Nurturing Giftedness
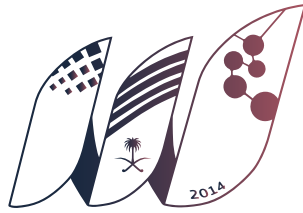
A Guide to the Philosophy and Strategy of Nurturing Giftedness at the University of Jeddah: Empowering for Eminence

جامعة جدة
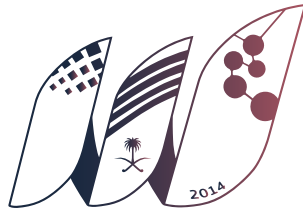
University of Jeddah

Nurturing Giftedness at University of Jeddah

A Guide to the Philosophy and Strategy of Nurturing Giftedness at the University of Jeddah: Empowering for Eminence 2023

146 pages, 29.7 x 21 cm

جامعة جدة

University of Jeddah

بسم الله الرحمن الرحيم

We in the Kingdom pay great attention to creating a new generation that contributes to building human civilization and facing contemporary challenges.

Our ambition is to build a more prosperous homeland in which every citizen finds what he desires. The future of our homeland, which we build together, we will only accept to put it at the forefront of the countries in the world.

The New Saudi University Vision seeks to provide an integrated educational journey based on excellence in teaching and scientific research to prepare a generation of graduates in specializations that are compatible with jobs of the future.

The University's President

His Excellency Dr. Adnan Al-Humaidan

TABLE OF CONTENTS

Overview

Preliminary

Identifying Best Practice

Benchmark-Framework for Giftedness Development

Talent Philosophy at the University of Jeddah

NEW SAUDI
UNIVERSITY VISION

THE UNIVERSITY OF JEDDAH VISION
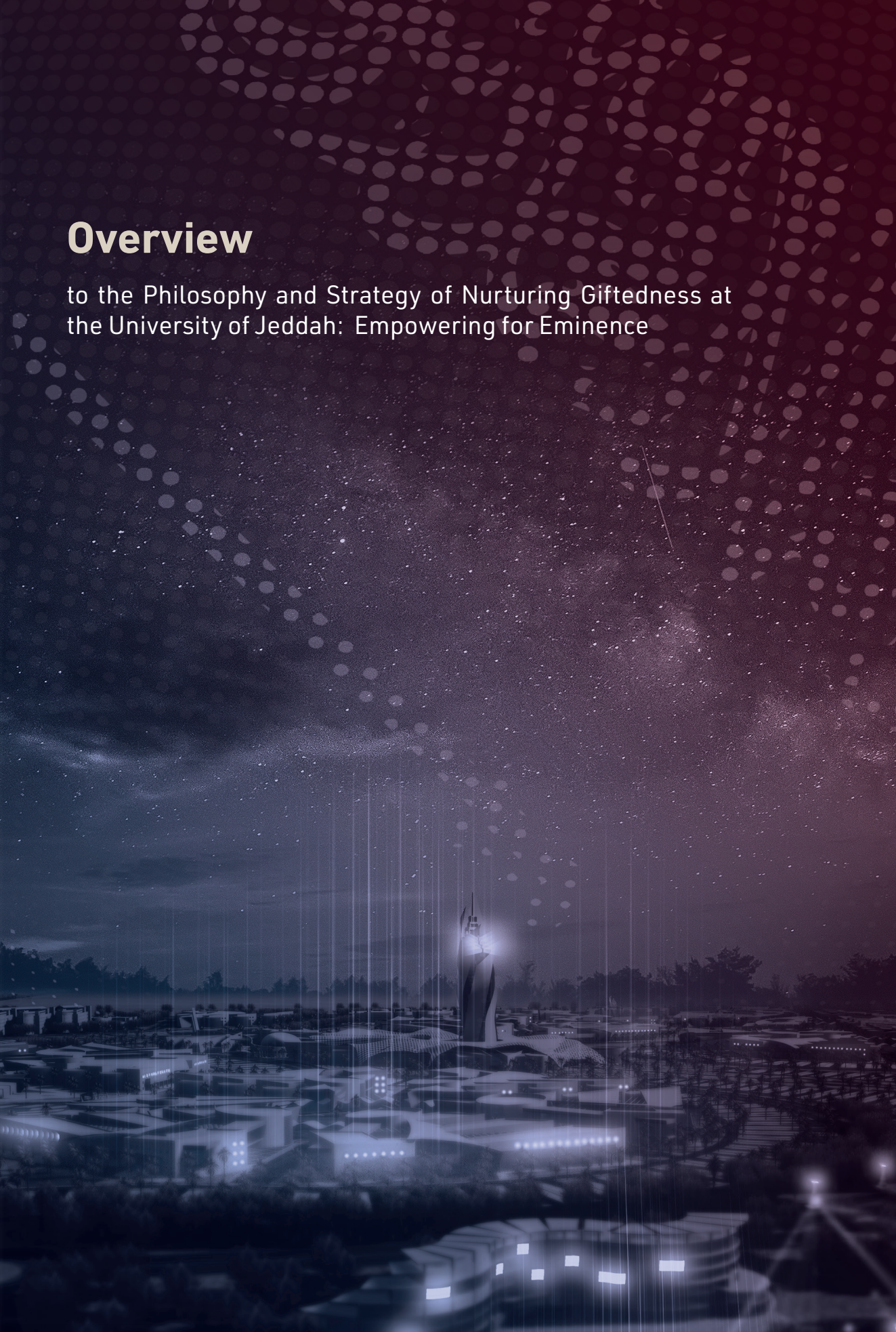
NEW SAUDI UNIVERSITY VISION

Browse the comprehensive guide

To see the New Saudi University Vision

www.uj.edu.sa/pages-new-uj.aspx

Overview

to the Philosophy and Strategy of Nurturing Giftedness at the University of Jeddah: Empowering for Eminence

The Philosophy and Strategy of Nurturing Giftedness at the University of Jeddah: Empowering for Eminence aims to shape talent and nurture it at the university according to a solid scientific methodology for developing gifted students stemming from the goals of the future of education and its skills emanating from the human capabilities development program to achieve global competitiveness, and its aligned with OECD reports on policies and initiatives for adopting and developing gifted students.

This philosophy and strategy combines various international scientific theories for talents: the Munich Model of Giftedness, the Tannenbaum Model, and the Scientific and Artistic Productivity Model. It was also built according to the main components of empowering and developing talent, such as the general components (superior general intelligence), the specific components (distinctive special abilities), stimulating creativity, and the components of non-intellectual personal traits (such as motivation, passion, wisdom, and challenge).

The philosophy and strategy define talent development at the university at three levels: enrichment, excellence, and leadership. At the enrichment level, the university seeks to provide a set of creativity skills to expand and complement the regular curriculum and contain topics that are not usually covered in the curriculum. While at the level of excellence, the university seeks to stimulate creative productivity as one of the components of talent development along with special abilities, psychological and social skills, motivation, and building characteristics that help individuals meet the requirements of creative professions and jobs that require addressing non-specific and complex difficulties, and these characteristics include independence. Early psychological development, self-sufficiency, ability to handle high levels of stress, resilience, and emotional strength. At the last level, leadership, which is the level of achievement and excellence that is desired to be achieved as a main goal for attracting and nurturing gifted people at the university, so that the talents and abilities of gifted students achieve transcendent creative contributions that lead to high levels of personal satisfaction and self-realization, as well as producing scientific, creative, and entrepreneurial benefits that cannot be imagined by society. .

We have studied and compared 16 international theories for gifted education, 6 international institutions for adopting the gifted, and 9 famous international universities to build this strategy. The strategy defines the foundations of talent based on modern national trends, such as applications of the Fourth Industrial Revolution, the Internet

of Things, uses of drones, and artificial intelligence, to enhance national projects and trends such as tourism, energy, and the green environment, and the university's focus area is logistics. The strategy targets health majors, computer and digital majors, engineering majors, business administration majors, natural sciences majors, humanities majors, the Holy Quran, and Islamic studies.

The strategy takes its success criteria according to the impact, advantage and competitive value of the innovation and creativity outputs, and achieving national and international awards for its talents.

The strategy was judged by nine international experts in the field of talent from specialized international universities and centres, who expressed their admiration for the university's strategy and initiatives to empower and attract talented people

رؤيــــة جـامعــــة جـــــدة
الجامعة السعودية الحديثة
NEW SAUDI UNIVERSITY VISION
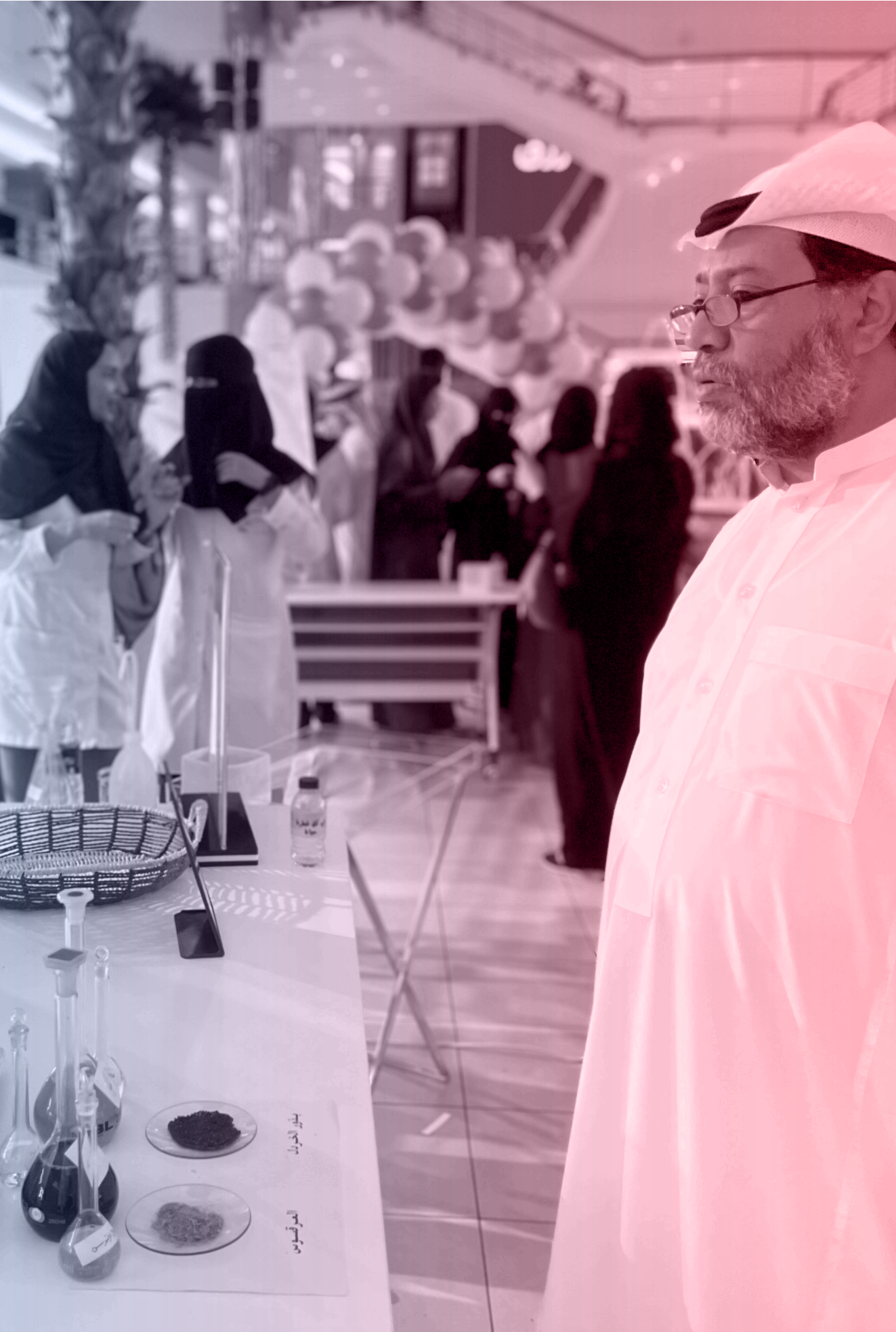
بذر الخردل

الميثيلين

CHAPTER 1

Preliminary

**NEW SAUDI
UNIVERSITY VISION**

"

To date, no international consensus exists on the definition of giftedness. There is a great diversity in conceptualising giftedness not only between, but also within countries. Inevitably, this has a major influence on how countries design and implement gifted education programmes......."

