a definition for talented and gifted individuals, or they did not memorise it. The identification tool, on the other hand, constitutes a challenge for experts, teachers, and managers in the first stage. Many of the exported international identification programs need customisation to suit the highly able students in a differentiated environment and to align with the strategies, visions, and national identity and agendas in the UAE.

(3)-Development & support

RQ 3. How is the development of gifted and talented students implemented in the UAE?

Table 32. Interview questions in alignment with RQ (3)

	What factors influence talent development (examples)	*Experts-Teachers-Managers*
Development & Process	How do you develop the gifted programs?	Experts-Teachers-Managers
	What do you/ school do to develop your child's talent?	Parents
	What supported the development of your talents?	Gifted & Talented
	What did you achieve -benefit from your talent?	Gifted & Talented
	Did anybody encourage you? Who and how?	Gifted & Talented

Table 33. Interview results in alignment with RQ (3)

Development and processes	
a) The current talented and gifted provisions and development practices, according to experts, teachers, and managers are random and not systematic, and not based on an institutional philosophy.	*Experts, teachers, and managers.*
b) There is no overall institution, strategy, or plan to regulate giftedness and talent development practices, as mentioned by all experts, teachers, and managers in addition to gifted and talented adults.	*Experts, teachers, and managers.*
c) No policy supports the implementation of qualified development programs. No system that links the current practices together. No policy provides guidance and regulations on the processes and procedures.	*Experts, teachers, and managers.*
d) No gifted and talented centres provide gifted and talented students with a conducive, stimulating, and challenging learning environment according to all participants from all categories.	*Parents, Experts, teachers, managers, and gifted and talented.*
e) No collaboration and coordination between the institutions to provide a qualified system that regulates the usage and efficiency of gifted and talented programs and initiatives, according to experts, teachers, and managers.	*Experts, teachers, and managers.*
f) The current gifted and talented practice is not sustainable and does not support gifted and talented students and teachers' needs in the long term, according to all participants from all categories.	*Experts, teachers, and managers.*

This question explores the development programs implemented for the development of the highly able students in public and private schools in the UAE.

The knowledge about the development of these highly able students' and the different programs implemented in and outside the schools to ensure this development and to make it an ongoing appropriate achievement is an important issue that affects the whole process if not applied in the right time and manner.

Finding out to how extent participants know about development programs and the role of these developmental programs, the interviews included specific questions aimed to explore the participants' awareness and knowledge in this regard.

The information gained from these different categories who work in the field of gifts and talents' development or related to it resulted in realising how some experts were mostly unfamiliar with the other institutions' identification and development process and procedures. Most of the interviewed teachers indicated that they rely on their experience to nurture the highly able students. However, they occasionally do not know if they satisfied their potentials equally.

For example, an expert who works in one of the educational institutions said:

"We have plenty of gifted and talented developmental programs and initiatives that cover all educational levels in the UAE. However, they are not empowered with enough experts, teachers, and criteria to make them sustainable. Most of them are temporary and unsustainable, they stop or pause, and sometimes, they continue without an aim. "

Interviewees revealed critical issues regarding the development programs, their creation, and implementation procedures. There were common consents among the interviewees who agreed and consent that these educational institutions have already created and implemented numerous

numbers of gifted and talented development programs for various domains of gifts and talents. Though, and because there is no ongoing assessment nor continues professional development available for the teachers, it leads to a lack of awareness about the programs and their ability to support the gifted and talented. These issues would appear in the form of a shortage in identification and development programs despite many programs are available. It prevents providing any support or the ability to implement the right decisions that will ensure their development sustainability and will empower them with the appropriate enablers. The majority of teachers nominated to teach and look after these gifted and talented students are teachers who work in schools and implement the regular curriculum and the traditional teaching style and system. Therefore, such teachers, who are not experienced and do not have long and continuous knowledge in dealing with highly able students would negatively influence the process of identification and development and minimise its effect. The assessment itself is sometimes not appropriate and does not match the gifted or talented student who is coming from a different country. If the institutions implement the development programs according to the state that created the application and developed it in coherence with its culture, citizens' needs, values, and its national agendas, this will end up in failure in our country or any other state, and the program will not achieve anything.

The findings as well highlighted the massive shortage in the key enablers that support the implementation of the development programs and minimise their benefit. Such an issue might not be evident nor addressed at present. However, their negative implications will emerge gradually in further extended periods. According to experts, most of the implemented development programs work consecutively for a while, but then they discontinue once they face any issue. The development of highly able students requires sustainability and continuity to reflect on their

development success. There should be teachers with knowledge on how to solve any obstacles, and they are professionals in implementing such programs.

An expert in the field of giftedness said that one of the observed challenges during the implementation of the talents' development programs is not being encouraged or welcomed by the highly able parents. The majority of parents do not appreciate gifts and talents in arts or any domain other than the academic field. They do not view the highly able children as an investment or assume their success in future. They think talents' development programs are just activities that will not educate their children or secure their jobs in future. The regular school curriculum, in their opinion, is the only opportunity by which their children can secure their future.

 One of the experts said:" Another problem that faces any developmental programs is the lack of understanding and awareness about the meaning and the concept of the development of gifted and talented, and how this development should reflect on the surrounding environment in the community. This problem caused the drop out of countless students who were not encouraged by their parents and were not influenced to continue in them." In addition to the above, the expert said:" These students should learn how to arrange their priorities and manage their timing. They need to learn to support themselves and manage their lives and their emotions. They want to know how to grow and progress with their talents while going on with their regular lives. Parents could mess their lives, but it is all because they are not convinced that gifts and talents would support their children's future and secure them jobs. *"what I see as the most significant challenge"*. *"This challenge makes the gifted and talented development very difficult, and sometimes it ruins the talent itself"*.

An expert indicated:

If the high ability students do not get training, this will negatively affect their personalities.

"It can turn out to be the most critical implications of introversion and isolation. There are substantial general observations that directly affect gifted and talented individuals. Lack of mentoring and development programs is one of them; the absence of a teacher rewarding program; the teachers' focus on providing the curriculum and not to train students on how to use their skills to understand the subjects; the absence of a management system that regulates gifted and talented students' education from early school life. The expert as well pointed at the existence of the traditional conservative thought in the community that views the scientific approach as the best approach for a career. The non-diversity in talent development programs make them unchallenging and dull, as well.

A mother of a talented girl who arrived in the UAE two years ago said:

"My daughter was able to develop her talent in (street dance) in an academy in Finland, but now, and as we moved to Dubai, it is difficult to find a specialised academy to support her talent. She is developing her talent with the support of YouTube."

This mother was unaware of the existence of any developmental programs in the UAE. She criticised her daughter's school for piling her with homework, which is distracting her from developing her talent.

"It is a private school. However, it lacks the equipment of many instruments and tools that could help my daughter develop or satisfy her talent."

Another mother indicated that the parents, who come to know their children are gifted or talented, begin to live and see daily nightmares because of this knowledge. It is oppressing because they do not know how to treat them or if they need to do anything for them. They are afraid that they may ruin their talents if they interfere in it.

A father of a grade 12 son agreed with her and confirmed what she said by adding:

"The stress begins when they are unaware of what to do after they discover that their child is gifted and talented and how to deal with this information. Life becomes more difficult and challenging for parents more than their children do. To know or not to know, both are distressing.

A mother of a grade eleven son and a grade one daughter said:

"I usually expose my children to different experiences, and I spend time to observe their behaviours. I used my experience with my elder son, who identified as talented in his school to encourage my daughter, too. Now I assume that she may exhibit any talent, as I believe that abilities inherited. However, she is still very young to know or to explain her desires, and I am the one who keeps thinking if I will succeed with my efforts exerted to make her display any talent.

A mother of a male student who is in grade ten said:

" My son has a passion for helping countries maintain a healthy, rubbish free environment. He established a group called: (Green 4 Life). He acted like a leader when he gathered several friends and used to go to the neighbourhood to collect the plastic bottles, glasses, cardboards, papers, and any recyclable items where I would take to the recycling centres every Saturday to support him. In Amman, our country, he discovered a group called (Green Wheels) that attracted

his attention and passion. The group's main task is to collect the plastic bottles and the leads, and they categorise them and send them somewhere where they use them to make wheelchairs for sick and disabled people. My son loves this kind of work, and he can gather a considerable number of people and can convince them to work with him. In Amman, they called him the 'Green Wheels Ambassador, but now, I do not know how he will manage his life with his leadership talents and where he could go to start his ambitious projects.

She continued saying:" *I thought the school could offer my son any support to flourish his talent, but this was not true. I had to move my son to a more expensive school because his former school does not offer any growth opportunities for talented children like him. I do not have access to any identification tools to have a reliable insight on his abilities; there are no opportunities apart from having private music or sports lessons and training in a club with expensive charges.*

A father of a gifted boy in math and robotics said:

" *My son's former school had no provision or services for gifted and talented students, but the new school has after-school activities, and my son enjoys these activities. I noticed now that he mainly focuses on Math. He is also passionate about robotics. He used to complain about how boring the math classes were in his previous schools. Now he loves it, and he is doing very well in this school.*

A mother indicated when asked what she knows about talent development programs :

" *Not a lot, but now I am seriously thinking of opting Home Schooling, where I can spend time with my children to make them responsible for their learning."*

The results obtained from the interviews show that the development of talents operates through several initiatives and programs in the fields of science, academics, and culture. However, these

newly launched initiatives could not reflect the talents' development progress yet. Similar development programs require ongoing evaluation to clarify the program plans, improve communication among partners, and gather needed information for program improvement and effectiveness. (Milstein, B, Wetterhall, S, and Evaluation Working Group, 2000).

However, it is not difficult to assume the existence of several difficulties that face the application of these programs, such as (1) the shortage in the enablers that would support the program's success in the future. (2) The lack of specialists in the field (3) the shortage of training given to gifted and talented teachers, trainers and parents. (4) The absence of coordination between the related institutions, which makes it challenging to learn about other talents' development programs in other institutions.

Another finding that emerged from these experts' dialogues was that teachers and managers in some schools have little awareness of the existence and importance of talented programs and initiatives process, although some of them thought it is easy to guess what they entail based on their knowledge of other teaching programs in the regular classes. Experts were aware of the impact of not having a national policy. A few participants were aware of the national concern regarding these developmental programs and their achievements. They thought that having a policy for gifted and talented would help regulate the applications of these gifted programs. It would also enable them to achieve better and higher results. Some participants expressed disenchantment with the existence of multiple institutions in charge of implementing talented developmental programs. The lack of enablers and the nonexistence of a regulating policy would negatively reflect on all of them and support a non-collaboration that enhances undesired systematic competing.

An expert who works in an educational institution said:

"There are plenty of talents' developmental programs and initiatives that cover all aspects of talents and all educational levels in the UAE. However, because they are still new, they are yet to have measurements taken accompanied by the qualified enablers nor any accredited accelerators, which will make them a sustainable, fruitful, and measurable program."

A talents' program developer expert commented by saying:

"I know that every institution has implemented different programs and initiatives to support talents' development in a different emirate, but I know that there is a need to equalise and regulate these programs in the UAE. There are no enablers, we have all types of talents' developmental programs for different domains of giftedness and talents, but we do not have sustainable programs to train qualified teachers and enable them to train other teachers as well and so on continuously."

Another finding that emerged from these interviews was the unavailability of qualified teachers to identify and nurture talented learners in schools.

A manager in an educational institution said:

"There were some teachers selected to enrol in an intensive Diploma program that is offered by Hamdan Bin Mohammed Al-Smart University. This university as well has signed a partnership agreement for the implementation of the vocational diploma program in gifted education. This program aimed at training and developing a selection of teachers who were chosen from the government schools as teachers in the field of giftedness education and at rehabilitating a distinguished Emirati teacher in the process of detection, care, and development of talented people."

The researcher found that this program includes (20) teachers every duration and runs for five months. It represents an advanced step towards the formation and the development of human capacities and capabilities that are necessary to build a scientific and practical system.

Managers in some of these institutions showed little awareness about this diploma's achievements. Few experts had a piece of knowledge about the national concern on the accomplishment of this diploma, and some participants expressed their disenchantment with this diploma because it is limited to a small number of teachers.

According to an expert:

" It also selects teachers from regular education and special education to train them for (13) hours only, which is not enough to make teachers able to identify and nominate who is talented and who is not."

Finally, looking at what the interviewed indicated and what results obtained from them reveals an issue in the development process, strategy, and enablers. Such results will constitute the recommendations in the recommendation section.

(4) Challenges
RQ(4) What are the main challenges facing the gifted and talented identification and development in the UAE?