- OECD December 17th, 2021

"
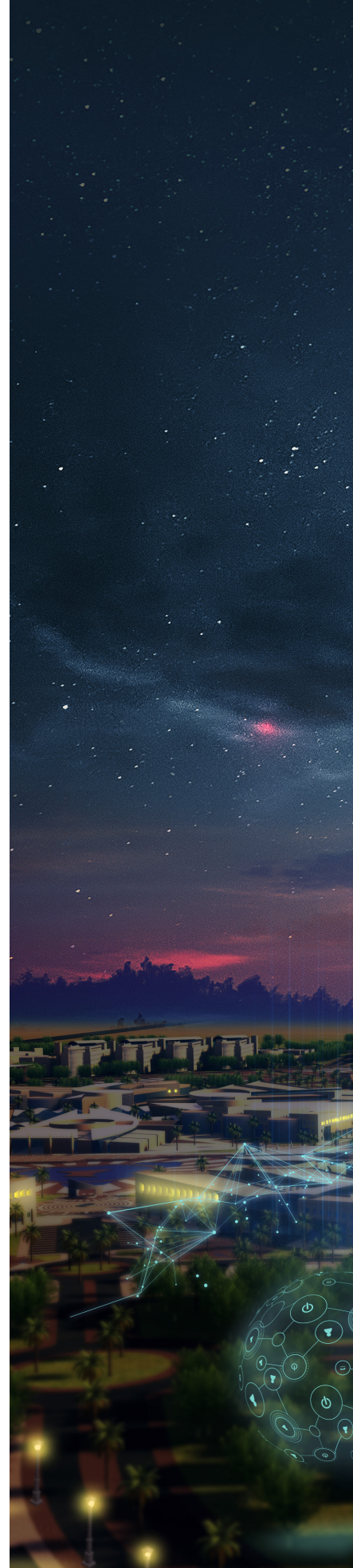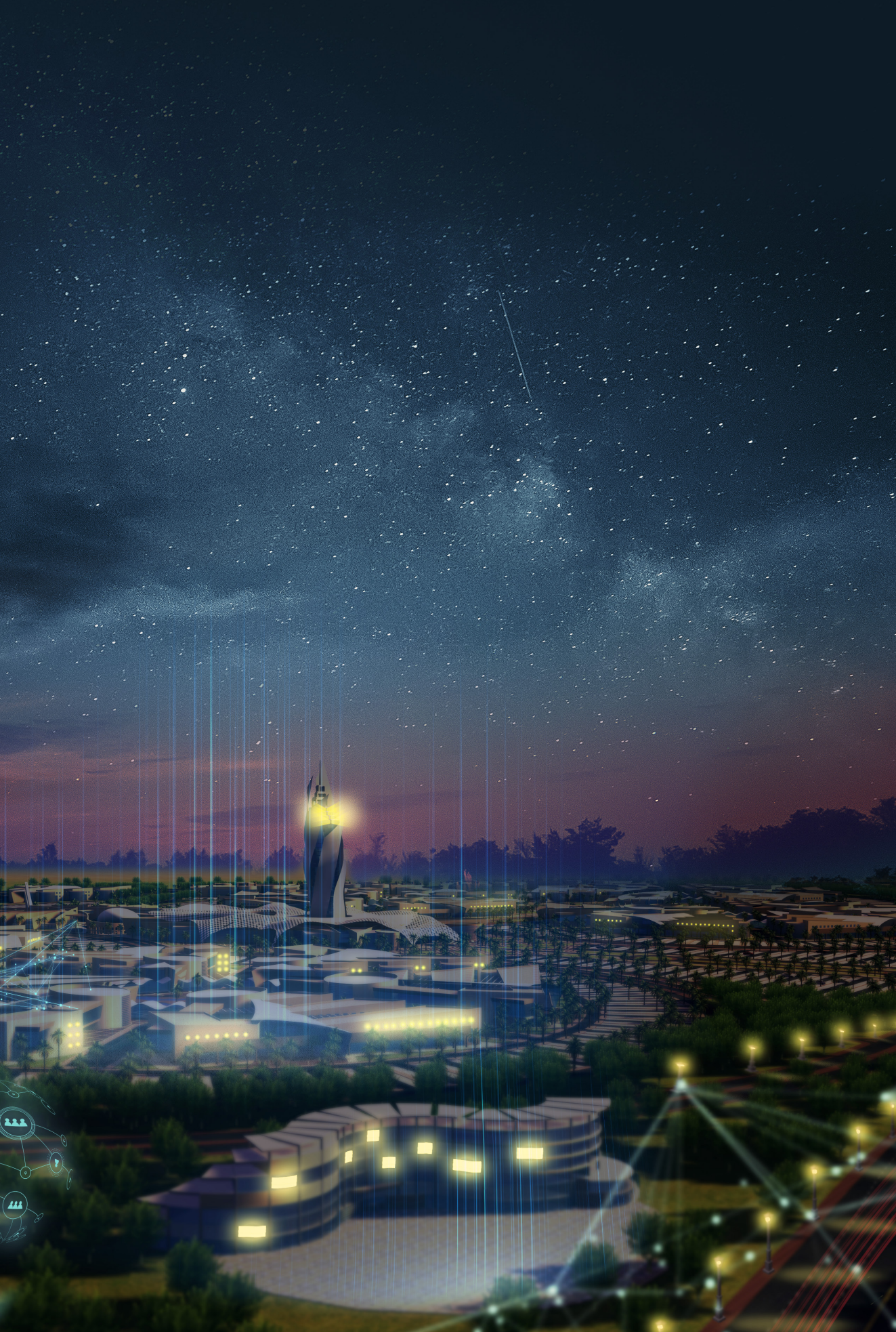
Thus, it is an endeavour to nurture giftedness at the University of Jeddah ...

رؤية جامعة جدة
برنامـج تمكيــن الطــلاب
الموهوبين والمتفوقين

پاذ

SAUDI VISION FUTURE

- Competencies to transform our society and shape our future
  - Goal Directed

- Need for a broad set of knowledge, skills, attitudes and values in action
  - Action BASED
  - Multi-factor & Multiplicative

- Creativity and critical thinking are needed to find new solutions to complex problems in a rapidly changing world
  - Development Process Driven

- Learner agency competencies: Navigating through a complex and uncertain world
  - Self Development Process

1.   OECD

The primary OECD reports that are used as a frame of reference and the basis for the philosophical underpinnings are the following:

1. Future of Education and Skills 2030.

2. Policy and initiatives for the inclusion of gifted students in OECD countries by Ruti-gliano, A. and N. Quarshie (2021).

1.1 OECD: Education System and Giftedness Development- Need for Governance

1. Framing within Education System: It is imperative that any initiatives to respond to the needs of gifted students must foster their inclusion within educational systems.

2. Any special provisions for developing giftedness must take into considerations the potential & needs of the gifted.

This requires special attention is given to the Governance of Implementing Giftedness Development in Education Systems.

1.2 Giftedness Development: How?
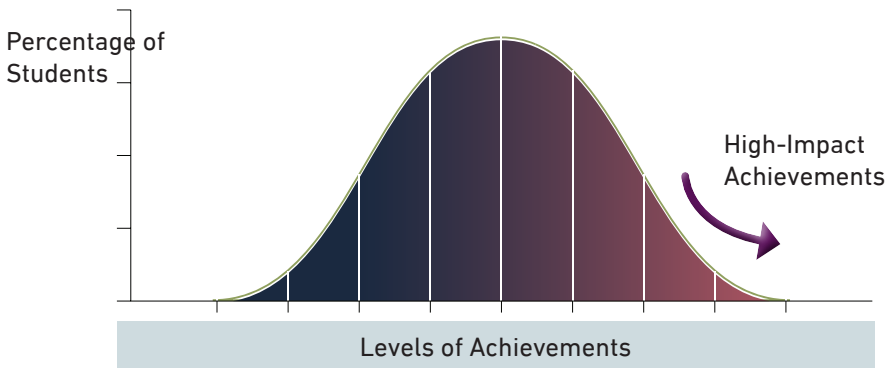
CHAPTER 2

Roadmap for Giftedness
Development at the
University of Jeddah:
Identifying Best Practice

NEW SAUDI
UNIVERSITY VISION

2.   Roadmap for Giftedness Development

It's not about whether someone is Gifted or Not!, It's about if someone is gifted, what have they achieved?

Hence, this study aims to develop a roadmap for giftedness development: based on answering the following five questions:

1.   What are the philosophical underpinning to realise the full potential of gifted-ness?

2.   How to translate the philosophical underpinnings into actions?

3.   What are the overall goals for giftedness development?

4.   What are the principles of governance needed for giftedness development in relation to an education system?

5.   What are the governance strategic directions for giftedness development?

2.1   Philosophical Underpinnings to "Frame" Giftedness Development

What are the philosophical underpinning to realise the full potential of giftedness?

Indeed, OECD & Subotnik et al. (2011) point to three pillars to "frame" giftedness de-velopment:

1.   Holistic Development

2. Agentic Driven

3. Opportunities for High-Impact in the Relevant Domains
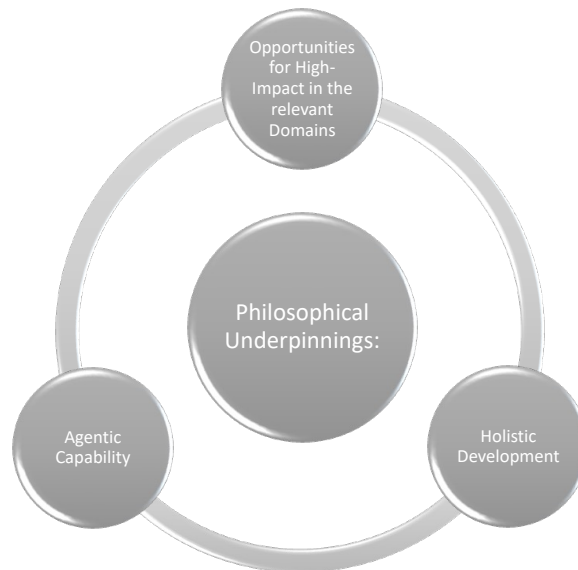
2.1.1 Holistic Development

The holistic approach emphasize that economic and social impact and the "Portfolio" record of giftedness achievements (outcome driven) is the true criterion for measuring capabilities of giftedness and not traits. Indeed, OECD and similarly Subotnik et al. (2011) promotes a "Holistic" approach to giftedness development to realise the full potential in shaping future by emphasising:

1. Domain-centric and life-long development.

2. High-achievements-driven development: ghallenging the gifted to transform society and shape future.

3. Harnessing the coalescing (multiplicative effect) of a multitude of factors on the development of giftedness: 1) human-centric factors (psychological, psychosocial etc.), 2) contextual factors , and 3) biological & educational factors.