Table 34. Interview questions in alignment with RQ (4)

	In your opinion, what are the most obstacles and challenges facing talented people and their families?	*Parents*
Challenges	What are the challenges you face in raising up your child's talents?	Parents
	What are the challenges you faced in the UAE with your talents' development?	Gifted & Talented

195

Table 35. Interview results in alignment with RQ (4)

Challenges

Challenges	Participants
a) The support given for the subjects related to arts and cultural talents is very little and not encouraging according to all participants from all categories.	*Parents, Experts, teachers, managers, and gifted and talented.*
b) There are rare scholarships granted for artistic talents but plenty to the academic subjects only according to all participants from all categories	*Parents, experts, teachers, managers, and gifted and talented adults.*
c) Lack of qualified instruments for identification, lack of trained and qualified teachers to identify gifted or talented learners, according to experts, teachers, and managers.	*Experts, teachers, and managers.*
d) Talented and gifted students can study one speciality in the university, which prevents them from considering the speciality of their choice as a talent,	*Parents, experts, teachers, managers, and gifted and talented.*
e) Non-academic subjects are costly because they are not available in public schools as given by private schools.	*Parents, Experts, teachers, managers, and gifted and talented.*
f) The lack of differentiation in teaching methods in schools makes talented students forced to underachieve in their academic subjects.	*Experts, teachers, and managers.*
g) Curriculum provision: the curriculum taught in schools is inadequate to fulfil the gifted and talented student's potential. There is no curriculum differentiation method adopted, and the differentiation of the curriculum is for the academic giftedness achievements only. The curriculum is unable to accommodate all types of talents, and there is no differentiated or specialised qualified curriculum for talented and gifted students.	*Experts, teachers, and managers.*
h) Training of skills: Teachers at schools teach subject content only without paying attention to skills. They do not even know how to train skills. There is no attention paid to develop the students' abilities; students do not understand innovation and innovative products. Teachers' skills do not undergo training, and they are mostly not qualified to discover or identify talented students in their classes.	*Experts, teachers, and managers.*
I) Human capital: the participants raised the lack of specialist professionals to identify or to provide counselling, coaching, and training for gifted and talented students and their teachers in schools.	*Parents, experts, teachers, and managers.*
j) University specialities: lack of higher education institutes and academics founded for teaching music and other arts along with cultural subjects is a challenge for those who are talented and who have no option to select any speciality subjects in the university.	*Parents, experts, teachers, and managers.*
k) The mismatch between university speciality and jobs, on the other hand, creates another challenge for those who graduate without guidance on how or where to find a job.	*Experts, teachers, and managers.*
l) A significant speciality is available in one university only, this causes other challenges such as the availability of an opportunity, and who can obtain it.	*Parents, experts, teachers, and managers.*
m) Most of the implemented identification and development programs are recent, yet, it is difficult to assess their efficiency or how successful they were. However, this is an opportunity to apply for an assessment program to resume a culture of programs' ongoing evaluation in the future.	*Experts, teachers, and managers.*

In these sections, several challenges represented as obtained from the results with alignment to the themes derived from the results of the discussions.

(a)Challenges in knowledge and awareness

This major challenge occurs in the misunderstandings and beliefs of the community and their attitudes towards gifted and talented individuals. Challenges can be at home, in schools, and the classroom setting. According to (NAGC)'s "list of the most prevalent myths in gifted education" (nagc.org), many of these turned to be solid myths, believed, and accepted for a long time. These myths are including (1) the belief that "gifted and talented children can learn on their own*"* (nagc.org) because their curiosity will lead them to learn and know what they need to know without any interference. This category of individuals indeed has their innate ability; however, this ability and these children require guidance to know "what it means to be gifted or talented and how to nurture their giftedness and talent to benefit out of them" (nagc.org)

(2) People assume "the happiness of the gifted and talented students and that they always enjoy being exceptional*"* (nagc.org)*,* however, the highly able persons they are not satisfied all the time, and they may feel lonely or isolated most of the time. Their behaviour requires schools and parents to seek psychological advice to help their children know how to deal with their giftedness or talents and to live happily like the others. (nagc.org, 2019)

Teachers and parents assume that "those students find it interesting to know all the answers in the classroom*" (nagc.org).* The thing that some people do not understand that while talented and gifted students have an incredible ability and curiosity, but they will not engage in any material they do not find interesting. The worst challenge for them is to feel bored, as this feeling will hinder their interest, and they will not make any effort to learn or to involve themselves in the class discussions. The most challenges the gifted and talented students' face that their parents think if they are gifted or talented, they do not require development because their teachers can recognize and support any highly able students in their classroom. This issue requires the attention of the

teacher or the parents to help this type of extraordinary students find their interest and passion for topics they like. The fact about how most of the teachers are not qualified or trained on how to identify or recognise the students with exceptional abilities would increase the gap and minimise their abilities. Moreover, gifted and talented students are more comfortable to teach, and they learn faster than others do according to the myth. However, and despite being highly able, teachers need to change their methods of teaching and present the subject in distinct ways. Therefore, to teach these students, teachers must exert more effort to keep them interested and willing to learn. The high expectations of teachers or parents or even the community would help the development of these students and urge them to achieve better. However, very high expectations might oppress and pressure them. These highly able students do not like to feel pressured, though people around them should understand this. They as well assume that the giftedness or talents will make the gifted and talented students achieve without effort, however, highly able children will likely be at the top of a class and get high grades unless they were interested in the subject.

A talented girl said in the interview said *"When I told my mother that my school identified me as talented in arts, she was not happy, and she asked me to look for another useful talent in me. Frankly, this upset me because I love drawing, and I can't find my interest or passion in another field to make my mother happier."*

A mother of a talented son in entrepreneurship said: *"My husband felt ashamed from our son when his school called him for a meeting and told him that our son creates original items and sells them in school. His father stopped him from doing his own business as he called it and told him that what he is doing appears like he is poor and in need of money. He told him we do not need the money, and people will think we do if you sell your creations."*

The lack of awareness or knowledge about giftedness and talents, the need of freedom required by these individuals to feel they can create and produce is one of the most considerable challenges that hinder these students from exhibiting their abilities and interpreting them into achievements.

A parent said that he is not worried about searching for any development programs to support his son's talent because he is sure that his son's talent will find its way and will lead him to decide and choose his path without the help or interference of any tools or outsiders."

A teacher of gifted and talented said that she had no clue about any other institutions' programs or development strategies for gifted or talented. She said that she heard about these programs during this interview only and for the first time.

(b)Challenges in definition and identification

According to (NAGC)'s" list of the most prevalent myths in gifted education, all children labelled as gifted have strengths, and they display curiosity, which is one of the giftedness and talents traits" (nagc.org). This mistake leads the children to underachieve because people assume by this definition that these highly able would succeed and achieve better marks than his /her peers in the classroom achieve.

A teacher said: *"it is easy nowadays to label any hardworking student as talented, while I think this will change the concept of talents and will make anyone who works in any work is called talented."*

An expert who worked as a gifted and talented program developer said*:" We are not only in a debate regarding the differences between gifted and talented, but we also debate the usefulness of many of the identification tools. Some of these are outdated, and if it comes to us, there is a*

need for different types of definition and identification tools customised to suit the environment and many other aspects that would prevent losing talented individuals or identifying a non-talented as a talented.

The UAE's vision, strategies, and national agendas depend on a variety of values such as leadership, innovation, and creativity. Therefore, creativity and leadership should emphasise the selection of abilities in the definition of a gifted and talented individual in the UAE, and this would help the educators and the related stakeholders provide them with the appropriate services accordingly.

Development of the best identification programs depends on how the highly able students defined. The definition should include specific abilities and skills. Developers of programs can determine the type of identification if they have a clear definition for them. The definition helps to nominate and select any gifted and talented student and their enrollment in specific development programs. An appropriate definition helps the educators as well to decide the type of education, the method of identification, and the development programs that will support their talents' progression.

(c) Challenges in development and process

Challenges in the development of the highly able students rise mainly from the absence of specialised, differentiated and gifted education. The nature of general education does not enhance these students' development. It does not challenge their specific abilities as well. Gifted and talented students usually find regular education boring and uninteresting, and they fail to get along with it. Furthermore, the style of regular learning and teaching relies heavily on memorisation and lecturing. This system results in increasing dropouts and numbers of underachievers, and it narrows the participation of the highly able students and hinders their skills from progression.

According to an expert:

"The argument here is about the domination of the traditional teaching style in all theoretical and practical subjects at schools. Many children dropped out of schools, and many of them may be gifted or talented."

According to another expert, *"The bestseller development programs are the enrichment programs that occur after school or trips and visits that involve all students and do not allow any gifted and talented student to feel he or she is a unique person."*

A father of a teenager gifted said, *"I do not encourage my son to waste this valuable time to attend any enrichment programs provided after school. Drawing and arts are the girls' interests. He can spend quality time studying physics or math subjects. He is talented in math, and he will get high grades if he focuses on his subjects. I wonder why schools do not increase science subjects in boys' education. If the school introduces robotics programs, I may consider this program only and encourage him to attend this one specifically."*

A psychologist indicated, *"In parents' psychology and mindsets, any program excluded from the primary curriculum is useless and applied for fun and entertainment only. They view arts as one of the feminine interests, and it will take long years to convince them that cooking, for example, is the place for many successful male chefs. It is part of arts and culture, and they are defined as talented accordingly."*

5.4 Results from focus groups

This research aimed to study the development system in the educational institutions in the UAE to detect the status of identification and development in schools. As previously discussed in the

chapter (3), the focus group discussions intended as part of this study methodology to obtain data. The researcher varied the methods for the sake of getting more data from different resources. Group discussions were infused using three scenarios in alignment with the themes. They used the scenarios to tell their stories and inform the topic with real data. In this way, the researcher was able to generate discussions among the participants. These participants met for the first time; however, they were familiar with the highly able individuals' issues. They were able to describe the highly able students statue currently and suggest what they think should change in the future. Their discussions were helpful to recommend the design of a better ecosystem eager to support the highly able progress.

The findings and discussions among (64) participants in these focus groups, will be highlighted in the following section, noting that this study will not disclose these participants names or designations to protect their anonymity.

5.5 Findings from Focus Groups

As previously discussed in the chapter(3), setting in the focus group sessions was prepared to guide the discussions. It intended to allow the groups' participants to imagine the life cycle of the highly able students. They were using the scenarios and the stories presented to them in their discussions. The debates aimed to obtain the opinions and answers from the participants that constitute the stakeholders in the lives of gifted and talented individuals. The selection of the participants for the focus groups was similar to the selection of the participants for the interview. Why did this happen? Because the researcher was looking for answers to the same themes that respond to the research questions. Obtaining answers from different participants for the same question supports the reliability of the study and to generate preliminary data. Any real information obtained from lively

discussions and brainstorming would allow the study to have better insight into the issues. The groups' participants included educational experts, teachers, managers, parents of highly able students, highly able students and adults. All of them had different experiences in the field of gifted programs in the UAE, and they are familiar with its educational system and environment. The focus group participants debated different aspects of the critical issues.

Table 36. Participants in Focus Groups

Participant Group	Code	Number of participants
Experts -including psychologists	E	8
Teachers	T	4
Managers	PM	2
Parents	P	12
Young talents	YT	18
Adolescence talents	AT	21

5.6 Analysing focus group discussions

Four main themes emerged from the interview data. These four themes constituted the main topics for discussions in the focus group, as they were the core issues that considered a comprehensive ecosystem supposed to serve and support the highly able students. The four themes including knowledge and awareness, definition and identification, development and processes, and finally challenges, formed the ground from which the scenarios given to each group came, with stories intended to add more insights to the results and findings from the interviews.

Various challenges emerged within the stories mocked in the group discussions in response to the given scenario. The problems in alignment with the themes were: (1) lack of support given to parents who need expert advice to raise their awareness and learn how to identify and nurture their highly able children. (2) The misconception of definitions due to not having a unified definition.

(MOE) In their opinion should impose a unified national definition within a federal national policy to regulate the services and provisions to support the highly able persons in the country. (3) The availability of numerous identification and development programs and tools. According to the expert's focus group, many of these tools lack many enablers that empower them to serve and support the gifted and talented students' differentiated needs. These challenges mainly focused in: Age-specific Tools; Tools that recognise a specific talent domain; Tools that only test one or two skills and the majority of these tools or programs disconnect. The small number of specialists and experts in this field is another challenge. Such a shortage of professionals in different domains of expertise affects the area and reflects negatively on the identification and development processes as well. Furthermore, the available experts do not undergo periodical professional development to update their methods and knowledge in this area. On the other hand, teachers who are in charge of teaching and developing highly able students are teachers who work in special or regular education. They go through a short-term diploma, which is not adequate for a critical process regarding nurturing the highly able students. Moreover, the lack of a mechanism to bring together all experts and specialists is another critical challenge in the process. Gifted and talented specialists need to share knowledge and experience, communicate with parents and teachers, and develop a policy that unifies all concepts. The development and disseminate of a policy would standardise practices and regulations is an essential procedure towards a thorough solution. The establishment of specialised academies in different domains of talents is a must. Conducting researches that explore the type of current identification processes would help to identify the gaps and propose improvements. Experts group thought that the usage of a platform to get expert advice would help students and parents gain the experience they need. They also thought that the professional

development of a gifted and talented teacher must go through systematic education and not just a

short diploma or brief courses.

Table 37. Themes analysis

Following analysing the findings from the focus group discussions, below is a summary of

results generated from these discussions

Knowledge and awareness	Participants
Three Groups pointed out that the family & community do not have adequate knowledge about giftedness and talents, and that negatively affects their support for their children.	Parents Gifted and talented students Experts
Four groups pointed out that parent prefers and encourage their children to study academic programs over artistic talents due to the insufficient understanding of the significance of talents for the UAE national and international profile.	Parents, gifted and talented students Gifted and talented adults Experts
The society perspective reflected in the discussions in more than two groups. The talented adults, as well as students, agreed the society still finds art talents as a complementary component, and the investment favours the academic talents.	Parents Experts, teachers, and managers.
The students do not receive adequate guiding on aligning their career options with the needs of the workforce.	Parents, experts, teachers, managers, Gifted and talented students and adults.
In one of the groups, there was a consent that gender is pertinent in determining the appropriateness	Gifted and talented students and adults.
Definitions and identification of Giftedness & Talents	
The current talented and gifted provisions and practices are random, not systematic, and not based on an institutional philosophy.	Experts, teachers, managers,
There is no overall organisation to regulate giftedness and talent definitions and practices.	Experts, teachers, managers,
The absence of a policy framework that supports and links the current practices and provides guidance and regulations on the processes and procedures of identification.	Experts, teachers, managers,
The lack of comprehensive gifted and talented identification programs in schools to provide the G&T students with a conducive, stimulating, and challenging environment.	Experts, teachers, managers, Parents
The current gifted and talented practice is not sustainable.	Experts, teachers, managers,
Lack of collaboration, and coordination between the organisations, associations who provide gifted and talented programs.	Experts, teachers, managers,
Development and processes	
Human capital: the participants raised the lack of specialist professionals to identify or to provide counselling, coaching, and training for gifted and talented individuals.	Experts, teachers, and managers.
Curriculum provision: the taught curriculum is inadequate to fulfil the talented student's potential, the curriculum is unable to accommodate all types of talents, there is no curriculum for talented and gifted students	Experts, teachers, and managers.
University courses: lack of higher education institutes for teaching music and other arts subjects, challenges in selecting speciality subjects in the university,	Parents, Experts, teachers, managers, and gifted and talented.

the mismatch between university speciality and jobs, and a significant speciality is available in one university only.	
Skills' training: teachers teach subject content, there is no attention paid to develop the students' skills, students do not understand innovation and innovative products	Experts, teachers, and managers.

Challenges

a) The support given for the subjects related to arts and cultural talents is very little and not encouraging according to all participants from all categories.	Parents, Experts, teachers, managers, and gifted and talented.
b) There are no scholarships granted for artistic talents but to the academic subjects only according to all participants from all categories	Parents, experts, teachers, managers, and gifted and talented adults.
c) Lack of qualified instruments for identification, lack of trained and qualified teachers to identify gifted or talented learners, according to experts, teachers, and managers.	Experts, teachers, and managers.
d) Talented and gifted students can study one speciality in the university, which prevents them from considering the speciality of their choice as a talent,	Parents, experts, teachers, managers, and gifted and talented.
e) Non-academic subjects are costly because they are not available in public schools as given by private schools.	Parents, Experts, teachers, managers, and gifted and talented.
f) The lack of differentiation in teaching methods in schools makes talented students forced to underachieve in their academic subjects.	Experts, teachers, and managers.
g) Curriculum provision: the curriculum taught in schools is inadequate to fulfil the gifted and talented student's potential. There is no curriculum differentiation method adopted, and the differentiation of the curriculum is for the academic giftedness achievements only. The curriculum is unable to accommodate all types of talents, and there is no differentiated or specialised qualified curriculum for talented and gifted students.	Experts, teachers, and managers.
h) Training of skills: Teachers at schools teach subject content only without paying attention to skills. There is no attention paid to develop the students' abilities. Teachers' skills also do not undergo training, and they are mostly not qualified to discover or identify talented students in their classes.	Experts, teachers, and managers.
i) Human capital: the participants raised the lack of specialist professionals to identify or to provide counselling, coaching, and training for gifted and talented students and their teachers in schools.	Parents, experts, teachers, and managers.
j) University specialities: lack of higher education institutes and academics founded for teaching music and other arts along with cultural subjects is a challenge for those who are talented and who have no option to select any speciality subjects in the university.	Parents, experts, teachers, and managers.
k) The mismatch between university speciality and jobs, on the other hand, creates another challenge for those who graduate without guidance on how or where to find a job.	Experts, teachers, and managers.
l) A significant speciality is available in one university only, this causes other challenges such as the availability of an opportunity, and who can obtain it.	Parents, experts, teachers, and managers.
m) Most of the implemented identification and development programs are recent, yet, it is difficult to assess their efficiency or how successful they were. However, this is an opportunity to apply for an assessment program to resume a culture of programs' ongoing evaluation in the future.	Experts, teachers, and managers.
Financial support: the participants pointed out challenges with financial backing such as little support for the non-academic subjects, scholarships, instruments, teachers, students can study one speciality in the university, and non-academic items are costly, lack of differentiation in teaching in schools.	Parents, Experts, teachers, managers, and gifted and talented.

5.7 Evidence from Focus Groups discussions

Focus groups consisting of different categories of stakeholders brought together to gain more information related to this research topic. They discussed the four themes presented in a manner of scenarios. They told their stories in different ways. They discussed the challenges and suggested solutions to overcome these challenges. The groups' discussions generated information added to the data obtained from the interviews. The issues of awareness, definitions, identification, and development programs in the UAE were the main themes discussed.

Following a summary of the evidence derived from the discussions conducted within the focus groups

5.7.1 The Parents Group

Parents' focus group consisted of parents who were accompanying their talented children. They all expressed their worries about the future of their children, and they look at the challenges in this period as an obstacle that should not be there. The following paragraph will look at these challenges and try to define them as discussed during the session. The scenario in this group was suggesting that parents have to choose the future track for their talented child who is interested in arts. They have to decide which educational path they prefer or impose on their children. Arts or Science were the two defined topics, and parents were required to imagine guiding their children within one or both tracks. They had to write and draw a plan that will support the child in his way to the future. They had to write down the challenges they expect their child would face while moving on within each track.

Evidence from the parents' group

Parents' opinions split into two. Fathers of the gifted males rejected the idea of their children studying arts and drew a road map for their children that leads them towards STEM education. Mothers described arts as a not important subject because it is an enrichment program that is not

ranked like other subjects and does not require academic education. They thought that STEM is the only way towards the future.

Parent1: (Mother): *There is no time to participate in all events, and our children are distracted by many different competitions, exhibitions, and any other function in the country.*

Parent 2(Father): *The school is not providing any programs in Robotics or science to sharpen their skills and prepare them to be future scientists as I dream."*

Parent 3: (Mother): *I am worried about my child's health. He does not express enough to know how he feels. There is no counsellor in his school to talk to him. It is the school's responsibility to follow up on the student's health. The other thing that worries me is the differences between parents and children's perspectives. They do not think like us.*

Parent 4: (Father): *My son suffers from being multi-talented. He is a genius in math, physics, biology, and robotics. He faces difficulty in choosing a university speciality because he does not know which skill will help him achieve.*

Parent 5: (Father): *I have three talented children. One of my daughters is a musician but cannot find higher institutes of music to develop her abilities in music. The other child is passionate about photography, but again, there are no specialised academies for them. The offered programs at the different institutions here are whether short or not qualified or costly.*

Parent 6: (Mother): *There is no sustainability in gifted programs. There are no talent centres. My son feels distracted now because he cannot find a more extended program that supports his talent in Cinema.*

Parent 7: (Father): *My son is finding difficulty in certain conditions of admission to universities. There are no mentors available at school to guide them and direct them to the right speciality.*

5.7.2 The Experts' group

Experts focus group consisted of experts, teachers, and managers. Some teachers were graduates from the gifted teachers' diploma. They all work in the UAE in different educational institutions, and they are acquainted with the situation of the highly able students' in the country. The scenario given to this group was about the identification and development programs in the country.

"We have a massive number of specialised tools prepared to serve those who are gifted and talented in the UAE, yet most of them are still new to evaluate, and there are still various gaps regarding:

- The inability of most of these existing tools to detect the types of gifts and talents that are difficult to detect (unique gifts and talents)

- There is an ample supply (the labour market provides many fields of business), and university graduates are in large numbers. Studies have shown that there is no consistency between supply and demand.

- There is a need for development programs to bridge or reduce the gap between supply and demand.

Evidence from the experts' group

Expert1: *Efforts in the field of giftedness and talents requires a council or an entity to coordinate all these institutions' efforts. There is a need for a national policy that mandates assessments and*

evaluations and criteria for these tools and programs, and in conclusion, if there are no

provisions, there are no excellent services as well.

Teacher1: *There is no sustainability in the discovery and follow-up of talents. The shortness in*

the program's periods and their durability distracted the gifted and talented students and their

parents. Such a process was challenging for them. It is challenging to follow up with the

identified students because some of them leave the school. There are no improved e-portfolios

for them that can always support follow-ups with them and in any other school.

Manager: *The presence of a gifted specialist in each school as a specialised teacher would*

hugely support gifted and talented students. They should be able to mentor not only gifted and

talented students but also other teachers, leaders in school, and parents according to clear

policy and methodology at the state level. These specialists will address any challenges through

their experiences in the field of education and will support the implementation of the 21st-

century strategies in discovering the abilities and skills of students in different domains of gifts

and talents.

5.7.3 The Gifted and Talented focus group

In this group, a selection of highly able young males and females' students (artistic and scientific)

came together to discuss the issues reflected in the scenarios. They were from different age groups,

interests, genders and had various experiences in different gifted and talented development

programs.

The scenario: Draw your life journey from today until you graduate from the university following

the below script:

1-Today you knew that you are a gifted /talented student. From here, define the base stations in your learning journey. What do you need? Who will support you at every station? How do you plan for every stage?

 2-The next crucial stage: Today, you graduated from college and started looking for a job. What kind of profession you think will suit your gifts/talents?

3-Can you draw the work you want to do in a circle and try to suggest the skills needed to master this work?

 4-Now, imagine that you found the work or project you are passionate about: What is the product that you produce?

Evidence from the Gifted and Talented focus group

Highly able students thought that parents put more pressure and high expectations on them. Others said that their parents want to impose their choices of study, interest and career on them. The society's mindset is not adapted accepting the domain of Arts and Culture as careers. Universities as well do not provide scholarships in the domains of arts and culture nor any organised education. The highly able students in this group seemed frustrated by the oppression of the educational system and commented on the lack of teachers' awareness and support.

Talent 1(male): *I was born with a problem with hearing. I could not cope with the classroom work or with my teachers, who were unable to diagnose my silence due to my illness. I was talented, but I needed support. My teachers could not identify my talents, but my mother tried to help me. She moved me to different schools and exerted efforts to diagnose my hearing problems.*

She exposed me to different hobbies and crafts until I excelled sculpturing. Today I am an artist.

I see myself creating more sculptures and investing in them.

Talent 2(male): *My parents are not aware of the importance of talents, so I do not know how they can help me to move on the path I choose. Besides, it is difficult to convince them that I want to do my major in music, which is my talent. They cannot see my future in anything but in my academic achievement. It is oppressing.*

Talent 3(female): *I love music; I am encouraged by my father, who rides me to Fujairah to attend music classes at Al Fujairah Academy. I want to become a pianist; I see myself sitting in front of the piano and playing music in the opera, but there is no way to practice what I like because I cannot practice in the Academy anymore. I will graduate from school and because there are no university programs to do so. I will travel to study abroad and satisfy my passion for music.*

Talent 4(male): *There is no support for me at school neither at home. I am failing the lessons in school because my parents want me to get a certificate in what I am not interested in learning. They think I want a future job in an office, which I dislike. I cannot explain to my teacher why I underachieve in math while I get the highest marks in PE. I want to become an athlete, and I do not achieve well in any academic tests. I do not know why I must study what I do not like! I want to be an athlete and I need to practice and not to sit in a classroom.*

Talen 5(male): *Sometimes, I feel like it is my fault for being talented in arts, sports, and math. I do not know how to solve the problem of what to study and when or how to manage my talents. No one tells me what to do, and I cannot find the university that would help me combine two majors or even plan better objectives. It is challenging to choose any of them.*

5.7.4 Documentation

Evidence from Documentation

(1)Knowledge and Awareness

In support of the findings obtained from both methods "interviews and focus groups", an analysis was conducted on the related documents to investigate the development programs implemented by the educational institutions in the UAE. Another search was to find out if these institutions developed a law or a policy that support the highly able students' and nurture their needs. The investigation aimed to explore the documents issued and related to the improvements in education, including the development of these highly able individuals in the country. The reviewed materials were mostly resolutions, ministerial decrees, and other official publications that give more insights about the five institutions' activities and achievements in the field of education, in addition to other reports like "The United Arab Emirates National Commission for Education, Culture, and Science, *UNESCO* reports". (moe.gov.ae)

The findings from the document and their analysis supported the four themes generated from the "interviews and the focus groups" such as knowledge and awareness, definition and identification; development process; and challenges. This section follows a similar manner like the manner observed while discussing the results of the interviews and the focus group. The findings were as follows:

Starting with the goals of the educational institutions in the UAE, they emphasise on the student's personality and ability to grow in a creative environment. They also highlight society's needs for equal education and opportunities for more creativity and innovation.