Holistic Development
- Domain-centric Life-long Development
- High Achievements Driven
- Coalescing (Multiplicative) of Multitude of Factor
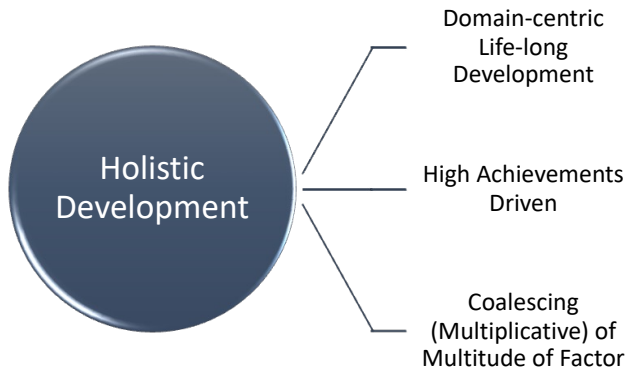
OECD: Shift to "Holistic" Approach for the Development of Giftedness. Adapted from:

4. Policy and initiatives for the inclusion of gifted students in OECD countries by Rutigliano, A. and N. Quarshie (2021).

5. Rethinking Giftedness and Gifted Education: A Proposed Direction Forward Based on Psychological Science by Subotnik et al. (2011).

6. Room at the top: inclusive education for high performance by Eyre, D. (2011).

OECD has Identified Main Threads of a "Holistic" development of Giftedness:

1. Domain-specific and Domain-general Capabilities

2. Educational Perspective of Development

3. Psychological and Human-centric Perspective of Development

4. Governance of Development (from within or without an Educational System)

5. Facilitating Supportive Environment

6. Opportunities from within and without

7. Overall Objective of Development (Enrichment, High-Achievements, etc)

8. Creativity to Shape the Future

9. Approach to Development of Capabilities (Additive or Multiplicative)

10. Flexibility According to Potential and Needs

11. External Support

12. Teaching, learning, mentoring and coaching

2.1.2 Agentic Driven

(a) OECD Future of Education and Skills 2030: Empowering "Agentic" Giftedness Development

1. Competencies to transform our society and shape our future

    a. Aspirations and achievements that make a difference

2. Learner agency capabilities: navigating through a complex and uncertain world

    a. Empowering agentic learning capabilities that deals with complexity and uncertainty

    b. Progressive learning capabilities

3. Need for a broad set of knowledge, skills, attitudes and values in action

    a. Action-driven development

4. Creativity and critical thinking are needed to find new solutions to complex problems in a rapidly changing world

    a. Creativity and progressive learning

5. Need for broader education goals: individual and collective well-being

    a. Wider contextual factors

(b)   OECD Transformative Competencies for "Agentic" Capabilities

- Agentic development is defined as self-directed actions aimed at personal growth and development based on self-chosen goals:

- Creating New Value (Product*)

  a.   Innovation can offer vital solutions, at affordable cost, to economic, social and cultural dilemmas. Innovative economies are more productive, more resilient, more adaptable and better able to support higher living standards. To prepare for 2030, people should be able to think creatively, develop new products and services, new jobs, new processes and methods, new ways of thinking and living, new enterprises, new sectors, new business models and new social models.

- Process-oriented Capabilities (Process*)

  b.   Encapsulates a complex concept: the mobilisation of knowledge, skills, attitudes and values through a process of reflection, anticipation and action, in order to develop the inter-related competencies needed to engage with the world.

- Reconciling Tensions and Dilemmas (People*)

  c.   In a world characterised by inequities, the imperative to reconcile diverse perspectives and interests, in local settings with sometimes global implications, will require young people to become adept at handling tensions, dilemmas and trade-offs, and striking a balance between competing demands. To be prepared for the future, individuals have to learn to think and act in a more integrated way, taking into account the interconnections and inter-relations between contradictory or incompatible ideas, logics and positions, from both short- and long-term perspectives for the benefits of themselves, their families, and communities. In other words, they have to learn to be systems thinkers.

- Taking Responsibility (People*)

  d.   Creativity and problem solving require the capacity to consider the future consequences of one's actions, to evaluate risk and reward, and to accept accountability for the products of one's work. This suggests a sense of responsibility, and moral and intellectual maturity, with which a person can reflect upon and evaluate his or her actions in light of his or her experiences, and personal and societal goals, what they have been taught and told, and what is right or wrong. Central to this competency is the concept of self-regulation, which involves self-control, self-efficacy, responsibility, problem solving and adaptability.

(c)   Agentic Capabilities & Giftedness: Phycological Evidence

Mudrak, J., & Zabrodska, K. (2015) have addressed that "the participants who showed the highest level of achievement and motivation in early adulthood perceived them-selves as "agents of their learning" and made sense of their extraordinary outcomes as resulting from effortful, proper, and self-directed practice. Our findings indicate that a sense of agency is critical to maintaining gifted-level achievement through adoles-cence."

Karwowski, M., & Beghetto, R. A. (2019) introduces and empirically explores a theoret-ical model of creative behavior as agentic action. "Transforming creative potential into creative behaviour results from a decision informed by one's creative confidence and perceived value of creativity. More specifically, the model posits that the link between creative potential and creative behaviour is mediated by creative confidence and mod-erated by perceived value of creativity."

2.1.3 Opportunities for High-Achievements in the Relevant Domains

The OECD has identified making opportunities available to the gifted in the relevant domains is as important as the abilities of the gifted.

Subotnik et al. (2011) has commented that:

- "....Opportunities provided by society are crucial at every point in the talent development process. We argue that society must strive to promote these opportunities but that individuals with talent also have some responsibility for their own growth and development. Furthermore, the research knowl-edge base indicates that psychosocial variables are determining influences in the successful development of talent."

- "Abilities matter, domains of talent have varying developmental trajectories, opportunities need to be provided to young people and taken by them as well, psychosocial variables are determining factors in the successful devel-opment of talent, and eminence is the aspired outcome of gifted education."

2.2 From Philosophical Underpinnings to Reality: Developmental Tra-jectories

How to translate the philosophical underpinnings into actions?

OECD Future of Education and Skills 2030 & Subotnik et al. (2011) promotes empower-ing "Agentic" capabilities of the gifted to realise their full potential and shape the future based-on

- Trajectories that are high-achievements-driven

- Continuous monitoring, assessment and evaluation of progression to higher achievements/development-levels

- Incorporating in a holistic manner the coalescence of human-centric and contextual factors with giftedness traits at each level

Subotnik et al. (2011) also promotes the importance of "Eminence"-driven aspirations on developmental trajectories of giftedness

Holistic Development & Agentic Capabilities

Self-goals & Commitment	High-Achievements-Driven Trajectories	Self-Aware of Progression to Higher Achievements/ Development-levels	Holistic Development at Each Level

2.2.1 Giftedness Development Strategy for High-Achievements-driven Trajectories

Subotnik et al. (2011) promote the following stages for development high-achievements-driven Trajectories:

1. in the beginning stages, potential is the key variable which can be enriched to translate to abilities and skills, and it is referred to as the people stage;

2. in later stages, achievement especially differentiated through creativity is the measure of giftedness, and it is referred to as the demonstrated achievements stage; and

3. in fully developed talents, eminence is the basis on which this label is granted."

Eminence-Driven Achievements

Distinctive Domain-Centric Achievements

Abilities & Competences
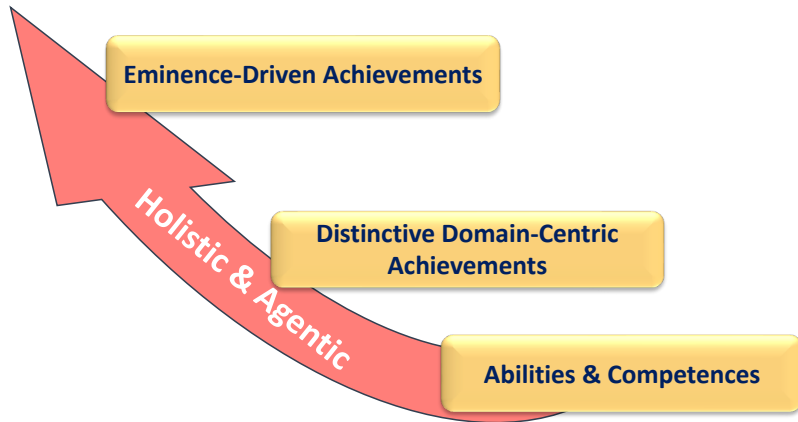
Holistic & Agentic

Holistic & Agentic Achievements-Driven Trajectory Levels for Giftedness Development: Adapted from OECD Transformative Competencies & from Subotnik et. al. (2011)

NEW SAUDI
UNIVERSITY VISION

Developmental Levels for High-Achievements-driven Trajectories	
Levels of Development for the Gifted	**Description**
Little-c Creativity (Additive) & Enrichment (Additive)	Little-c creativity refers to accomplishments that are unique to a classroom or office or to the person - that is, creativity that is exhibited in narrower social contexts and does not usually entail the creation of novel products or new information, Kaufman, J. C., & Beghetto, R. A. (2009); Plucker, J. A., Beghetto, R. A., & Dow, G. T. (2004). It incorporates independent thinking, entertaining different perspectives, creation of projects and products that are novel when compared to those of peers. These can all be developed through enrichment. Enrichment is a term used to describe a set of programming options that extend and supplement the regular curriculum and often include topics that are not typically covered in the curriculum, Adams and Pierce (2008); L. Coleman and Cross (2005); Gavin and Adelson (2008); Olszewski-Kubilius, Lee, Ngoi, and Ngoi (2004); Reis (1995, 2008); Reis and Renzulli (2010). It is usually implemented as a multi tier programs. It usually includes developing psychological independence, self-sufficiency, Albert (1994). It should also include tackling ill-defined, unstructured, and complex problems, as well as ability to cope with high levels of stress, resiliency, emotional strength, a tolerance for ambiguity, intellectual risk taking, and a preference for challenge, Ochse (1990); Olszewski-Kubilius (2000, 2008); Simonton (1994). It also includes little-c creativity. These traits can be developed using additive or multiplicative multi-tier models.
Distinctive (Big-C) Creativity (Multiplicative)	Big-C creativity, refers to field- and culture- altering products and knowledge with economical & social impact with efficacy and productivity, Kaufman and Beghetto (2009); Plucker and Beghetto (2004); Simonton (2010). It is a higher level of creativity that involves shifting emphasis from "person" (creative approach and attitude, independent thinking, entertaining different perspectives, creation of projects and products that are novel when compared to those of peers) to "process" (acquiring process skills and mind-sets) that develop "products" (creation of intellectual, aesthetic, or practical products or performances). It is engendering characteristics that enable "multiplicative" combination of creativity, critical thinking, design thinking, domain specific abilities, psychosocial skills, motivation, and opportunity to meet the demands of creative work that have economical or social impact.