The UAE constitution, permanently adopted in 1971 with amendments through 2004, "is the primary source of laws and legislations and the fundamental basis that governs the political, economic and social affairs in the UAE. It allocates the legislative, executive and international jurisdiction between the federation and the emirates and provides essential directions regarding education in the country". It states in "*(Article (17)* of the constitution that "education is a primary means of social development". "It is made compulsory and free, and the educational plans will be prescribed by law for the circulation of education all over the country." *(Emirates, U.A, 2016)*

The UAE depends mainly on education. It applies different services in the educational system to infuse its development and advancements(Warner, R.S. & Burton, 2017). The progressive education system in the UAE is adopted to fulfil the market needs for human capital development. The global agenda of the UAE urges it to develop a sustainable model of education. The majority of educational institutions in the UAE are empowering the type of education that supports the development of both students and teachers. They aim to make the students more aware and able in social life, better educated and ready to function in a knowledge-based economy. Human capital development is what the education stakeholders are looking at to attain the UAE National Agenda aims for education.

In the *(Assessment project of 111 UAE UNESCO Associated Schools to identify the efficient schools),* the UAE Commission reported the commitment of the UAE to achieve its goals and plans, especially those concerned with UAE schools and related to the educational system. The Commission referred by that to the UNESCO's associated schools-specific objectives in accordance with its medium-term strategy *(2014-2021):* Education integration for international citizenship, education for sustainable development in learning and education, experimentation of the creative aspects to achieve integration, strengthening the exchange of information, experiences

and leading practices in the UAE network schools. They also must take part in achieving the strategic goal, which is empowering all learners to become global and creative citizens'.This empowerment infuses the development of in-depth knowledge, strong values, and more specific skills. *(moe.gov.ae).*

Moreover, the *World Data on Education Report (VII Ed.2010/11)* included *(MOE) Education Strategy (2010-2020)* that aims to deliver a student-centred model focused on improving student's outcomes, school life, and equality. The overall outcomes of the strategy, according to the report, were to make students ready for a lifetime career and teachers' excel in supporting them *(De Education, 2010)*

Therefore, and according to the "World Data on Education Report", the UAE new organisational structure identifies and determines the educational tasks employed to the (MOE). These tasks include implementing advanced education for all citizens of the UAE, setting educational plans, advanced curricula, advanced examination systems, and adult ongoing lifelong education programs. Moreover, it shall establish schools and institutions and monitor their performance. The new educational system as well defined the role of the (MOE) to develop and implement policies, standards, and plans and all other supporting services." (De Education, 2010).

The UAE government, therefore, has longtime before entrusted the Ministry of Education (MOE) to provide the best education to its youth. The Ministry of education, according to *Federal Law No 1-M7*, bears the responsibilities of supervising and improving the educational affairs in the country (De Education, 2010). The Cabinet Decree No.1 of 5 January 1987 defines the objectives of the (MOE). It focuses on achieving these objectives and structuring the formation of a supreme committee to oversee the Education Policy and identifies its tasks. "*The Cabinet Decree No.7 of 15 May 1991"* deals with the establishment of a Ministerial Advisory Committee to study all

matters dealing with education policies. However, and in the light of the existing policies to oversee the education of different categories in the UAE, policies related to gifted education and development programs are not within their tasks. Such a policy is in need to regulate and help the implementation of high-quality development programs, and this policy is supposed to be a part of the (MOE) future policies.

On the other hand, the UAE government has launched several educational institutions to oversee the development of the educational system in the other Emirates such as (ADEK), which is authorised to deliver education in the emirate of Abu Dhabi and policy development since 2005.

The establishment of the (KHDA) in 2006 was to develop the sectors concerned about "knowledge and human resources" in Dubai. The role of (KHDA) is to assure that these sectors apply quality in their missions and to support and improve education and human development. Another objective is to develop a comprehensive strategy for "knowledge and human resources development*"* *(khda.gov.ae).* The KHDA accordingly established the National Institute for Vocational Education *(NIVE.ae)* in 2006. It also established the "University Quality Assurance International Board" (UQAIB) in 2006 to assess and license universities operating in the education free zone in Dubai *(khda.gov.ae)* it is responsible for private school inspection, too. However, and while individual educational policies and strategies do exist in several institutions in Dubai, a national policy related to highly able students is not among them.

The UAE government exerts efforts to facilitate collaboration among stakeholders. It aims to infuse the development of highly able students' skills. It operates to ensure that institutions services are meeting the expectations of gifted and talented students. The role of each educational institution will not appear enough unless a national policy regulates its efforts. The unavailability

of a policy asserts the concerns revealed by different participants in the interviews and focused group regarding gaps in the programs.

Finally, there is a need for a collaborative strategy that enhances communication among all of the educational institutions. This strategy would help them fulfil their roles collaboratively and enhance the talented and gifted services in the UAE. It would organise each authority task to support a systemized harmonised ecosystem capable of the development and progression of these highly able students in the UAE.

(2) Definition & Identification

Definition of talents (MOE)

According to the "General Rules for the Provision of Special Education Programs and Services in (Public & Private Schools*)" (moe.gov.ae*), the definition of gifted and talented is :

 "A gifted and talented is the one with outstanding ability or aptitude in one or more areas of intelligence, or creativity, or academic achievement or special talents and abilities such as oratory, poetry, drawing or handicrafts, sports, or drama, or leadership capacity and others. More often, the performance of outstanding, talented students in the above areas is distinct from his peers who are in the same age group." (moe.gov.ae)

However, this definition does not differentiate the giftedness and talents. It does not specify any other traits or abilities that differentiate the gifted and the talented; it instead points at specific areas or unique talents and abilities in specific types and domains of gifts and talents.

Definition of talents (MCKD)
It appeared that the "Ministry of Culture and Knowledge Development" did not generate a definition for the highly able persons in culture and arts. However, the Ministry is in the process

of developing a policy for talented individuals, and this suggests that it may include a definition in this policy. In general talents at (MCKD) means those who produce, publish, perform, or win in the literature and arts or cultural contests or other different domains of talents.

Definition of talents (ADEK)

Talents are the students with outstanding abilities and skills that lead to outstanding high performance and their expected accomplishments, and potential are at the forefront of most of their peers in one or more of the following areas"(Adek.abudhabi.ae):

- Intellectual ability,

- Specific subject competence such as mathematics and science, meeting maturity, leadership, mechanical

- Theatrical and theatrical arts, such as literature, theatre and fiction, psychological and motor ability, such as dancing or playing sports

Their needs require specific consideration within the mainstream educational programs. (Adek.abudhabi.ae)

Definition of talents (KHDA)

The definitions of gifted and talented students at (KHDA) reflects the "Differentiation Model of Giftedness and Talent" and align with international best practices according to (KHDA) inspection report".(khda.gov.ae)

"Talented refers to "students able to transform their "giftedness" into exceptional performance, and they are creative in one or more ways. They show significantly higher performance than their peers do in the same age group. Students are likely to show unique talents and abilities in aspects such as poetry, painting, sports, and theatre"(moe, gov, ae).

"Gifted refers to a student who is inexperienced and spontaneously- expresses exceptional natural ability in one or more domains of social skills such as intellectual, creative, social, and physical skills. Gifted students, while extraordinary potential will be present, may underachieve. They are students who have the potential to study or have the potential to achieve much higher rates than their peers in one or more areas of their academic study. These students show distinct performance levels from their peers". (moe.gov.ae)

Definition of talents (HA)

"A gifted student is the student who has exceptional preparation and potential or has markedly superior performance than his / her peers in general mental ability and or academic achievement, creative thinking, and or leadership that the community appreciates.

This definition limits the giftedness to special preparations and describes the gifted students as the one who has (exceptional) and (markedly superior performance).

Identification of talents (MOE)
Identification of gifted and talented in (MOE) depends on six methods or stages.

The stages of identification are:

1) Differentiation-A differentiated method to implement the curriculum without special education provisions.

2) Pace-Highly able to learn at a faster pace and teachers required to give them extra challenges.

3) Assessment-Ongoing assessment to match the curriculum to student's needs.

4) Grouping-Flexible grouping of highly able students in the classroom.

5) Level of work-The curriculum needs to include complex abstract ideas to challenge their abilities.

6) Enrichment-Extended enrichment with challenging opportunities and programs within and beyond classrooms.

Identification of talents (MCKD)
Competitions, camps and contests are the followed procedures in the (MCKD) to identify talented and gifted individuals. The presence of (9) cultural community centres affiliated to the (MCKD) and distributed around the UAE makes them a primary ground for identification*(mckd.gov.ae)*.

Identification of talents (ADEK)
The process of identification at (ADEK) starts at grade (4) -Cycle (1) -grade (6) -Cycle 2 -and Grade (10) in Cycle 3(Adek.abudhabi.ae).

This identification process depends on five criteria's that the student must meet (3) of them at least:

(1) Achievement: This means having a (97) per cent in a standardised test such as (EMSA -PIPS) in a specific area. Alternatively, having a (90) % in total in all standardised tests areas like (EMSA-PIPS). Alternatively, as one of the top 10 in reading and understanding in English or Arabic languages (Adek.abdudhabi.ae).

(2) Characteristics Checklist): It contains (15) characteristics, and a student must have more than half of them. The teacher must be good in using these checklists, should be familiar with the student, and knows him/her by a direct relation in the classroom. Parents and peers.

(3) Screening: This assessment uses an approved test like the IQ test. The score of the student must be (120-above).

(4) Final Grades: The gifted student is very high-performance evidence in the last two academic years will be on his/her final report card and that he/she has been among the top (10 %).

(5) Product Assessment Rating: The student's product must obtain (very good) or (outstanding) in product rating form if evaluated by a specialist.

Identification of talents (KHDA)
The identification of gifted and talented, according to (KHDA) inspection report "is not an isolated activity. Identification is the first crucial stage of a continuum of provisions that should provide appropriate and personalised learning programs to enable all gifted students to become talented"(khda.gov.ae).

The critical aspects considered in (KHDA) when personalising education programs for highly able students are:

- Differentiation: A differentiated curriculum for all students with different learning methods and ability levels.

- Pace: Learning at a faster pace.

- Assessment: An ongoing diagnostic tool for matching curriculum delivery to student's needs.

- Groupings: Students with extraordinary gifts and talents benefit from flexible grouping within the classroom.

- Level of work: The level of understanding of the highly able students is usually above usual age-related expectations.

- Enrichment: The majority of highly able learners are in mainstream classes while they need more opportunities for advancement, extension, and acceleration within and beyond the classroom.

Identification of gifted (HA)

Identification at (HA) is a critical stage that supports the stage of building students' development programs. Identification of gifted students is to provide them with appropriate services and enough educational programs in every domain of giftedness (ha.ae). This process, according to the foundations' documents, contributes to control the system of how to enrol the gifted children in the programs designed for their development. The supplement programs aim to attract the most worthy students to provide them with developmental services. They determine the type and level of gifts to define the needs of the gifted students and guide them to enrol in the appropriate programs for their area of competence. At (HA) there are different stages of gifted student's identification process such as:

(1) Screening: To accommodate the most significant possible number of students and engage them in the identification procedures. It includes:

(a) Nominations of students "by teachers, parents, and peers or self –nomination".

(b) Screening methods "checklists, test results, portfolios, teacher reports".

(c) The narrowing: To identify gifted students based on specific criteria by using qualitative and quantitative tools.

(d) Inclusion: To make decisions concerning assigning selected students in the second stage of educational programs in line with their abilities, preferences, and interests. This stage works via

personal interviews and lists of inclinations and interests. Identification tools used are IQ, creativity, and academic achievement tests(ha.ae).

The identification standards and tools split into two types: "Quantitative tools that measure mental abilities are" intelligence tests, the gifted identification kit, academic achievement tests, and innovative Problem solutions test". "Qualitative tools include a portfolio, a notecard, behavioural statements, personal interviews, lists of professional interests, and inclinations".

The gifted identification kit is to discover and identify gifted students through the provision of adequate identification tools. (HA) Developed specific tools to commensurate with the UAE environment. They develop measuring tools for each stage to measure that stage.

(3) Development & Processes
Development of Talents in the UAE

In UAE Federal Law on child rights (*Wadeema's Law) no.3 of 2016* issued on 8/3/2016, articles (6), (25), (30), (31) and (32), stressed on the child's rights for development and knowledge.

Article (6) included the liability of the concerned entities in the UAE to implement policies and programs developed by them to work in all areas related to the child. The cultural rights of the child in this Law's *(Chapter 6-Article (25)* incorporated that the capable concerned authorities in the UAE should provide the child with his/her rights for knowledge, innovation and creativity means to participate in the recreational, cultural, artistic and scientific programs that are adequate to the child's age(khda.gov.ae*). "Article (30)* was about the necessity of forming specialised councils, associations, clubs, and centres to develop children's cultural, artistic, scientific, and physical talents". "Article (31) assured that every child has the right to be educated, and the country should provide every child with an equal opportunity. Article (32) mandated several measures in

the field of education, including the development of the educational system to achieve its purposes of development of every child's mental, physical, emotional, social, and moral traits *(khda.gov.ae)*.