Emi-nence-Driv-en Achieve-ments	Eminence and pioneering achievement ought to be the chief goal of gifted education. This refers to ground breaking and pioneering work with aspirations to fulfil one's talents and abilities in the form of transcendent creative contributions will lead to high levels of personal satisfaction and self-actualization as well as produce yet unimaginable scientific, aesthetic, and practical benefits to society .

2.2.2 Which existing perspective is more effective for a "Holistic & Agentic" Approach for Giftedness Development?

Psychological

(End-driven Development)

Holistic Development of Agentic Capabilities

Educational

(Abilities-driven Development)
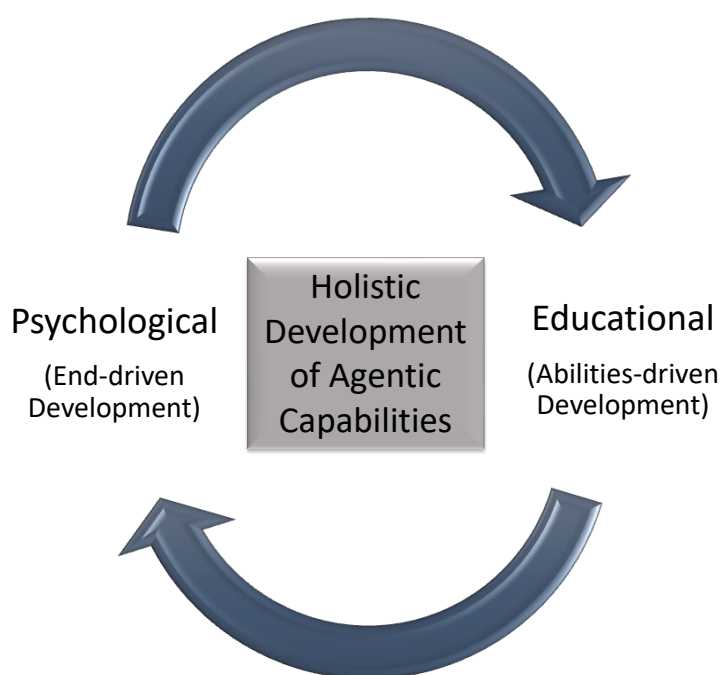
Which perspective is more aligned with the philosophical underpinnings of the holistic and agentic approach? **Or** Which perspective is more effective to understand the confluence effect of contextual factors on Giftedness development?

Difference Between Perspectives on Giftedness

Perspective	Giftedness
Educational	Giftedness is traits!
Psychological	Giftedness is Action for Achievements (Holistic & Agentic)

2.2.3 Philosophical Underpinnings: Psychological

Perspective of Giftedness

"From a Psychological perspective, Giftedness is the manifestation of performance that is clearly at the upper end of the distribution in a talent domain even relative to other high-functioning individuals in that domain." Subotnik et al. (2011).
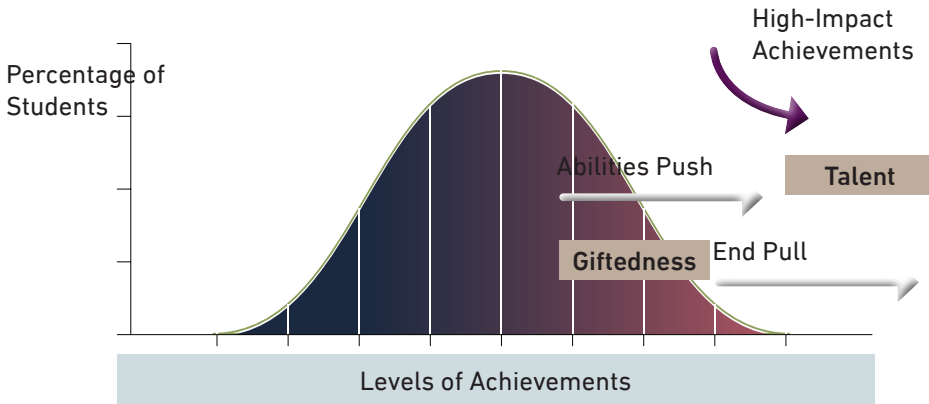
2.2.4 Philosophical Underpinnings: Psychological Science Perspective on Giftedness

A giftedness education endeavours and acknowledges several perspectives about giftedness on which there is a fairly broad scientific consensus. Subotnik et al. (2011) stated that giftedness:

1. reflects the values of society;

2. is typically manifested in actual outcomes, especially in adulthood;

3. is specific to domains of endeavour;

4. is the result of the coalescing of biological, pedagogical, psychological, and psychosocial factors

5. is relative not just to the ordinary (e.g., a child with exceptional art ability compared to peers) but to the extraordinary (e.g., an artist who revolutionizes a field of art).

6. also requires amongst other things creativity, motivation and mindset, task commitment, passion, interest, opportunity

2.3 Overall Goal (OECD & Subotnik et al. (2011))

What are the overall goals for Giftedness and it's Development?

"Outstanding achievement or eminence ought to be the chief goal of gifted education." Subotnik et al. (2011).

Empowering Giftedness for High-Achievements-driven Trajectories through:

- developing capabilities for "multiplicative" manifestations of domain-specific, domain general, and human-centric abilities and skills (psychological & psychosocial)

- facilitating appropriate contexts including opportunities from within & without (OECD & Subotnik et al. (2011))

2.4 Governance Principles for Giftedness Development (OECD)

What are the principles of Governance needed for Giftedness Development in relation to an Education System?

- OECD promotes governance based on inclusion with special provision for the Gifted to meet their needs and to support fulfilling their aspirations

- OECD promotes incorporating Governance, Policies, Monitoring and Evaluation as an integral part of Giftedness Development within an Existing Education System for maximum efficacy

- OECD promotes the need to provide provisions for the Gifted to support their needs and requirements to realise full potential

Policies, Evaluation and Monitoring

Governance Principles for Giftedness Development

Provisions for the Gifted

Inclusion

2.5 Governance Strategic Directions for Giftedness Development– Adapted from OECD & & Subotnik et al. (2011)

What are the Governance strategic directions for Giftedness development to realise the full potential?

no.	Strategic Directions	Reference
1	Giftedness Development for Life-long High-Achieve-ments-driven Trajectories	OECD & Subotnik et al. (2011)
2	Holistic and Agentic based Development for High-Achievements-driven Trajectories of Giftedness (OECD & Subotnik et.al)	OECD & Subotnik et al. (2011)
3	Facilitates domain-centric High-Achievements-driven Developmental Trajectories	Subotnik et al. (2011)
4	Facilitates supporting domain-general and human-cen-tric abilities & skills	OECD & Subotnik et al. (2011)
5	Facilitates developmental trajectories for High-Achieve-ments-driven creativity and innovation (Subotnik et.al)	Subotnik et al. (2011)
6	Developing capabilities for multiplicative manifestations of domain-specific, domain general, and human-centric abilities and skills (psychological & psychosocial)	OECD

7	Facilitates appropriate contexts including opportunities from within and without, as well as identifying relevant stakeholders	OECD & Subotnik et al. (2011)
8	Enables an agency for life long commitment, development and understanding of the confluence effect of a multitude of biological & educational factors, human-centric factors (psychological, psychosocial etc.) and contextual factors on the development of giftedness	OECD & Subotnik et al. (2011)
9	Incorporates Governance and multiple, appropriate and on-going Monitoring, Assessment and Evaluation as an integral part of Giftedness Development over-time for maximum efficacy	OECD
10	Incorporates a supportive environment and contextual factors for development	OECD & Subotnik et al. (2011)
11	Incorporate flexible & agile teaching, learning, coaching and mentoring to maximise efficacy and contextual dependency	OECD
12	It is flexible to incorporate different giftedness development models	OECD & Subotnik et al. (2011)

CHAPTER 3

Benchmark-Framework for Giftedness Development at the University of Jeddah

NEW SAUDI
UNIVERSITY VISION

3.   Benchmarking Areas

This Benchmarking covers various aspects:

1. Governance, Development Assurance and Evaluation & Monitoring

2. Benchmarking Giftedness Development Stages & Performance Management

3. Benchmarking Theories of Gifted Education with respect to Holistic Threads & Governance Strategic Directions

4. Curriculum

5. Pedagogy

6. Counselling & Mentoring

7. Environment: Organisation of Learning time and space for gifted students

8. Identification of Gifted Students

9. Attraction of Gifted Students

Summary of Benchmarks for University of Jeddah Gifted Education:

1.   **15** Most Internationally Referenced Foundation Theories for Gifted Education

Year	Theoretical Models for Gifted Education
1976	Talent Search Model (Stanely Model) developed by Stanley, J. C.
1976	Enrichment triad model developed by Renzulli
1983	Tannenbaum's Star model developed by Tannenbaum
1986	Co-incidence model developed by Feldman
1998	Pyramid model developed by MacIntyre et. al.
2000	DMGT. Gagné developed by Gagné, F.
2003	Wisdom, Intelligence, Creativity Synthesized by Sternberg, R.
1985	Triarchic theory of intelligence developed by Sternberg, R. J.
1992	The Munich model of giftedness (MMGA) by Heller, K. A.
1993	Three-stratum theory by Carroll, J B
1999	The emergenic–epigenetic model by Simonton, D. K.
2002	The parallel Curriculum Model by Tomlinson, C. A., et. al.
2005	The scholarly productivity/artistry (SP/A) model by Subotnik RF
2005	The Actiotope Model of Giftedness by Ziegler, A.
2011	Talent-Development Mega-Model by Subotnik RF, et. al

2.   **3** International Organisation:

World Organisations
OECD (Organisation for Economic Co-operation and Development)

| World Economic Forum |
| European Union |

4. **6** International Institutions for Gifted Education

National & International Organisations
Mawhiba
Supporting & Advocating for Gifted Education (SAGE)
National Association For Gifted Children (NAGC) US
National Centre for Research on Gifted Education (NCRGE), Connecticut Uni, US
MENSA
International Gifted Consortium

6. **13** Renowned International Universities

World Renowned Universities
Massachusetts Institute of Technology
Carnegie Mellon University
John Hopkins University
University of Illinois Chicago - Urbana-Champaign
The University of Arizona
Northwestern University
University of California, Berkeley
University of Southern California
Texas State University
Imperial College
Kings College
University of Toronto
Waterloo University

Theoretical Models for Gifted Education

Year	Theoretical Models	Summaries are mainly from "Rethinking Giftedness and Gifted Education", Subotnik et al. (2011)
1976	Talent Search Model (Stanely)	The talent-search model -perhaps the best known- has been the basis for numerous outside-of-school programs as well as some in school programming. An important component of the model is domain-specific testing in key cognitive areas such as verbal, mathematical, and spatial reasoning using above-grade-level instruments that have sufficient ceiling to accurately measure the abilities of gifted children.
1976	Enrichment triad model (Renzulli)	It focuses mostly on developing talent in childhood and youth. In the enrichment-triad model, the variables that provide the basis for developing giftedness are above-average cognitive ability, creative ability, and task commitment. It divides the educational experiences into three stages: enriched activities in a number of domains (Stage 1), specific and advanced instruction in domains of interest (Stage 2), and experiences that foster creative productivity that may lead to adult career contributions to benefit society (Stage 3).
1983-2003	Tannenbaum's Star model	The Tannenbaum model present a theory explicating the talent development process from childhood to adulthood. It consists of five components, all of which must be in place to transform early potential into exceptional contributions in adulthood. The components include general ability, special or domain-specific ability, psychosocial abilities, external support, and chance.