To achieve the core goals of UAE Vision 2021 and UAE Centennial 2071, the UAE has taken enormous steps towards equipping the young generations with the needed skills for the future. It issued a report title: *(The UAE Green Jobs Program: Jobs and Skills for the UAE's Green Economy Transformation)* (moccae.gov.ae). According to the report, the number of green jobs will rise from *(49,520 in 2018 to 83,422 by 2030)*. The different national approaches in the UAE focus on youth and in implementing various development programs to help the highly able students achieve their potential in different types and domains of giftedness and talents. The UAE National Innovation strategy focuses on education as well as other aspects such as health, technology, transport, and others to represent a mixture of opportunities and challenges for the young students and long-life learners in the UAE.

Development of Talents (MOE)

The UAE (MOE) as well issued the (*Advanced Skills Strategy)* in November 2018 (government.ae), which sets out the national framework that will consolidate the concept of life-long learning for citizens and residents of the UAE. The Advanced Sciences Agenda launched in 2018 aims as well to support the (UAE's Centennial Plan 2071) by focusing on (8) scientific priorities and (three) consecutive strategies from 2018-2021(government.ae.)

The (MOE) implements the developmental programs at an early age. Not only because children learn faster, but also to ensure providing the highly ables students' all types of development opportunities. *(moe.gov.ae)*

Development of Talents (MCKD)

The talent development at (MCKD) focuses mainly on implementing different enrichment programs and initiatives such as the summer camp for children and young people. This camp provides them with skills development in the fields of science, arts, design, and architecture. The camp stimulates the participants' passion for acquiring knowledge, as well as alerting them regarding future jobs based on their aspirations. However, it is not an ongoing camp, and students join it during summer only.

Development of Talents (ADEK)

The Department of Education and Knowledge (ADEK) launched its (2018) second edition of talent Discovery Program*)* (Adek.abudhabi.ae). This initiative nurtures eight fields of arts such as painting, colouring, graphic design, photography, music, ballet dancing, traditional performing singing, and acting. It accepts all students, citizens, and residents, from grades one through twelve, who study in public and private schools in Abu Dhabi. This initiative aim is to identify the highly able students in visual and performing arts. Following they undergo training and development to sharpen their skills. Each talented student has an individual development plan tailored to his or her potential and to ensure that all students have access to their talent-based programs. The program includes mentoring support, training and scholarships to enlist them in the world's leading universities. It also offers these students a variety of opportunities to showcase their products in local and international events and exhibitions. The first phase of the program is experimental. It accepts only 90 of the highly able students from various technical fields in it (Adek.abdudhabi.ae).

Development of Talents (KHDA)

Rahhal is a talent development program, initiated by (KHD) to enlist any desired institution to provide learning that supports transforming all people into lifelong learners."

Rahal's project focuses on preparing students for life experiences by allowing educational institutions and service providers to deliver quality services to expand their knowledge. It offers a platform that helps integrate life with education and enables students to study in regular schools, as well as partially follow up on another place in society, within an innovative system that includes assessment tools, and allows students and learners to seek and benefit from learning opportunities. It also enables students to acquire and recognise life skills on an equal footing with academic skills, thereby driving Dubai's regional and international leadership in promoting education. Rahal promotes educational opportunities for all members of the community, whether children or adults, and will support learners who are motivated, talented students, and individuals with unique abilities. At the same time, Rahhal program provides adults with flexible education that can be used to enhance their careers or enrich their lives(khda.gov.ae).

Development of Gifts (HA)

The gifted development at (HA) depends on the National Plan for Gifted Education(ha.ae). This plan implements the latest practices in the field of gifted programs and education. It is a framework for all methods applied to promote talents and giftedness. (HA) Believes in the importance of caring for gifted. Therefore, it is working towards a qualitative shift in this area. The National Plan consists of seven significant talents'-oriented programs integrated to discover and nurture talented people as follows: "1. Discoverable students. 2. Sponsorship programs for gifted students. 3.

Professional teachers in the field of giftedness. 4. Awareness and scientific dissemination in the field of talent. 5. Partnerships with relevant institutions in this area. 6. Hamdan Bin Rashid Al Maktoum Center for Talent and Creativity. 7. Hamdan Schools for gifted students " (ha.ae). The Hamdan Center for Talent and Innovation is the first to provide care, guidance, training, and digital manufacturing opportunities to students in public schools. The centre includes two sections: One is for discovery and nurturing of the gifted students, while the other is for the services provided to them in the Fab Lab. The Fab Lab is the place where innovators and digital manufacturers nurtured. In addition to that, there are mentoring programs for the students and their parents, including workshops and training programs. They aim at providing gifted students with the latest scientific and engineering techniques in various fields of science. They constitute of robotics, aeronautics and space industry, as well as Mathematics and Science. Training programs in this institution support the development of the gifted students' personal, scientific, and leadership aspects. They also promote self-learning and creative thinking skills. The second section is the innovation centre, established according to the international standards and specifications. It provides logistical support to (8,000) beneficiaries annually. The centre succeeded in identifying (225) gifted students. (47%) Males and (53%) females. The Center aims to provide seven enrichment programs annually to develop different interests and gifts among students during the year (2018).

(3) Challenges

Current attitudes to inspiring and celebrating talent may be counterproductive to identifying and supporting talent's development. Many see talent as something elusive, that is hard to locate, and for which there is a narrow window of opportunity for identification. As a result, this is demotivating for parents, children, and those that support them, leading to a feeling of helplessness and paralysis. Each stakeholder within the talent ecosystem believes that the responsibility towards

talent development falls on someone else. The government has employed the responsibility of the highly able students to the educational institutions. However, parents think it is all the responsibility of schools and teachers. These students, additionally believe everyone around them, should be offering the services. This diffusion of responsibility has contributed to the "bystander effect," and no one taking enough action.

Implementing development for the highly able students alone will not be enough, nor it will solve the challenges. Decision-makers in education must also focus on regulating the development of other skills (e.g., business creativity, resilience) that would enable talented people to become responsible for their talents and build their successful careers. Conversations have primarily focused on developing talents. However, talent is a small component of success. It will be essential to support their skills that are necessary for the desired development.

Several studies, papers and previous interviews have pointed at the missing federal law that safeguards talented individual's rights to be educated by special gifted education. The existing law and policies safeguard the rights of disabled people with special needs while gifted and talented individuals lack such service.

Talented children can sometimes suffer while fitting in with their average peers in a regular classroom. Gifted and talented students do not have the facility of education by an exceptionally gifted curriculum or skills development program. The children with high IQ and advanced capabilities sit for hours in typical classrooms and listen to ordinary lectures. Moreover, it is usual that a parent of a profoundly gifted student might feel isolated as well. Among the root causes of this isolation, according to an expert in talents' development, is the absence of awareness education and training for parents, which can leave them feeling that they lack the knowledge they need to handle and develop a gifted child. (The national.ae)

The lack of awareness drives the fact that there is a lack of appreciation for being talented in arts or any other artistic domain in the community. It is one of the most substantial challenges, as this means there is a need to change the mindset to appreciate the importance of talents and understand why we need them. The society should be aware of the importance of gifts and talents as investments in the long run, besides, becoming responsible towards them. Development of talents is not the sole responsibility of the educational institutions; institutions are also liable to educate parents, highly able students and the society on how to deal with gifted and talented individuals and how to support them.

Finally, the following chapter discusses the findings obtained from the methods used in this study.

Chapter Six. Discussions, Recommendations & Conclusion

Introduction

This chapter concludes this study by discussing the key findings of the research presented in the previous chapter to address the research questions. The questions centred on the role of five educational institutions to implement gifted and talented identification and development programs in the UAE. The goal of this study was to explore their achievements and provide recommendations to help improve the implementation of development programs. The gained results from data and information taken from the interviews focus group discussions, and document reviews were about the effectiveness of implementing such development programs on the talented students. A summary of the research and findings discussed and interpreted. The findings and discussions provide implications and limitations of the study. However, the study recommends future research in this issue and other related to the area of highly able students.

The design of the research questions was to guide the research to obtain descriptive data that would provide the study insight into the selected initiatives' current practices.

RQ1.What is the role of development programs implemented by governmental, educational institutions to develop gifted and talented students in the UAE?

RQ2. How are gifted and talented students defined and identified in the UAE?

RQ3. How is the development of gifted and talented students implemented in the UAE?

RQ4. What are the main challenges facing the gifted and talented identification and development in the UAE?

6.1 Discussing Key Findings

The discussion implemented within this section is upon the four themes derived from the analysis of the findings of data gained from interviews, focus groups, and document review.

The Main Themes

Awareness and knowledge, Misconception of definitions and identification. Development processes, procedures, and challenges.

6.1.2 Gifted and talented ecosystem

The findings, in general, revealed the existence of several gaps in the gifted and talented ecosystem. These gaps reflect in the process of implementing the development programs and the duration of these development programs in addition to the evaluation process of these developmental programs.

The design of the current study was a qualitative method. It accordingly urged gathering and analysis of data based on interviews, focus groups, and document review. The results of the data analysis showed the information obtained from different sources. However, this research did not intend to criticise any institution. The participants included parents of talented students, experts in the field of gifted and talented, gifted program managers, teachers of gifted, talented, gifted and talented students, and gifted and talented adults as well. They were responding to the questions from their perspectives and without pointing at any institution or their responsibility.

The researcher tried to include different participants in the interviews selected from the critical relations around the talented students and those who affect their identification and the journey of their talents' development. The teachers and program managers come from different educational institutions or had experience in similar institutions. Some of these teachers are graduates of gifted

diplomats and programs. These teachers implement some development programs; therefore, if they thought that some of these programs lack a variety of essentials, they intended to support their improvement. Several participants, such as parents and highly able students, agreed that they do not know about many development programs. They revealed that they are not aware of any policy that exists. Others said that several programs lack specific enablers to be capable of benefiting gifted and talented students. Most of the participants believed that most of the highly able students do not receive appropriate services in public schools according to their different needs. Others believe that these programs are not mature enough to fulfil their objectives. Accordingly, below are the four key themes that lead the discussion in this chapter.

This chapter discusses the findings presented in the previous chapter to address the research questions. The researcher, therefore, implemented ethical principles to collect, analyse, interpret, and report the findings. Therefore, the researcher suggests that educational institutions should trust the conclusions of this study if they choose to implement the recommendations.

RQ(1). What is the role of development programs implemented by governmental, educational institutions to develop gifted and talented students in the UAE?

Findings from the collected data make it significant to reveal that the implementation of development programs does not fulfil the needs of these highly able students. The documents of these institutions and the published reports submitted to the UNESCO show the concern and the interest of the (MOE) in supporting highly able students (Al Obaidli, 2006). The findings from the data collected from the interviews and the focus groups did not reflect this concern and interest.

According to (Gaad et al., 2006), "the provisions and the programs found in government schools do not mirror such care and the significance of the educational institutions" *(Gaad et al., 2006).*

The interviews with experts and teachers and the analysis of their published documents show that a national policy that provides these institutions with a framework to implement and evaluate standardised development programs is missing. Furthermore, there is no training or awareness plan to encourage the value of talents among the parents. Their role seems to be limited to implementing such programs.

Several teachers who participated in the study believe that it is essential to implement development programs for highly able students. Others indicated that the development programs implemented and exist in schools. Most of them seem not aware that these programs' need enablers to make them beneficial and sustainable. These enablers represent a policy as a framework to define gifted and talented, regulates development programs, implement continuous teachers' professional development, define program standards, provide programs constant evaluation, and a clear gifted and talented explanation. The definitions of the highly able students or the identification process are highly critical. Teachers and parents need to acknowledge them to provide these students with differentiated development programs that suit their abilities and type of talent. A research study examined the issues regarding the provision in the performing arts, sport, and found that the identification of talented in art base on performance only and ignores the other dimensions like teamwork, leadership, commitment, and academic skills (Neelands et al., 2005). Unfortunately, there is a little awareness and few published documents that give information about the definition of the highly abled and the standards of the identification programs. There is no guidance to guide the educators on such procedures.

Most of the programs provided for the highly able students in the country are limited to field trips, enrichment after school programs, and competitions. They do not help much to elevate and promote their abilities and talents. (Al Obaidili, 2006). The after-school enrichment programs are not used equally by all schools nor are all activated. Also, many teachers are inexperienced; they have received little training in implementing development programs. Other enablers such as resource rooms, technological tools, clubs, and other skills training courses do not seem as designed for highly able students in every school, and if they are available, they do not use them as teaching aids but more as entertainment centres for all the students.

Development and identification programs and processes require more variety, widely conducted, or used appropriately. The data gained from the interviews and the focus groups have reflected how the identification of the highly abled students based mostly on achievement tests and teachers' nominations. Creativity tests, psychological and social evaluations, and IQ tests are not standard methods. There is a need for proper identification process that will meet the highly able needs with essential support. Moreover, highly able students may be stressed and unhappy if they do not get their essential needs. This difficulty might affect their behavioural and emotional attitudes with conflicts, underachievement, and leads to harmful behaviours. Such behaviours include being overly aggressive, the tendency to violence, school dropout, refusal to work with others, and suicide (Davis & Rimm, 2004). Many gifted children might have a higher risk of suicide (Webb, J.T., Gore. & Amend, 2007).

In conclusion, highly able students deserve an appropriate education and an opportunity to get their needs for development to become productive and skilful. However, several gaps in the development services need a focused concern in order to address them adequately.

RQ(2): How are gifted and talented students defined and identified in the UAE?

The interviews and focus groups reflected the absence of formal provisions that regulate identification and development programs. It is due to the lack of national policy according to them. Moreover, there is a misconception regarding the gifted and talented definitions, which makes them vague and not conducted appropriately in most of the schools. The giftedness referred to as the potential for higher academic achievement in sciences or languages, while the talents include the performing arts and sports. However, not everyone agrees with the difference between giftedness and talents (Gardner, 2000). For example, some said that there is no reason to separate gifted and talented into quite distinct areas. Others suggested that this separation refers to a view that promotes academic subjects for being more critical than arts. (Ofsted, 2005) stated, "It has been much more difficult for schools to identify the students potential rather than their realised talent. "The gifted and talented students assigned in regular classes that offer regular students regular unchallenging education. Gifted education is missing, and a curriculum that supports the gifted and talented development after identification is not there.

The identification programs need development, and their procedures need improvements too. They are not obliged to specific timing and inexperienced teachers implement most of them. They do not evaluate the students' progress, and they are random and insufficient. The UK teacher net, which is the UK government website for teachers, recommends "Identification of highly able students, must be an ongoing process by multiple sources and strategies." The UK teacher agreed that students' abilities emerge at different ages, and they develop in different circumstances (Attfield, 2009). According to the findings from interviews and focus groups, experts, and teachers indicated that the identification of the highly able students is not varied or multidimensional. Therefore, institutions need to consider the advantages and the disadvantages of the identification

tools before deciding on them and to agree on a method that identifies the highly able students. The identification of the underachievers who have high abilities is an essential process too, and It needs to prioritise in schools. Identifying gifted and talented students by their potential may sometimes fail to recognise them as capable, and this will possibly frustrate them and force them to demonstrate awkward behaviour.

The (MOE) already developed a gifted and talented policy that contains the essential provisions such as a definition. It organises identification and development programs too. However, it is still a draft awaiting approvals to go in force. The (MOE) role is to change and implement reforms in education to provide all students with a high standard education system and to support their development (UAE Vision and National Agenda 2021). However, there are no laws or policies that serve highly able students yet (Mazumder, 2016). The UAE government pays much attention to gifted and talented identification and development. It is the highest priority in the country, and this should make the educational institutions eager to develop a   policy that supports this attention and helps to implement the proper identification procedure. The Ministerial Resolution no.94/2(2002), regulates the institutions' role towards highly able students. They should provide these students with development programs along with education. These educational institutions need to impose ongoing professional training for the teachers and provide consultation for the highly able students and their stakeholders. Some of the plans implemented for these students are, on the other hand, still new and in need for more time to evaluate their success.

According to a guide booklet (inspection framework) published by the (MOE) and includes definitions, characteristics, application forms, checklists, and teaching strategies, UAE public schools should set plans for gifted and identification programs (moe.gov.ae). Teachers of the highly able students must complete an ongoing assessment and update their profiles to support

their identification and support their differentiated needs. The results of the interviews and focus groups conducted with educators, parents, and talented and gifted students, showed that most of them did not go through the mentioned identification process. They were not aware of many identification processes and methods or any of the teaching strategies that encourage gifted differentiated teaching and education. Most of the development programs were limited to enrichment programs, and they were not evaluated or accredited. The exemption of development programs from the school curriculum makes these programs look like additional unnecessary programs and not as core programs intended for the highly able students' ongoing development.

Furthermore, educators think it is not possible to implement any differentiation or compact curriculum within the regular classes where different abilities included. Parents complain of not having time to send their children to additional development programs offered to them after school while some of them believe there is no need to send their highly able children to such programs because these programs are not included in the school core formal curriculum, not thoroughly planned and will not affect their children's academic achievement. As not all the educational institutions can interfere in the schools' plans, the (MOE) which is the educational regulating authority in the country, has encouraged schools to give time for these programs and to allow students to participate in them. According to the (MOE) objectives in its Strategic Plan (2017-2021), it aims to "ensure quality, efficiency and good governance of the educational and institutional performance, including the delivery of teaching" (moe,gov.ae), though, and as findings showed, most of the development programs can be incompetent if they lack the appropriate planning. Furthermore, many of these development programs, as said, are limited to function as extra-curricular activities, and most of these programs need specialists to assist the highly able students while participating and gaining some benefits.

In conclusion, the status of gifted and talented identification and development programs seems in need of more in-depth exploration. Few programs are implemented for limited domains of talents while there are no comprehensive, well-organised plans for them. The identification programs need effective processes and procedures based on clear definitions and an understanding of the description and characteristics of giftedness and talent. There are no policies established to regulate the services offered to the highly able students. These services provided with misperception in schools, and a comprehensive national strategy is highly needed to organise the scene.

Moreover, many programs do not exist equally in all schools. There is a shortage of qualified or trained teachers who can contribute effectively in implementing the identification programs. Highly able students still enrol in regular classes, and such classes do not provide specialised services like differentiated curriculum or compacted curriculum. Additionally, most of the programs do not follow the identification methods, and the first approach depends on the achievement scores and teachers' nominations.

RQ(3): How is the development of gifted and talented students implemented in the UAE?

According to the researching instruments used in this study, including document review, interviews, and focus groups', their findings approved that the absence of the policy affects the effectiveness and quality of any implemented development program. The interviewed experts and teachers admitted that despite the existence of a few plans to improve the quality of education and to meet the needs of the highly able students, challenges remain unmoved due to the absence of regulations. The non-existence of identification and development standards minimises their effect and influence. Each institute has its standards, and this confuses the field. There is a great need for an integrated, unified approach and a national strategy that dictates regulations and plans. The UAE is witnessing more launching of advance development programs dedicated to the

development of the highly able persons in it. However, the absence of a policy that regulates and aligns the developmental programs with the needs of all the users from the highly able students in schools makes these programs unappreciated.

The policy is essential to organise and mandate gifted education and development for any highly able student at any time and under any circumstances. This education should become mandatory to support the identification of these students and infuse the services for them. The UAE's first education system incepted at the establishment of the UAE in 1971. This education since its last major updating in 2014, has transformed its practices to meet the country's future needs by adding new subjects in the curriculum, such as design and technology. Policies regarding the education systems developed, reformed and modified over the years. However, no individual policy oversees the existing situation and adapts to world changes and talents' development challenges. The absence of a system for gifted and talented students results in not having any guidelines or regulations that support their development. The educational institutions are responsible for the implementation of several programs, including programs for the welfare of students. UAE launched several initiatives to boost the development of strategies that would help gifted and talented student's growth, including competitions and arts performing auditions. However, from the findings of the conducted interviews, focus groups and documents' analysis, the absence of a written published official policy regarding the gifted and talented identification and development remains an unsolved challenge.

Having a policy for the development of the highly able students supports as well the country's development. Nurturing and meeting their unique needs is everyone's' responsibility. Adapting the education system by particular policies will enhance the abilities of this category and ensure that the UAE benefits from their skills, unique talents, and aptitudes. There should be a collective

understanding and agreement amongst all stakeholders on how to define, identify and serve the gifted and talented. Providing these services and having sustainable financial support should also be shared.

In conclusion, the UAE requires a state policy that organises the gifted education and development and provides the highly able students and individuals with their needs. There should be a clear definition that defines who is gifted and who is talented. The desired policy will also regulate and organise the application of the identification and development programs. It will allocate the responsibilities of each authority and institution towards gifted and talented services and needs for development. It will determine the standards of the identification and the development programs and will give instructions and regulations on who is qualified for gifted and talented identification and development. The policy should regulate the plans and the strategies to offer the gifted and talented the appropriate development. It will ensure all gifted and talented students will receive suitable programs, have access to all of the institutions that provide them with development initiatives and programs, receive equal education, have access to various activities, and makes sure that they are satisfied and challenged in their schools.

RQ(4): What are the main challenges facing the gifted and talented identification and development in the UAE?

The UAE focuses on this valuable category to pursue its economic development and step in the future. It exerts efforts to elevate the quality of education and the development of highly able students. To do that, these students need a unified definition that helps in identifying and developing their skills and abilities appropriately. The absence of a national policy that organises their education and the implementation of their development programs agreeing to standards increases the challenges faced by this category. Furthermore, this issue would be more

complicated, knowing that each educational institution in the UAE is following a different framework and definitions to describe giftedness and talents. (khda.gov.ae).

Schools and parents should collaboratively exert efforts to secure a thriving environment in which all gifted and talented children can blossom and find what helps them to grow and not to become disruptive or reclusive. The absence of a policy that mandates processes and procedures such as definition and identification leaves them to the estimations of their parents and teachers who need to have enough experience to spot them. The usual talented and gifted provisions and practices applied now are random and not systematic, and they do not depend on an institutional philosophy due to not relying on a regulating policy.

The other most significant challenge is the implementation of identification programs by non-experienced teachers and providing highly able students with their needs of development through non-qualified and unable programs. Identifying highly able students should be a significant priority for any institution and school. Failing to distinguish this category occurs due to an inappropriate implementation of the identification method or as a reason for not implementing it in time or by people, as it should be. The identification method has both advantages and disadvantages, and this may lead to these students going unrecognised and non-talented identified as talented. Being gifted or talented and not getting the attention deserved or not challenged in the classroom leads to disruptive behaviour. The findings from the documents, interviews, and focus groups stated that many gifted and talented students hide their abilities to stay with their friends in their class. They avoid that by performing poorly in classes, and they show their distress more than their happiness if they feel they would be isolated from their peers. It is the responsibility of all educators and staff in schools to identify the highly able students and to meet their needs. A lead teacher may be responsible for issues related to these students. However, this responsibility is unlikely to have a

significant impact without the support and help of the school team and parents. Most kindergarten children, as well, display gifted and talented characteristics. However, if people fail to identify them at that time, their talent will rapidly decrease as they progress through formal education.

The educational institutions are aware that these students need early identification and more development programs. However, they also know that schools have difficulty in balancing between trying to develop their abilities while preparing them for the traditional exam-based pre-university qualifications. (The national. ae, 2015).

Parents, on the other hand, are having an issue amongst providing a challenge for their children or allowing them to behave and be children. Putting more expectations on these students as well as pressure or demands may ruin their lives. However, believing that their talents develop in their own time is a challenge if we know that this talent may disappear if not spotted at a time.

Participants in the interviews and focus groups pointed out challenges with financial support. The little support for the nonacademic subjects makes them unappreciated and undesirable. Scholarships granted for science or (STEM) only. This makes arts and cultural studies unappreciated. Developing few instruments for music practices interprets music as not a desirable subject, lack of continuous and sustainable identification process and lack of specialised teachers who can identify such highly able students risk losing more skilled and talented individuals. All these forces push the talented students in arts and culture to study another academic subject. Nonacademic subjects are, on the other hand, very costly if the highly able student in this field wanted to pursue them outside their schools or universities, and they are not available in nearby locations nor sufficiently organised.

Finally, the current taught curriculum provision is inadequate to fulfil the talented student's potential, and the curriculum is unable to accommodate all types of gifted and talents because there is no specific differentiation or challenging curriculum for talented and gifted students.

Table 38.Theme Analysis in alignment with research questions

What is the role of development programs implemented by governmental, educational institutions to develop gifted and talented students in the UAE?	*Knowledge and awareness* *What participants know*	*The family and community do not have adequate knowledge about giftedness and talents, and that affects their support for their children. There was a lack of knowledge among the participants about the existence of a talents' services policy or development programs. There is little training given to teachers who oversee talented training. There was a lack of teachers 'continuous training and development. The talented programs are enrichment programs, and not considered as talented education because they are not sustainable and not included in the school curriculum. There is no explicit guidance or awareness on talented education, rather general principles. Selected teachers to implement the identification or development programs are not qualified enough.*
How are gifted and talented students defined and identified in the UAE?	Definition and Identification Participants attitudes	Human capital: the participants raised the absence of national policy as the cause of lack of specialist professionals to identify or to provide counseling, coaching, and training for gifted and talented students.
How is the development of gifted and talented students implemented in the UAE?	Development of talented students	Development programs are not following any policy or standards, teachers teach subject content, and there is no attention paid to develop the students' skills.
What are the main challenges facing the gifted and talented identification and development in the UAE?	Challenges faced by parents/talented students Participants recommendations	Absence of a national gifted and talented policy to regulate gifted and talented services. Absence of a gifted and talented law to equalize, mandate, and regulate the gifted and talented services. Lack of financial support: Participants pointed out challenges with financial backing such as little support for the non-academic subjects; scholarships, instruments, teachers, students can study one speciality in the university, nonacademic subjects are costly, lack of differentiation in teaching in schools. Curriculum provision: Taught curriculum is inadequate to fulfil the talented student's potential, the curriculum is unable to accommodate all types of gifted and talents; there is no differentiation or challenging curriculum for talented and gifted students. The current talented and gifted provisions and practices are random and not systematic, and not based on an institutional philosophy due to the absence of national policy. There is no overall organization to regulate the giftedness and talent practices. Lack of collaboration amongst the institutions to provide gifted and talented development programs. The current G&T practice is not sustainable.