Year	Theoretical Models	Summaries are mainly from "Rethinking Giftedness and Gifted Education", Subotnik et al. (2011)
1986	Co-incidence model	Feldman's (1986) co-incidence model is designed to explain why prodigies emerge in some domains and not others. Prodigies are individuals who perform at extremely high levels within a specific field at a young age, Feldman (1986). The model does not address adult eminence. Components of the co-incidence model include biological proclivity toward a domain, access to master teachers, family recognition and support, and deep passion for the domain. Although not mentioned explicitly in the model, the role played by chance is reflected in another dimension explicated by Feldman: the fact that only some domains are within the physical and conceptual reach of children. These are domains in which prodigies excel, such as chess, music performance, or some subsets of mathematics. Chance also plays a role in the convergence of all of the supporting factors that lead to prodigious outcomes.
1998	Pyramid model	Pyramid model begins with a foundation of abilities that come from genetic contributions and develop through training of psychological and cognitive skills. The direction of development is influenced by the values held by families, schools, communities, and cultures. These influences can afford or disallow opportunities to pursue talents and interests. According to Piirto, psychological attributes such as insight, passion, persistence, and creativity outweigh intelligence in determining the likelihood that one will gain recognition by one's peers for making something valuable and new. The following are the basic assumptions of the Piirto Pyramid: 1) Creativity is domain-based, 2) Environmental factors are extremely important in the development of talent, 3) Talent is an inborn propensity to perform in a recognized domain. Creativity and talent can be developed, 4) Creativity is not a general aptitude, but is dependent on the demands of the domain, and 5) Each domain of talent has its own rules and ways in which talent is developed. These rules are well-established and known to experts in the domain. Talent is recognized through certain predictive behaviours'.

Year	Theoretical Models	Summaries are mainly from "Rethinking Giftedness and Gifted Education", Subotnik et al. (2011)
1985	DMGT. (Gagné)	It emphasises the talent-development process. The main goal was to unveil the significant influence of one's environment and of non-intellective variables that transform genetically determined "gifts" into specific talents DMGT employed a similar set of variables as Tannenbaum (1983), but he placed them in a sequence framed in the transformation of natural gifts into high-level mastery or expertise (although not necessarily eminence) in a domain. In the Gagné model, intellectual, creative, socio-affective, and sensorimotor abilities serve as a foundation for the talent development process when those gifts are displayed at a very high level. Gagné also incorporates learning and practice into the mechanisms that drive talent development, with environmental and intrapersonal catalysts (such as temperament) serving as facilitators or inhibitors of the process. Gagné gives chance a prominent role in his model, as it affects the availability of learning opportunities and environmental supports, as well as whether one exhibits psychological traits conducive to motivation and persistence. The successful transformation of potential gifts to actualized talent is indicated by a level of accomplishment above the 90th percentile of same age peers with similar levels of investment in the field.
2003	Wisdom, Intelligence, Creativity Synthesized (WICS) - (Sternberg)	WICS stands for Wisdom, Intelligence and Creativity Synthesised, and constitutes an attempt to establish a potential common basis to identify gifted people, Sternberg (2003). In this model, giftedness is conceptualised as a synthesis of these three elements. According to Sternberg "wisdom, intelligence and creativity are sine qua non for the gifted leaders of the future. Without a synthesis of these three attributes, someone can be a decent contributor to society, and perhaps even a good one, but never a great one", Sternberg, R. (2003). Giftedness is the development of expertise, is associated with excellence relative to peers, and is rare within a given context. For example, among academically talented young adults, becoming a graduate student is not a sufficiently rare phenomenon to warrant the label "gifted" (unless this person emerges from extremely difficult circumstances). Giftedness also requires demonstration of productivity in valued domains.

Year	Theoretical Models	Summaries are mainly from "Rethinking Giftedness and Gifted Education", Subotnik et al. (2011)
1985	Triarchic theory of intelligence (Sternberg)	The theory proposes there are three distinct types of intelligence: practical, distinct, and analytical. It is comprised of three sub-theories, each of which relates to a specific kind of intelligence: the contextual sub-theory, which corresponds to practical intelligence, or the ability to successfully function in one's environment; the experiential sub-theory, which corresponds to creative intelligence, or the ability to deal with novel situations or issues; and the componential sub-theory, which corresponds to analytical intelligence, or the ability to solve problems.
1992	The Munich model of giftedness (MMGA) - (Heller)	Growing Expertise & Exceptional Achievements
1993	Three-stratum theory	The three-stratum theory is a theory of cognitive ability proposed by the American psychologist John Carroll in John Carroll (1993). It is based on a factor-analytic study of the correlation of individual-difference variables from data such as psychological tests, school marks and competence ratings from more than 460 datasets. These analyses suggested a three-layered model where each layer accounts for the variations in the correlations within the previous layer. The three layers (strata) are defined as representing narrow, broad, and general cognitive ability. The factors describe stable and observable differences among individuals in the performance of tasks. Carroll argues further that they are not mere artifacts of a mathematical process, but likely reflect physiological factors explaining differences in ability (e.g., nerve firing rates). This does not alter the effectiveness of factor scores in accounting for behavioural differences.
1999	The emergenic–epigenetic model (Simonton)	A gift may consist of multiple traits (multidimensional) that are inherited in a multiplicative (configurational), rather than an additive (simple) fashion. Second, the endowment may not appear all at once but, rather, will more likely unfold via an epigenetic process

Year	Theoretical Models	Summaries are mainly from "Rethinking Giftedness and Gifted Education", Subotnik et al. (2011)
2002	The parallel Curriculum Model (Tomlinson)	This model of curriculum development for gifted students and offers four parallel approaches that focus on ascending intellectual demand as students develop expertise in learning. The parallel curriculum's four approaches include: 1) the core or basic curriculum; 2) the curriculum of connections, which expands on the core curriculum's key concepts and principles; 3) the curriculum of practice, which encourages students to function in a discipline with increasing expertise; and 4) the curriculum of identity, which helps students see themselves in relation to the discipline.

Year	Theoretical Models	Summaries are mainly from "Rethinking Giftedness and Gifted Education", Subotnik et al. (2011)
2005	The scholarly productivity/artistry (SP/A) model	It builds directly on B. J. Bloom's (1985) work as well as on Sternberg's (1998) conception of transforming abilities into competencies and competencies into expertise. It reformulated Bloom's three stages to apply to the musical and mathematical domains. In the SP/A model, psychosocial skills serve as the catalysts of movement from one stage to another. Some psychosocial variables remain constant and others change. The age at which the first stage begins depends on the instrument or domain of talent. As development progresses, three variables remain constant: musicality (or in the case of mathematics, mathematical cast of mind; Krutetskii (1976), intrinsic motivation, and persistence. The first stage of SP/A is the transformation of abilities into competencies, a process mediated by parental support or pressure, the young person's willingness to learn, and sufficient extrinsic rewards. The second stage involves the transformation of competencies into expertise, with the following variables as mediators: parental support (not pressure), differentiation from one's teachers, recognition and opportunities to perform, and social skills such as collegiality. Two psychosocial variables are particularly important in Stage 2: self-promotion and learning how to "play the game." Additionally, many young people experience a loss of self-confidence at this stage when encountering other highly talented individuals for the first time and need assistance in restoring their self-confidence in order to proceed. The third stage of the model involves the transition from expertise to scholarly productivity and artistry. At this point, the talented individual focuses more exclusively on his or her strengths, is promoted through an agent or mentor, takes strategic professional risks, and according to gatekeepers interviewed by Subotnik and Jarvin, relies increasingly on psychosocial/political skills and charisma over technical skills.
2005	The Actiotope Model of Giftedness (Ziegler)	Excellent Action Repertoire. Not to categorize persons as gifted, but rather to identify a learning path for an individual that leads to excellence
2011	Talent-Development Mega-Model	Developmental process

3.1 Benchmarking Governance, Development Assurance, and Evaluation & Monitoring

3.1.1 Governance of Giftedness Education

Approaches of Governance of Giftedness Education: Current Practices (OECD)

1. Policies that explicitly name and identify gifted students. Naming and defining gifted students is regarded as a decisive move to prioritise excellence.

2. Policies that promote gifted education through an egalitarian approach. While some countries have clear legal definitions of giftedness or references in policy documents, others prefer a more egalitarian approach where all students can receive the same education. In contexts with national cultures of promoting egalitarianism, education policies, and particularly those addressing the needs of high ability students, are often geared towards avoiding academic interventions that could be regarded as forms of intellectual elitism.

3. Policies that integrate gifted education into mainstream policies (part of subgroup). Countries may also choose to incorporate gifted education into existing and perhaps less controversial educational agendas. Most commonly, the particular needs of gifted students may be integrated into policies concerning special education needs, a category traditionally reserved for students with learning difficulties and/or behavioural problems.

4. Policies that approach gifted education policy as a separate and specific policy measure. Such an approach can be considered as a sub-group of the first approach ("Policies that explicitly name and identify gifted students"). However, initiatives in this fourth category imply a more developed set of measures focused on giftedness.

5. Policies that define giftedness through achievements. Such an approach does not identify giftedness through traits but rather through the achievements of the students to specific challenges to demonstrate distinctive outcomes.

6. Policies that promotes holistic education as well as psychological coaching for the gifted at all levels. Such an approach puts well being and psychological factors at the same level of importance as giftedness traits.

Governance & Development Assurance - Policies Current Practice (OECD)		
Governance & Policies Types	Primary Development Strategy	Development Tools

Policies that explicitly name and identify gifted students	Special programs	Special programs
Policies that promote gifted education through an egalitarian approach	Acceleration & Differentiated Pedagogy	The same levels as normal students but with compaction of curriculum & flexible pedagogy to meet students needs (Educational Models)
Policies that integrate gifted education into mainstream policies	Enrichment	Multi-tier Enrichment (Educational Models)
Policies that approach gifted education policy as a separate and specific policy measure	Streamlined programs for the Gifted	Special Tracks/ Classes/
Policies that develop giftedness through achievements Subotnik et.al (2011)	Achievements-Driven Development	Multi-level High-Achievements-Driven Developmental Trajectory
Policies that develop giftedness through achievements Subotnik et.al (2011)	Achievements-Driven Development	Multi-level High-Achievements-Driven Developmental Trajectory

3.1.2 Development Evaluation & Monitoring of Giftedness Education (OECD)

1. The importance and challenges of evaluating gifted education programmes and policies

2. Monitoring and evaluating all the different giftedness developmental stages for high-achievements-driven trajectories

3. Generic Development cycle that can be Applied to every Trajectory Level

    a. Giftedness Development plans for each stage with clear criteria and performance measures for Achievements

b.   Implement plans and initiatives

c.   Evaluate and measure performance & achievements

d.   Improve performance
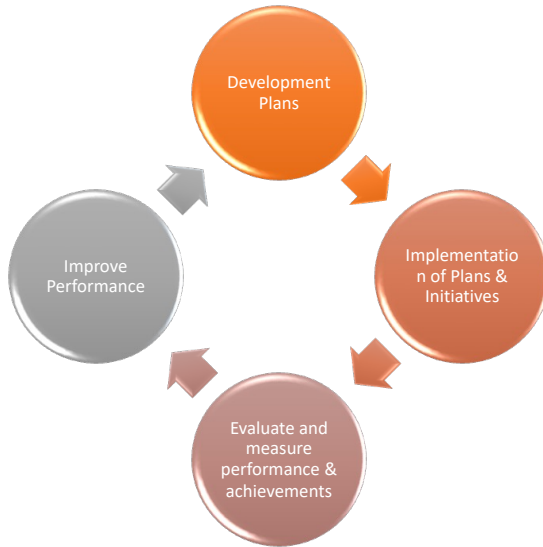
NEW SAUDI
UNIVERSITY VISION

3.2 Benchmarking Giftedness Development Stages & Performance Management

3.2.1 Theoretical Models for Gifted Education

Year	Theoretical Models for Gifted Education	Types of Development		
		Track	Personal	
1976	Talent Search Model (Stanely Model)		x	
1976	Enrichment triad model (Renzulli)	x		
1983	Tannenbaum's Star model		x	
1986	Co-incidence model		x	
1998	Pyramid model	x		
2000	DMGT. Gagné		x	
2003	Wisdom, Intelligence, Creativity Synthesized (WICS)		x	
1985	Triarchic theory of intelligence			
1992	The Munich model of giftedness (MMGA)			
1993	Three-stratum theory			
1999	The emergenic–epigenetic model (Simonton)			
2002	The parallel Curriculum Model (Tomlinson)			
2005	The scholarly productivity/artistry (SP/A) model	x		
2005	The Actiotope Model of Giftedness			
2011	Talent-Development Mega-Model	x	x	

	Holistic & Agentic Achievements-Driven Trajectory Levels of Giftedness Development: Adapted from OECD Transformative Competencies & from Subotnik et. al.(2011)			
	Acceleration & Curriculum Compactness	Ability & Competence Enrichment & Little c Creativity	"Distinctive Domain-centric Achievement (Big-C Creativity)"	Eminence-Driven Achievements
	x		x	
	x	x		
			x	x
			x	x
		x	x	x
			x	
			x	
		x		
		x	x	
		x	x	
		x	x	
		x	x	
		x	x	
		x	x	
	x	x	x	x

3.2.2 National & International Organisations

National & International Organisations	Types of Development		
	Track	Personal	
Mohiba, KSA	x		
Supporting & Advocating for Gifted Education (SAGE)	x		
National Association For Gifted Children (NAGC) US	x		
National Centre for Research on Gifted Education (NCRGE), Connecticut Uni, US	x		
MENSA	x		
International Gifted Consortium		x	

	Holistic & Agentic Achievements-Driven Trajectory Levels of Giftedness Development: Adapted from OECD Transformative Competencies & from Subotnik et. al. (2011)			
	Acceleration & Curriculum Compactness	Ability & Competence Enrichment & Little c Creativity	"Distinctive Domain-centric Achievement (Big-C Creativity)"	Eminence-Driven Achievements
		x	x	
	x		x	
	x		x	
		x		
	x			
				x

3.2.3 World Renowned Universities

World Renowned Universities	Types of Development		
	Track	Personal	
Massachusetts Institute of Technology	x	x	
Carnegie Mellon University	x		
John Hopkins University	x		
University of Illinois Chicago/Urbana-Champaign	x		
The University of Arizona	x		
Northwestern University	x		
University of California, Berkeley	x		
University of Southern California	x		
Texas State University	x		
Imperial College	x		
Kings College	x		
University of Toronto	x		
Waterloo University	x		

	Holistic & Agentic Achievements-Driven Trajectory Levels of Giftedness Development: Adapted from OECD Transformative Competencies & from Subotnik et. al. (2011)			
	Acceleration & Curriculum Compactness	Ability & Competence Enrichment & Little c Creativity	"Distinctive Domain-centric Achievement (Big-C Creativity)"	Eminence-Driven Achievements
	x		x	Pushing Boundaries
	x		x	Pushing Boundaries
	x	x	x	Pushing Boundaries
	x	x	x	Pushing Boundaries
		x	x	Pushing Boundaries
		x	x	Pushing Boundaries
		x	x	Pushing Boundaries
		x	x	Pushing Boundaries
		x	x	Pushing Boundaries
		x	x	Pushing Boundaries
		x	x	Pushing Boundaries
		x	x	Pushing Boundaries
		x	x	Pushing Boundaries

3.3 Benchmarking Theories of Gifted Education with respect to Holistic Threads & Governance Strategic Directions

3.3.1 Talent-Development Models

1. Models based on variables associated with talent development from childhood to adulthood

2. Three of the models represent efforts to identify variables associated with transforming potential into notable accomplishment. These models do not place the components into a trajectory but provide a framework for indicating how each variable on its own is necessary but not sufficient to maximize potential.

    a. Tannenbaum's talent-development model, Wisdom, Intelligence, Creativity Synthesized (WICS). Co-incidence model.

3. Models featuring talent trajectories

4. A second set of models takes components of talent development and places them into a sequence, although the sequence is not framed specifically as a developmental process.

    a. Enrichment triad model. Pyramid model. DMGT. Talent search.

5. Models that feature developmental changes over time

6. The second group of models we described suggests a trajectory for talent-development variables. The variables in the next set of models we present change in importance according to developmental stages.

    a. Bloom's & Subotnik et al (2011). models for achievements trajectories,

3.3.2 Categories of Theories of Gifted Education (OECD)

Categories	Definition	Theories
Domain General Models	These models focus on intelligence as a general ability that can be measured with IQ tests. According to this model, giftedness therefore equates to a higher-than-average general intelligence as defined and measured by an IQ test. It remains one of the most used across several countries (Terriot, 2018[7]).	"Tannenbaum's model Talent Search"

Domain Specific Models	"Sharing the conviction that equating gifted-ness to high general intelligence was not quite accurate, another wave of psychologists began to emphasise that individuals might be gifted in different ways. After the use of IQ tests, it remains nonethe-less one of the most common models along with Renzulli's Three-Ring-Definition."	"Co-incidence model Pyramid model The scholarly pro-ductivity/artistry (SP/A) model Enrichment triad model.(Renzulli)"
System Models	Giftedness corresponds to the confluence of several psychological processes. In other words, above-average ability is not sufficient in itself and the expression of giftedness further depends on other factors (e.g. psychological dynamics, one's environment etc.).	"Enrichment triad model.(Renzulli) WICS"
Develop-mental Models	These models mainly emerged in reaction against the dominance of the genetic determi-nants of giftedness. They take into account the environment and the trajectory of an individual as crucial for the expression of giftedness.	"DMGT Talent-Development Mega-Model"
Action, Goal & Challeng-es Driven Models	These models refutes the dominating view that gifts or talents are attributes of a person. For this reason, and in direct contrast to alterna-tive approaches to the identification of gifted-ness, the goal is not to categorize persons as gifted, but rather to identify a learning path for an individual that leads to excellence.	The Munich model of giftedness The Actiotope Model of Giftedness
Holistic & Multiplica-tive Models	"The holistic approach to inclusive educa-tion entails paying attention not just to the academic achievement of students, but also considering their well-being, including their sense of belonging and self-worth. This subsection focuses on the psychological and socio-emotional dimensions of well-being. It adopts a systemic view and takes into account developmental factors necessary to transform potential into high achievement. By doing so, it acknowledges that giftedness, or potential, in itself is insufficient and that other external and internal factors are required in order to support individuals in fully developing their abilities. In these models, a gift is assumed to consist of multiple traits (multidimensional) that are inherited in a multiplicative (configurational), rather than an additive (simple) fashion. Also, the endowment may not appear all at once but, rather, will more likely unfold via an epigenetic process."	"OECD Gifted Edu-cation The emergenic–epi-genetic model Rethinking Gift-edness and Gifted Education"

3.3.3 Main Elements of a "Holistic" Development of Giftedness (OECD)

Year	Theoretical Models for Gifted Education	Bases of Giftedness		
		Nature (Innate)	Nurture (Develop)	
1976	Talent Search Model (Stanely Model)	x		
1976	Enrichment triad model (Renzulli)	x		
1983	Tannenbaum's Star model	x		
1986	Co-incidence model	x		
1998	Pyramid model	x		
2000	DMGT. Gagné	x		
2003	Wisdom, Intelligence, Creativity Synthesized (WICS)		x	
1985	Triarchic theory of intelligence		x	
1992	The Munich model of giftedness (MMGA)		x	
1993	Three-stratum theory			
1999	The emergenic–epigenetic model (Simonton)	x	x	
2002	The parallel Curriculum Model (Tomlinson)			
2005	The scholarly productivity/artistry (SP/A) model		x	
2005	The Actiotope Model of Giftedness		x	
2011	Talent-Development Mega-Model	x	x	

- List of Main Elements of a "Holistic" Development of Giftedness (OECD)

1.   Domain-Specific
2.   Domain-General
3.   Educational Perspective of Development
4.   Psychological & Human-centric Perspective of Development
5.   Outside of Education System
6.   Within Education System
7.   Facilitating Environment
8.   Opportunities from Within & Without
9.   High-Achievements Driven
10.   Creativity
11.   Additive Development (Essence)
12.   "Multiplicative Development (Essence)"
13.   Flexibility According to Potential & Needs
14.   External Support
15.   Challenging and supportive teaching, learning, and mentoring

	Main Elements of a "Holistic" Development of Giftedness (OECD)														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
	X		X		X						X				X
	X		X							X	X		X	X	X
	X	X	X	X	X		X				X			X	X
	X		X		X		X				X				X
	X		X		X		X			X	X			X	X
	X		X	X	X	X	X			X	X			X	X
	X	X	X		X	X	X			X	X				X
		X	X				X			X	X				X
	X	X	X		X	X	X	X		X	X			X	X
	X	X	X	X		X	X			X	X				X
	X	X	X	X	X	X	X			X	X	X			
	X	X	X			X	X				X			X	X
	X	X	X			X	X		X	X	X		X	X	X
	X	X	X	X		X					X	X		X	X
	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