In conclusion, the absence of an overall organisation that regulates the giftedness and talent practices, processes, and education is a considerable challenge. Lack of collaboration and coordination between the organisations, associations, and institutions to provide development programs to highly able students and to ensure their sustainability makes addressing their needs critical. Without agreement among stakeholders around the roles and responsibilities of each of them, issues and challenges that hinder the implementation of development are likely to remain, affecting negatively on this category's progress and productivity in the future.

6.1.3 Recommendations

Table 39.Interview Questions in alignment with recommendations

Suggestions & Recommend ations	What are your suggestions for more talent's development in the UAE?	Experts-Teachers-Managers Parents Gifted & Talented
	What do you suggest investing in your child's abilities and talents?	Parents
	What are your suggestions and recommendations regarding talents' development in the UAE?	Parents
	What are your recommendations regarding increasing talents' services in the UAE?	Gifted & Talented

This study explored the implementation process of some of the development programs by five prominent educational institutions in the UAE. The study constructed on an exploratory sequential qualitative method design is to give applicable recommendations regarding improving the situation of highly able students' development in the UAE. One of the research questions was about the challenges faced by these institutions while implementing development programs and initiatives.

This research was to answer the questions and to find out the type of appropriate recommendations to provide throughout this study.

The question was as follows: What are the main challenges facing the gifted and talented identification and development in the UAE?

The findings obtained from the collected and analysed data in chapter five, along with the reviewed related literature in chapter two, are to offer the suggestions proposed in this chapter. These recommendations intended though to enhance and improve gifted and talented service and development in the UAE.

Recommendations follow the arrangement of the topics. They are not final recommendations, but they are significant and a few depending on the results of this study.

Recommendations include the following areas: National Policy for highly able persons, the definition, identification and development of these highly able, methods, resources, and support. Recommendations for further research available at the end of this chapter.

6.1.4 National Policy

Meeting the educational needs of the highly able students is not about providing something entirely different, but about constructing the new needs on proper general school provision (Eyre & McClure, 2001).

Education policy, according to researchers, is a strategy implemented by a governing board, driven by an educational issue that existed at a time (Van Tassel-Baska, 2006). This policy aims at attending to excellence in education. (Rasmussen & Lingard, 2018) It attempts to raise educational standards in general and to identify the highly able students to make special provisions for them.

Proper provision for these students is one of the most critical components of the personalisation and equal opportunities agendas that drive recent government initiatives. (Eyre &Lowe, 2013)

Changing an existing policy or improving its contents is not an easy task, and it needs to perform through different stages, moreover, improvement efforts in general education policies (AlObaidli, 2006). There is always a need for written policies by the decision-makers who govern and approve the policies. This policy is assumed to mandate the identification, development programs and any reasonable provisions for highly able students' progression. Denmark, for example, is an excellent practice regarding equality-oriented tradition in education. It pursued strategies of developing talent throughout the educational system to cater more to the needs of gifted and talented students in its schools (Rasmussen&Lingard, 2018).

Consequently, policies are penetrating to the different needs of the gifted and talented students served in schools. They could interpret and implement these services efficiently and appropriately if they were sensitive to their needs. They should positively affect gifted and talented students lives by providing them with benefits and systematic services. The policy for highly able individuals must support the needs of gifted and talented students and persons in general (Gallagher &Reis, 2004). To design a policy for the gifted and talented, it must be open to improvements and does not follow a standard model according to (Passow&Rudnitski, 1994).

The absence of a unified national policy for gifted and talented students in the UAE allowed the issuance of the variance of policies that were designed individually and by different institutions. The policies left to the efforts of private schools and institutions, and this confuses the national reform regarding gifted education and makes it less cohesive, comprehensive, and inclusive than it should be(Van Tassel-Baska, 2009). Accordingly, there is a need for an overall educational

policy to go inline with the new global trends and developments. This policy design should base on the UAE vision of education and emerge from it's National Agenda's objectives.

The (UAE National Agenda 2021 and the UAE Centennial 2071), stand on four aspects that comprise education, economy, government development, and community cohesion. The goals of the UAE are focusing primarily on the educational system. The ability of this system to implement the required development, such as advanced technology, engineering would help the UAE achieve its goals (UAE cabinet.ae). Thus, the need for a policy that implements, regulates and organises gifted education is a vital requirement in the UAE. It has to ensure that these highly able students are assigned their opportunity to acquire development and skills needed to become independent, responsible, and to contribute to the UAE's achievements.

To fulfil its role in this area, the (MOE) in its capacity as the principal educational institution and the primary decision maker regarding the educational policies in the UAE must develop and administrate such policy to govern, fund and provide these students with their needs all over the UAE. The policy should include flawless guidelines and directions for the identification and development of these students. It should as well focus on their experiences and skills and should include clues on how gifted and talented students are ready to participate in the society and to be a part of an active life in which they can solve problems in any situation. The policy is to inspire the gifted and talented towards their country's service and to promote the characteristics of a loyal citizen. The form of this policy should be able to provide all highly able students, teachers, and any stakeholders involved their differentiated needs and supported to be able to support them. Its objective is to design and organise the ecosystem around the gifted and talented students in a way that makes it able to support their needs equally and as early as possible. It should include all professional development regulations and needs for different materials and required logistics and

resources including books, electronic tools and devices, identification tests, games, competitions, resources rooms, and all necessary learning resources that would support the creation of a supportive environment for them, their parents, teachers and counsellors. (Eyre &Lowe, 2013)

These well-developed policies form the foundations of sustainable education systems. They help countries achieve their educational development goals and contribute to continuous learning. (UNESCO.org). "Planning policy for the highly able students should not be limited to one institution. All stakeholders and institutions related to their education, well-being and services should be involved in this task. Their involvement should endorse awareness about the importance of their differentiated education and development. The policy creators may constitute various stakeholders and people from different categories such as experts, psychologists, media specialists, curriculum developers, educators, parents, and gifted and talented. It is crucial to define its purpose and set its intended goals ahead. The stakeholder's assembly who oversees the policy planning and setting should research and review current Acts and policies before placing a new one. The UAE philosophy of education must be consistent with how they vision gifted and talented education. The other educational institutions should be involved as well and observe the policy designing and implementation to ensure that their staff will be capable of the implementation of the policy. An evaluation plan should come within the policy with a clear purpose and vision. Institutions, programs and any other related stakeholders should be involved in the different stages of the evaluation plan of the policy. This evaluation plan will help all stakeholders, including the educational institutions; identify areas of success through the results. They will be able also to provide their recommendations and point at the areas of improvement and the required modifications. There must be a schedule set for follow up this evaluation plan at different stages. Another plan for conducting a policy review includes the assessment of the policy

recommendations and the development of specific plans. The policy review may consist of consultations if requested by the policy developers to discuss the ideas and coordinate efforts with international agencies. This policy review helps the educational authorities reinforce their educational system and include any modification and improvements in it. It also contributes to the development of the educational authorities' system competencies. (UNESCO.org)

Having a policy developed and reviewed by all the stakeholders to look after these gifted and talented students is an efficient tool to regulate their services and help them satisfy their potential needs appropriately.

6.1.5 Unified Definition

Highly able students are individuals with exceptional abilities defined according to their skills and developed to a higher level than their year group (Eyre, 2012)."

Socrates and Plato viewed giftedness as the ability of a person to learn and gain higher knowledge and understanding faster than the others. In later centuries, the concept of giftedness moved from philosophers to scientists. People identified as gifted or talented only if they had made significant contributions to society like Galton, Mozart, Albert Einstein, and Thomas Edison (George, 2013). However, using this method limits the number of gifted and talented individuals and eliminates most of them from consideration. Very few people can make such contributions, and if the world followed this method, we would hardly find someone defined as gifted or talented.

The variety of definitions, terms, and criteria to describe these exceptional students and individuals have always created confusion among scholars and people in the societies in general. Thus, these students are not a similar group with similar qualities, but they represent a wide range of characteristics, and they do not demonstrate the same traits. (George, 2013)

The main characteristics of the highly able students to have extraordinary abilities and to be committed to what they do within or outside the school curriculum. Their gifts and talents may be in one or more areas, and it became apparent at different stages in their lives. We can find gifted and talented individuals in any group, including people with special needs, or underachievers in schools.

Consequently, recent gifted and talented definitions started to focus on identifying children who have the potential to excel as well as the children who have already shown excellence in some areas. (George, 2013)

The concept of intellectual intelligence moved to become multiple talents, according to (Gardner, 2000). The theory of multiple intelligence discards using one method to identify any gifted or talented student (George, 2013). Therefore, this should consider any child could be gifted or talented if he/she is abler than his /her peers are and had achieved better than those who are in his age. However, policymakers need to adopt a definition that will interpret the concept of "giftedness" and "talent." This definition should help determine the students who will be involved in a specific program of development. The definition is for the decision-makers to be clear about what decision they should make to secure the education and development of this category.

The definition that describes these gifted and talented must be accessible and comprehensible for everyone. It should include the UAE vision, philosophy of education, and the characteristics of the gifted and talented individuals in the country .it should provide all schools and educational institutions in the UAE with a clear description of their concepts.

This definition should help every highly able student get equal opportunities from a variety of services such as the development enrichment programs. This definition must help the school's

educators and staff acknowledge these students' needs and support them to get their differentiated academic, emotional, and social needs. However, it should not put on them any pressure or lead others to bully them or to assume higher expectations from them.

The definition should provide support to these students and not make people view them as non-humans. It is an essential issue to understand that gifted and talented individuals are humans with emotions and can suffer if they do not like what they do, or if not getting what they want. All educators, parents and stakeholders should recognise the gifted and talented students emotional, social and financial needs, understand their strengths and weaknesses and support them to become able to use their gifts and Tlnets properly. They may be superior in some areas and weak in others. They may be suffering from learning difficulties or any other social, physical, or behavioural challenges.

6.1.6 Identification Process

The identification process is what these highly able students' need to find their way and recognise their abilities. The crucial step in identification is to agree on how to identify them, when and who should do it. The main problem in the identification process is not having a unified definition that guides the identification methods and tools. Existing identification is mainly dependant on achievement tests, teachers and parents' nominations. Other identification methods are testing one dimension, while others are limited to a certain age.

The need for usage of more comprehensive assessment methods is to avoid ignoring many gifted and talented students. Their unqualified teacher or parents may not identify those tested by one tool.

The multidimensional method would identify those students who exhibit more than one talent. This method means using standardised assessment data, employing a multi-method approach to identify different areas of ability. It also means consulting a range of people around the students, monitoring the students in different situations, placing them away from the classroom, and watching them performing or doing anything out of class context.

Some methods of identification do not require specialists or expert's knowledge, such as screening checklists. A trained class teacher can complete the list and monitor the students who exhibit gifts or talents.

The identification process must start at an early age. Delaying this identification risks that this child is misunderstood and become an underachiever due to being unchallenged in a boring regular class.

Identification in the early years, according to (Freeman, 1998) is challenging. He highlighted four critical dimensions in the assessment of very young gifted and talented children: Lively minds, awareness, ability to learn, and independence. (George, 2013)

Renzulli's three-ring concept of giftedness (*Renzulli, J.S., 2016),* helped the educators for a long time look for more skills in their students and be eager to recognise their creativity combined with intellectuality and task commitment.

Moreover, identification should be a continuous, fair, and transparent process that does not neglect any child from any group. It should be flexible and able to include any child at any time. It should be flexible and comfortable enough to identify them at an early age or to identify those who will emerge later. Identification within the school must be a part of school life and curriculum. Teachers are the principal tool in the identification process. They should be able to spot any gifted

or talented student within a class or outside it, and his or her identification process should rely on a reliable tool, such as the portfolio approach supported with a range of different qualitative and quantitative data.

Identification should be an ongoing process and part of school life, and schools must prepare a challenging and supportive environment that helps these students emerge and exhibit their abilities. School leaders, teachers, or other educators in schools should be able to spot any hidden gifts or talents among students who come from all different cultural backgrounds. They should be aware that underachievers and students with specific learning or physicals disabilities can be gifted and talented with hidden gifts or hidden talents as well.

Open communications between educators in different educational institutions, and between teachers and gifted and talented students, and their parents would ensure all students appropriately identified and nurtured (Eyre, 2012)

6.1.7 Development Process & Systems

All highly able students should receive differentiated services, including a variety of development programs and initiatives that nurture their different abilities.

The most important provision is the ecosystem that surrounds these students inside and outside schools. Preparing this ecosystem makes it able to become a tool to identify and develop these students at early ages and throughout their lives. The gifted and talented needs differ from one to another. However, the emotional, psychological, social, and financial needs are the essentials.