3.3.4 Governance Strategic Directions for Giftedness Development– Adapted from OECD and Subotnik et al.

Year	Theoretical Models for Gifted Education		
1976	Talent Search Model (Stanely Model) developed by Stanley, J. C.		
1976	Enrichment triad model developed by Renzulli		
1983	Tannenbaum's Star model developed by Tannenbaum		
1986	Co-incidence model developed by Feldman		
1998	Pyramid model developed by MacIntyre et. al.		
2000	DMGT. Gagné developed by Gagné, F.		
2003	Wisdom, Intelligence, Creativity Synthesized by Sternberg, R.		
1985	Triarchic theory of intelligence developed by Sternberg, R. J.		
1992	The Munich model of giftedness (MMGA) by Heller, K. A.		
1993	Three-stratum theory by Carroll, J B		
1999	The emergenic–epigenetic model by Simonton, D. K.		
2002	The parallel Curriculum Model by Tomlinson, C. A., et. al.		
2005	The scholarly productivity/artistry (SP/A) model by Subotnik RF		
2005	The Actiotope Model of Giftedness by Ziegler, A.		
2011	Talent-Development Mega-Model by Subotnik RF, et. al		

- List of Governance Strategic Directions for Giftedness Development

1. Giftedness Development for Life-long High-Achievements-driven Trajectories

2. Holistic and Agentic based Development for High-Achievements-driven Trajectories of Giftedness

3. Facilitates domain-centric High-Achievements-driven Developmental Trajectories

4. Facilitates supporting domain-general and human-centric abilities & skills

5. Facilitates developmental trajectories for High-Achievements-driven creativity and innovation (Subotnik et.al)

6. Developing capabilities for multiplicative manifestations of domain-specific, domain general, and human-centric abilities and skills (psychological & psychosocial)

7. Facilitates appropriate contexts including opportunities from within and without, as well as identifying relevant stakeholders

8. Enables an agency for life long commitment, development and understanding of the

	Governance Strategic Directions for Giftedness Development– Adapted from OECD and Subotnik et al. (2011)											
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**
											X	
											X	
				X							X	
										X	X	
										X	X	
										X	X	
				X						X	X	
				X						X	X	
				X						X	X	
				X						X	X	
				X		X				X		
				X						X	X	
	X	X	X	X	X					X	X	
				X		X					X	
	X	X	X	X	X	X	X	X	X	X	X	X

confluence effect of a multitude of biological & educational factors, human-centric factors and contextual factors on the development of giftedness

9. Incorporates Governance and multiple, appropriate and on-going Monitoring, Assessment and Evaluation as an integral part of Giftedness Development over-time for maximum efficacy

10. Incorporates a supportive environment and contextual factors for development

11. Incorporate flexible & agile teaching, learning, coaching and mentoring to maximise efficacy and contextual dependency

12. It is flexible to incorporate different giftedness development models

3.3.5 Main Elements of a "Holistic" Development of Giftedness (OECD)

World Organisations	Bases of Giftedness		
	Nature (Innate)	Nurture (Develop)	
OECD		x	
WE Forum		x	
European Union		x	

National & International Organisations	Bases of Giftedness		
	Nature (Innate)	Nurture (Develop)	
Mohiba, KSA	NC	NC	
Supporting & Advocating for Gifted Education (SAGE)			
National Association For Gifted Children (NAGC) US		x	
National Centre for Research on Gifted Education (NCRGE), Connecticut Uni, US		x	
MENSA		x	
International Gifted Consortium	x		

- List of Main Elements of a "Holistic" Development of Giftedness (OECD)

1. Domain-Specific
2. Domain-General
3. Educational Perspective of Development
4. Psychological & Human-centric Perspective of Development
5. Outside of Education System
6. Within Education System
7. Facilitating Environment
8. Opportunities from Within & Without
9. High-Achievements Driven
10. Creativity
11. Additive Development (Essence)
12. "Multiplicative Development (Essence)"
13. Flexibility According to Potential & Needs
14. External Support
15. Challenging and supportive teaching, learning, and mentoring

	Main Elements of a "Holistic" Development of Giftedness (OECD)														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
	x	x	x	x	x	x	x	x	x	x	x		x	x	x
		x			x	x	x	x		x					x
		x			x	x	x			x	x		x	x	x

	Main Elements of a "Holistic" Development of Giftedness (OECD)														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
	NC	x								x					x
			x	x		x	x	x		x			x	x	x
			x	x	x	x	x			x			x	x	x
			x	x	x	x	x			x	x			x	x
			x	x		x	x			x	x		x		x
	x	x	x			x	x		x	x			x		x

NC   Not Clear

3.3.6 Governance Strategic Directions for Giftedness Development– Adapted from OECD and Subotnik et al.

World Organisations	
OECD	
WE Forum	
European Union	

National & International Organisations	
Mohiba, KSA	
Supporting & Advocating for Gifted Education (SAGE)	
National Association For Gifted Children (NAGC) US	
National Centre for Research on Gifted Education (NCRGE), Connecticut Uni, US	
MENSA	
International Gifted Consortium	

- List of Governance Strategic Directions for Giftedness Development

1. Giftedness Development for Life-long High-Achievements-driven Trajectories
2. Holistic and Agentic based Development for High-Achievements-driven Trajectories of Giftedness
3. Facilitates domain-centric High-Achievements-driven Developmental Trajectories
4. Facilitates supporting domain-general and human-centric abilities & skills
5. Facilitates developmental trajectories for High-Achievements-driven creativity and innovation (Subotnik et.al)
6. Developing capabilities for multiplicative manifestations of domain-specific, domain general, and human-centric abilities and skills (psychological & psychosocial)
7. Facilitates appropriate contexts including opportunities from within and without, as well as identifying relevant stakeholders
8. Enables an agency for life long commitment, development and understanding of the

Governance Strategic Directions for Giftedness Development– Adapted from OECD & & Subotnik et al. (2011)											
1	2	3	4	5	6	7	8	9	10	11	12
x	x	x	x	x	x	x	x	x	x	x	x
x						x			x	x	
x		x	x	x		x		x	x	x	

Governance Strategic Directions for Giftedness Development– Adapted from OECD and Subotnik et al. (2011)											
1	2	3	4	5	6	7	8	9	10	11	12
NC			x	NC		x		NC	x	x	x
x			x			x		x	x	x	x
						x		x	x	x	x
						x		x	x	x	x
		x	x			x		x	x	x	x
x		x	x	x		x	x	x	x	x	x

confluence effect of a multitude of biological & educational factors, human-centric factors and contextual factors on the development of giftedness

9. Incorporates Governance and multiple, appropriate and on-going Monitoring, Assessment and Evaluation as an integral part of Giftedness Development over-time for maximum efficacy

10. Incorporates a supportive environment and contextual factors for development

11. Incorporate flexible & agile teaching, learning, coaching and mentoring to maximise efficacy and contextual dependency

12. It is flexible to incorporate different giftedness development models

3.3.7 Main Elements of a "Holistic" Development of Giftedness (OECD)

World Renowned Universities	Bases of Giftedness		
	Nature (In-nate)	Nurture (De-velop)	
Massachusetts Institute of Technology	x		
Carnegie Mellon University	x		
John Hopkins University		x	
University of Illinois Chicago/Urbana-Champaign		x	
The University of Arizona		x	
Northwestern University	x		
University of California, Berkeley		x	
University of Southern California		x	
Texas State University		x	
Imperial College		x	
Kings College		x	
University of Toronto		x	
Waterloo University		x	

- List of Main Elements of a "Holistic" Development of Giftedness (OECD)

1. Domain-Specific
2. Domain-General
3. Educational Perspective of Development
4. Psychological & Human-centric Perspective of Development
5. Outside of Education System
6. Within Education System
7. Facilitating Environment
8. Opportunities from Within & Without
9. High-Achievements Driven
10. Creativity
11. Additive Development (Essence)
12. "Multiplicative Development (Essence)"
13. Flexibility According to Potential & Needs
14. External Support
15. Challenging and supportive teaching, learning, and mentoring

	Main Elements of a "Holistic" Development of Giftedness (OECD)														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

3.3.8 Governance Strategic Directions for Giftedness Development– Adapted from OECD and Subotnik et al.

World Renowned Universities		
Massachusetts Institute of Technology		
Carnegie Mellon University		
John Hopkins University		
University of Illinois Chicago/ Urbana-Champaign		
The University of Arizona		
Northwestern University		
University of California, Berkeley		
University of Southern California		
Texas State University		
Imperial College		
Kings College		
University of Toronto		
Waterloo University		

- List of Governance Strategic Directions for Giftedness Development

1. Giftedness Development for Life-long High-Achievements-driven Trajectories

2. Holistic and Agentic based Development for High-Achievements-driven Trajectories of Giftedness

3. Facilitates domain-centric High-Achievements-driven Developmental Trajectories

4. Facilitates supporting domain-general and human-centric abilities & skills

5. Facilitates developmental trajectories for High-Achievements-driven creativity and innovation (Subotnik et.al)

6. Developing capabilities for multiplicative manifestations of domain-specific, domain general, and human-centric abilities and skills (psychological & psychosocial)

7. Facilitates appropriate contexts including opportunities from within and without, as well as identifying relevant stakeholders

8. Enables an agency for life long commitment, development and understanding of the

(PB) Pushing Boundaries,(GL) Aim for Global Leadership,(GC)   Aim for Global Competitiveness.

Governance Strategic Directions for Giftedness Development– Adapted from OECD and Subotnik et al. (2011)											
1	2	3	4	5	6	7	8	9	10	11	12
x		x	x	x	PB	x	PB	GL	x	x	x
x		x	x	x	PB	x	PB	GL	x	x	x
x		x	x	x	PB	x	PB	GC	x	x	x
x		x	x	x	PB	x	PB	GC	x	x	x
x		x	x	x	PB	x	PB	GC	x	x	x
x		x	x	x	PB	x	PB	GL	x	x	x
x		x	x	x	PB	x	PB	GC	x	x	x
x		x	x	x	PB	x	PB	GC	x	x	x
x		x	x	x	PB	x	PB	GC	x	x	x
x		x	x	x	PB	x	PB	GC	x	x	x
x		x	x	x	PB	x	PB	GC	x	x	x
x		x	x	x	PB	x	PB	GC	x	x	x
x		x	x	x	PB	x	PB	GC	x	x	x

confluence effect of a multitude of biological & educational factors, human-centric factors and contextual factors on the development of giftedness

9. Incorporates Governance and multiple, appropriate and on-going Monitoring, Assessment and Evaluation as an integral part of Giftedness Development over-time for maximum efficacy

10. Incorporates a supportive environment and contextual factors for development

11. Incorporate flexible & agile teaching, learning, coaching and mentoring to maximise efficacy and contextual dependency

12. It is flexible to incorporate different giftedness development models

3.4   Benchmarking Curriculum

3.4.1   OECD Learning Framework 2030: Design Principles

Curriculum change assumes that education is an ecosystem with many stakeholders. Students, teachers, school leaders, parents, national and local policy makers, academic experts, and social and business partners have worked as one to develop this project.

World Renowned Universities	Process Design Principles
Learner agency: Student centered	
Rigour: Challenging with deep thinking and reflection	Teacher agency: Empower teachers
Focus: depth and quality of students' learning	Authenticity: Link to real world issues
Coherence: Progression of knowledge & skills	Inter-relation: In-between topics
Alignment: Curriculum & assessment	Flexibility: In curriculum
Transferability: knowledge & skills in different contexts	Engagement: Stakeholders
Choice: Cater for learners' interests	

3.4.2   Curriculum Flexibility

Emphasis on the adaptation of the curriculum to respond to the learning needs of gifted students

- The main strategies are used in order to support these students in reaching their full potential: acceleration, enrichment.