The progress of the ecosystem starts with the development of the whole-school approach towards the highly able students. Having a policy that helps the schools or the institutions follow its

mandating provisions would outline this development and structure it. Having a clear, smooth, and flexible, multidimensional identification methods would expand the identification process and the identified students. Ensuring that all teachers, responsible for teaching and guiding the highly able students, understand and know how to spot gifted or talented students would strengthen the process and increase its reliability. Teachers should keep a precise checklist and record of all gifted and talented students to follow up with their identification and development. The new technology tools made it easier currently to follow up on their development and record their achievements accurately. They should continuously review and monitor the gifted and talented students' progress to improve the school's environment to become able to facilitate the development of gifted and talented students (George, 2013).

Gifted and talented students need developmental programs provided to them in a variety of options that suits their differences and help them to satisfy their potentials equally. These programs may include an extension provided to gifted and talented students within the mainstream classroom. The extension involves these students who follow the regular curriculum but to a different complexity. Effective teachers who can provide these highly able students with the extension program are those who possess good knowledge of the subject, and they work with at a higher level than they usually work at with an age group. They must be with excellent pedagogical skills and the ability to recognise the student's abilities and personalities (Attfield, 2009).

Other programs like acceleration apply to one or more than a subject, and it involves moving the gifted or talented students to work with a group of older students.

Grouping these students based on their abilities to meet their different needs can help these gifted and talented students in a variety of ways. Forming different settings could be a way that supports all types of abilities. The grouping includes different types of groups according to their abilities,

learning style, shared interest and socialising interests. The most crucial aspect of this program is planning the educational objective and reason for it. Different forms of grouping can provide productive learning and help gifted and talented students stay motivated. (Attfield, 2009)

Compacting describes a shortening of course materials. It happens when a gifted or talented student is familiar with a significant portion of course content, and this makes this student cover the course in less than the required amount of time.

Mentoring is also another tool used for regular and highly able students' empowerment. It has proved to be useful and supportive for the gifted and talented students. It helped them plan their ambitions and know-how to reach their potential. The mentor-mentee relationship depends on time arrangement, mutual trust and respect, and some other requirements to make it successful. The right mentor helps the gifted and talented students take hold of the proper opportunities, plan and come up with their solutions, develop confidence, maximise their potential, develop their skills, and gain self-awareness (Long, Fallon, Murphy, Derbyshire & Hewitt-Craft, 2010)

Enrichment programs proved to result in more benefits in learning for these highly able students. These students enjoy new and supplementary experiences and different opportunities outside the standard curriculum. This enrichment program may include trips, clubs, museums, and galleries visits, the use of different resources, developing a broader curriculum to enrich and enhance provision, additional languages, drama, music, astronomy, debating groups, chess, community projects, competitions, and many other projects or intellectual activities(Attfield, 2009)

Offering a variety of programs ensures providing every gifted and talented student with the best developmental opportunity according to their different needs and requirements. To design an

individual development program for each gifted and talented student ensures that each student has access to the best developmental opportunity.

Creativity also is an essential attribute for the development of gifted and talented potential because they need special services and needs while learning in schools. However, school context is not developing creativity properly, nor it offers creative solutions or methods for this category within curriculums or environment (Piske, F.H.R, Stoltz & Machado, 2014)

Teachers need to be creative by differentiating their teaching methods and students' learning styles in order to allow highly able students to improve their learning in an inspiring environment. Utilising the available community centres in the UAE can help schools provide their exceptional students as well as other students, in general, an opportunity to learn through different methods and places outside school days

The continuous reforms in the UAE educational system provide an opportunity to improve the curriculum and to ensure that the education system is adapting all developmental programs and is flexible enough to implement them quickly and for every student. Teachers, on the other hand, should be involved in continuing professional development to be able to apply differentiated teaching methods and approaches to meet the needs of different student's abilities in one classroom. They are required to design different activities and a variety of methods and programs in a challenging way.

It is, therefore, essential to note that many factors can stimulate different improvements in educational institutions. Such improvements would support the development of more sustainable beneficial programs that ensure gifted and talented meet their needs and can satisfy their potentials.

This study has provided some recommendations while there are many more that need more researches and studies. The significant recommendation is having a national policy agreed upon by all stakeholders to organise and mandate the gifted and talented quality services in the UAE. This policy will regulate and mandate identification and development programs and will ensure that they will be applied appropriately to develop these students' abilities and potentials. All gifted and talented students will get support through accredited, high-quality programs.

Developing a policy means all educational institutions need to collaborate and agree on how to implement new services to identify and develop the highly able students and to improve the existing services to make them achieve sustainable progress all over the UAE. This policy will impose crucial changes to the current systems and programs. It will monitor the process and will require adhering to international standards and criteria. It will develop more plans in favour of gifted and talented ongoing development.

6.2 Recommendation for Future Research

* The current situation of gifted and talented identification and development programs in the UAE needs further studies and researches that aim to explore and investigate it in-depth. These recommended researches should be able to examine the effectiveness of the continuous establishment of nurturing initiatives and if they are providing these highly able students with their differentiated needs?

* The evaluation of the rapid changes in the UAE and the investigation of the educational system improvements made to fulfil the (UAE Vision 2021) and the UAE preparations for the (UAE Centennial 2071), needs to be researched and investigated.

*Gifted and talented different physical, emotional, social, financial, and psychological needs that studies ignore and to seek more topics related to this category as humans.

* To conduct longitude studies, track the changes in the UAE society and people's mindsets; to study the social effects of this rapid advancement on the awareness and knowledge of the people regarding the value of gifted and talented individuals.

Conclusion

This study aimed to explore the area of identification and development programs implemented by five educational institutions in the UAE for the sake of highly able students development and progress. It aimed as well to give appropriate recommendations according to the results and findings. A carried out comprehensive literature to understand various concepts and theories behind the giftedness and talents. Different research instruments used in this study, including interviews, focus groups, document reviews and library search obtained more data and extended information. This data was studied and analysed to identify the services provided for gifted and talented students and the programs implemented for the sake of their development in the UAE.

Realizing the enormous amounts of global books, studies, researches, articles, journals, conference papers and debates conducted about the issues of the gifted and talented worldwide, makes this research a significant addition to the UAE's efforts to promote and support the importance of these students and the necessity of implementing the most reliable identification and development programs and tools in the country. It was also significant to learn more about different theories and debates provided to the field by prominent scholars, psychologists, thinkers, politicians, journalists, and researchers to enrich literature and help any future researchers conduct replicated researches and studies in their countries.

As this study was born to investigate the role of five educational institutions in the UAE, it aimed accordingly to explore different stakeholders opinions by interviewing four main categories in this area. It applied various methods and planning tools to answer the questions of the research.

This study based its rationale on the urgent need for proper identification and development tools to support the highly able students and prepare them to contribute to the aspirations of the UAE according to its (UAE National Agenda, UAE Vision 2021, and UAE Centennial 2071).

Moreover, these exceptional students are the future investment and the country's hope to support its economy as a replacement for oil if provided with the appropriate development after being correctly identified.

The study and the analysed findings found out that the identification and development processes and programs, despite their excessive availability in the UAE are still in need of crucial improvements and modifications. While the five educational institutions subject of the study provides a variety of these identification methods and development programs for gifted and talented students, however, some programs are in need for additional enablers, more enhancements, and various necessary modifications to achieve their roles. The educational institutions need to collaborate and communicate to evaluate these programs and mutually plan to elevate their effectiveness and exchange experiences in this regard. They need to extend an appropriate ecosystem that would provide highly able students inside and outside schools with the proper services and development. Many of these programs require governing standards, provisions, and criteria applied through a national policy that regulates the implementation and quality of the services provided for the gifted and talented students in the UAE.

Implementing appropriate, highly qualified programs in all public schools would effectively support the proper identification and development of highly able students. They as well provide them with an equal opportunity through differentiated services.

Furthermore, a national policy unifies and regulates the gifted and talented provisions. There is also a need for an appropriate comprehensive description of the concepts of gifted and talented. Having a flexible, modernised definition should allow all of the highly able students with different abilities to satisfy their needs and obtain customised services to thrive. The definition should describe and reflect the cultural values and the leadership vision of the UAE. Moreover, identification methods should be multidimensional and not depending on one tool or process to avoid excluding many gifted and talented students.

In conclusion, the study found that there is a critical need for improvements that include the improvements in the identification and development programs provided to the gifted and talented students in the UAE. The different gaps that disable their efficiency and prevent the gifted and talented students from benefiting out of them require certain amendments and modifications to make them beneficial and reliable and to build a more comprehensive ecosystem that meets the needs of all students in general and gifted and talented students.

The role of the five institutions towards implementing the identification and development programs for the gifted and talented students would be fully accomplished and successful with a national policy that regulates the services and mandates the ongoing assessment and evaluation. The participation of teachers, parents and all of the stakeholders in the country would promote the awareness regarding the role of each of them and their collaborative responsibility towards the development of the gifted and talented students in the UAE.

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Interview Questions Guide

Experts-Teachers-Programs Leaders.

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Project Study: The Role of Governmental Educational Institutions in implementing talents' development programs in the UAE

Time of Interview				
Date of Interview				
Place of Interview				
Interviewer				
Interviewee: Gender:	Age	Job	qualifications	Years of experience

My name is **Basema Younes.** Thank you for accepting to participate in this research study. The purpose of this interview is to collect data for my PhD project study on the practices implemented by UAE Government Educational Institutions to identify and develop talents. The interviews will provide the researcher with the best information on your perspectives and background knowledge you have on (TID &TDE) in this initiative.

The research questions are:

1. What is the role of development programs implemented by governmental, educational institutions to develop gifted and talented students in the UAE?

2. How are gifted and talented students defined and identified in the UAE?

3 How is the development of gifted and talented students implemented in the UAE?

4. What are the main challenges facing the gifted and talented identification and development in the UAE?

* Interview Questions

What is the talents' definition from your perspective?	1
What factors influence talent development (examples)	2
What are the identification tools used to detect talent in your institution?	3
How do you develop gifted programs?	4
How well do you know about gifted programs and talent care programs in the UAE?	5
In your opinion, what qualities of talent that facilitate their identification?	6
How can gifted and talented develop their talent?	7
In your opinion, what are the most obstacles and challenges facing talented people and their families?	8
What opportunities are there to promote talent investment in the UAE?	9
What are your suggestions for more talent's development in the UAE?	10
Do you think teachers need special educational provision and training for the G/T?	11
In your opinion, how likely, the G/T have emotional problems.	12
Do you Know if schools grant extra money to create G/T development programs?	13

Appendix B

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Interview Questions Guide

Parents of Talented Students

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Project Study: The Role of Governmental Educational Institutions in implementing talents' development programs in the UAE

Time of Interview				
Date of Interview				
Place of Interview				
Interviewer				
Interviewee	Gender	Age	Nationality	Qualifications

My name is **Basema Younes.** Thank you for accepting to participate in this research study. The purpose of this interview is to collect data for my PhD project study on the practices implemented by UAE Government Educational Institutions to identify and develop talents. The interviews will provide the researcher with the best information on your perspectives and background knowledge you have on (TID &TDE) in this initiative.

The primary research questions are:

1. What is the role of development programs implemented by governmental, educational institutions to develop gifted and talented students in the UAE?

2. How are gifted and talented students defined and identified in the UAE?

3 How is the development of gifted and talented students implemented in the UAE?

4. What are the main challenges facing the gifted and talented identification and development in the UAE?

Interview Questions	
Definition of talent from your perspective	1
How did you discover your child's talent?	2
What do you/ school do to develop your child's talent?	3
To what extent do you know about talents program-Policy in the UAE?	4
How did you come to know about the talents' identification programs in the UAE?	5
What are the characteristics that made you recognise your child's talent?	6
What are the challenges you face in raising up your child's talents?	7
What are your suggestions and recommendations regarding talents' development in the UAE?	8

Appendix C

Talented Individuals

Project Study: The Role of Governmental Educational Institutions in implementing talents' development programs in the UAE

Time of Interview			
Date of Interview			
Place of Interview			
Interviewer			
Interviewee	Name	class	Type of Talent

My name is **Basema Younes.** Thank you for accepting to participate in this research study. The purpose of this interview is to collect data for my PhD project study on the practices implemented by UAE Government Educational Institutions to identify and develop talents. The interviews will provide the researcher with the best information on your perspectives and background knowledge you have on (TID &TDE) in this initiative.

The primary research questions are:

1. What is the role of development programs implemented by governmental, educational institutions to develop gifted and talented students in the UAE?

2. How are gifted and talented students defined and identified in the UAE?

3 How is the development of gifted and talented students implemented in the UAE?

4. What are the main challenges facing the gifted and talented identification and development in the UAE?

Interview Questions

How do you define talents?		11
How did you know you are talented?		2
What supported the development of your talents? Who did?		3
How do you want to benefit from your talent in the future?		4
Did you participate in any development program inside or outside the UAE? How?		6
To what extent did the institution support your talent development?		7
What are the challenges you faced in the UAE in relation to your talents' development?		
Did anybody encourage you? Who and how?		