- Acceleration and compactness adopts a "vertical" extension of the curriculum, and involves the early introduction of content and skills or a quickening of the pace of delivery and response

- Enrichment is considered as a "horizontal" extension of the curriculum, where learning activities provide depth and breadth in accordance to the child's abilities and needs,

- Flexible curriculum and self development to allow the gifted to have a indi-

vidualised curriculum that meets their needs, interests and goals for self actualisation

	Enrichment	Process Design Principles
Advantages	• May be easier for the administration because it does not require class skipping; • The student mostly stays with peers of her/his age; • Seems to favour a positive socio-emotional impact; • Has a positive impact on gifted students' motivation; • Flexibility that makes it easier to adapt to students' needs.	• Allows the student identified as gifted to have a curriculum adapted to his/her ability and be challenged; • Has a significant positive impact onindividual academic performance; • Can have a positive impact on motivation.
Disadvantages	• Requires significant knowledge of giftedness from teachers and other • educators, therefore it implies important investment in capacity building for educational staff.	• Mere class skipping may be insufficient for some gifted students; • It is estimated that it does not have a positive impact on students' socioemotional well-being (being among older peers can create isolation situation for example); • According to teachers, it has more negative outcomes than positive ones (e.g. negative impact on the socioemotional dimension of well-being) which makes it increasingly controversial among parents and educational staff;

3.5   Benchmarking Pedagogy

3.5.1   Differentiated Pedagogy Strategies (OECD)

The diversity of student needs can be addressed through various strategies in the class-room. In order to respond to diversity in the classroom, gifted education programmes often rely on a differentiated pedagogy, which can also be merely called differentiation, ANEIS (2017); Eyre (2012). This notion refers to educational strategies used by teachers and other educational staff based on a flexible education which adapts to the personal students' individual cognitive and psycho-social characteristics. Differentiation "means building instruction from students' passions and capacities, helping students person-alise their learning and assessments in ways that foster engagement and talents, and encouraging students to be ingenious", OECD (2018).

Many school-level approaches to gifted programming involve differentiation. Such an approach expects teachers to recognise the different learning abilities of students and to respond appropriately according to students' individual needs Lawrence-Brown (2004). Moreover, differentiation is regarded as essential both to enhance the academic development of gifted students and to prevent the development of interpersonal chal-lenges for gifted children, Beljan et al. (2006). The final goal corresponds to "ensuring the holistic development of students' identity", Bakar (2016). Regarding the specificity induced by giftedness, such strategies must go beyond traditional personalised ap-proaches to teaching in order to support gifted learners in reaching their full potential.

Differential pedagogy seems to be highly efficient when coupled with curriculum en-richment strategies. A study undertaken in the United States showed that less struc-tured teaching methods paired with enrichment models tend to raise performance among gifted children significantly. The research highlighted that a rich curriculum and responsive instruction adapted to gifted learners might an effective strategy to enhance these students' learning outcomes at different levels of education, Callahan et al. (2015).

In countries who see the inclusive education approach as one that allows teaching all learners in the regular classroom while responding to their diverse needs, there tend to be an increasing emphasis on differentiated pedagogies. The adaptation of teaching and learning methods to respond to the specific needs of gifted learners within the classroom is mentioned in some countries' legal and policy frameworks. France, in its Education Act, refers to gifted students (élèves à haut potentiel, previously élèves intel-lectuellement précoces) and requires that special measures and equipment are provid-ed to support these students in reaching their full potential, DGESCO (2019). Likewise a 2013 White Paper on promoting talent and excellence published in Austria emphasises the need for the design of personalised and differentiated learning processes to boost performance not only in gifted students, but also in all learners, Weilguny et al. (2013).

Though some academics argue that children perform better with more structured and rigid teaching methods, a growing body of research has shown that higher autonomy, participation and individualised teaching methods can be highly beneficial for numer-

ous students, and particularly for gifted individuals, Heller-Sahlgren (2018).

3.6 Benchmarking Counselling & Mentoring

3.6.1 Counselling the gifted: education transition and career guidance for gifted individuals (OECD)

School counsellors, gifted-education and classroom teachers and other actors such as university-based counselling centres with a focus on gifted individuals can provide appropriate services to support gifted students beyond academic achievement, Peterson (2006). If properly prepared, these actors can have a central role in supporting gifted students progressing through the education systems and make decisions about their professional career.

First, well-designed transition programmes29 to orient students and help them progress through and after the education system are essential elements of inclusive education systems. Moreover, comparative studies, while highlighting the need to improve the existence, diversity, relevance and transparency of different pathways, advise the design of specific support to young people who could be left behind so that all students advance to further education and employment, OECD (2012).

In the specific case of gifted students, research has identified that transition programmes can be highly beneficial if they take into account and adapt to these students' needs. Existing research suggests that these students may adopt different decision processes and require special support in relation to counselling and guidance that take into account their specificities such as asynchronous development and motivation-related issues, Jung (2017); Kerr and Sodano (2003); Wood (2010). As an example, Benson (2009) observed that dropouts were higher where strategies aiming at supporting gifted students transition throughout the education system were fewer. His study also highlighted that peer-to-peer mentoring can also be efficient in supporting such transition.

Furthermore, several authors have stressed the importance of giving attention to transitions beyond compulsory education for gifted students. For example, adhering to Gagné's model, Greene (2005) for example maintains that career counselling is a necessary aspect of talent development and that it must be infused into educational and socioemotional support as part of a life-long process.

Mendaglio (2013), focused on gifted students' transition to university. He found that while gifted students face similar challenges to the rest of the average student population, they tend to confront a different set of psychological demands due to giftedness itself. More specifically, they are likely to face a higher level of anxiety and loss of confidence, which can result in underachievement, loss of motivation and largely affect aspirations for their future.

Mendaglio nonetheless acknowledges limitations due to the generalised absence of consistent research and data in this area. Likewise, Chen and Wong (2013) point out challenges that might be specific to gifted students when making career choices, such as a narrow-mindedness regarding the domains of interest and a tendency to perfectionism that can impede them from choosing certain career paths because of an acute fear of failure or to respond to family and educators' expectations.

Despite these considerations, there seems to be a generalised lack of practices and empirical research on the benefit of counselling to support gifted students progressing within the education system and to orient them with their career choices, Wood (2010); Chen and Wong, (2013); Smith and Wood (2018); Mendaglio (2013). While there has been significant progress in understanding how adolescents make decisions about to their future career, there is still little research on this topic regarding students with higher-than-average abilities.

To tackle this issue, the literature further emphasises the need to focus on the necessity to include giftedness in school staff education and training. It first stresses a need to strengthen the education and training of school counsellors to foster practices that respond to student diversity, which might equip them to better respond to gifted students' needs in terms of career orientation. This may particularly benefit students for whom giftedness intersects with other dimensions such as gender, gender identity, sexual orientation and ethnic background, confronting them to specific challenges, Smith and Wood (2018). Second, there might also be a need to strengthen teachers' initial education and professional development since teachers can have a decisive role as mediators, even mentors, regarding gifted students' career decision making, Watters (2010); Greene (2005).

3.6.2 Mentoring strategies to support gifted learner's academic and well-being outcomes (OECD)

1. Teacher-student mentoring. One of the most common and informal forms of mentoring is the relationship between a teacher and his/her students as the latter often look to their teachers for advice, direction, and assistance in learning, Bisland (2001). This kind of mentoring can be found at every level of schooling and university, mostly for newly arrived students.

2. Mentoring with an older student. In this type of mentoring, a younger gifted student talks about career decision and transition with an older student. It seems to be a highly efficient strategy to reduce gifted student's anxiousness in relation to transition, Benson (2009). Moreover, it proved to have a particularly positive effect on gifted students from a disadvantaged background and gifted minority students who can be more isolated than others, Bisland (2001); Centre for Education Statistics and Evaluation (2019).

3. Student-expert mentoring. This strategy might involve a university expert or a practitioner and take the shape of a more formal programme. It is often an academic expert mentoring a secondary or high school gifted student in

a specific field. For instance, the Malaysian PERMATApintar National Gifted Centre proposes a mentorship programme that focuses on developing students' capacity to undertake academic research by pairing them with a university professor who guides them in research in their field of interest, Bakar (2017). The importance of civil society organisations and networks for building capacity and promoting collaboration to advance gifted and talented education

3.7 Environment: Organisation of learning time and space for gifted students (OECD)

3.7.1 Environment: Organisation of learning time and space for gifted students (OECD)

Within the literature, there is a debate about what organisation of learning in regular schools could cater to the academic and general well-being of gifted learners. This debate is persistent because of the lack of rigorous empirical research about what approaches or models work best and is further compounded by national differences in gifted education. Approaches can fall into two categories:

1.   separate, or special, classes, also referred to as grouping strategies and

2.   integrated, or mixed-ability classes.

Some policy makers and practitioners advocate for separate class times for gifted students. This follows from the aforementioned idea that high-ability learners in regular classrooms are left unchallenged and unmotivated, which can be a major contribution to their underachievement, Laine and Tirri (2017); Moon (2009). As such, responses to these issues include accelerated isolationist or "pull-out" methods in which selected students are taken out of their regular classrooms for specified amounts of time for d/ enrichment learning.

In such settings, students of similar ability or achievement levels learn together. A significant body of research supports the separate classroom method, which enables gifted learners to work with similar ability peers and receive more challenging and appropriate learning than they may receive in a mixed-ability class. It might lead to greater academic achievement and, if time in mix-ability classrooms is also promoted, it can have a positive effect on the social development of students, Reis and Renzulli (2010); Rogers (2007); Sahlgren (2018); and Centre for Education Statistics and Evaluation (2019). More generally, available research highlights that grouping strategies can help improve all students' academic performance if it used with appropriate curriculum and teaching/learning strategies in the classroom, Gentry (2014).

To be a viable option, separate classroom approaches must bring together students

for a substantial amount of time during the school week, Reis and Renzulli (2010); Rogers (2007). VanTassel-Baska (2017), for example, maintains that a minimum of two hours per week of group learning with other gifted students of equal or higher ability is essential in ensuring the authentic learning of the gifted. Renzulli (1987) explains that pull-out programmes work particularly well when the regular curriculum undergoes systematic modifications, and are better suited for students at the primary school level than the secondary school level.

Using My Class Activities as an instrument to investigate the perceptions of gifted primary students in Korea, Yang, Gentry and Choi (2012) were able to determine that gifted students who attended pull-out programmes experienced higher levels of interest, enjoyment and challenge from these programmes than they did from their regular classrooms. An acknowledged limitation of this study, however, was the lack of detailed information about the students' demographics, and thus the inability to determine whether, for example, gifted students from low economic backgrounds have access to such pull-out programmes.

However, ability grouping strategies for gifted students are however subject to significant controversy among educators and academics, primarily because of aforementioned concerns around elitism and gaps or inconsistencies in recent research, Centre for Education Statistics and Evaluation (2019). Gentry (2014) mentions for example that "conflicting results, conclusions, and opinions exist regarding ability grouping. The practice has been both touted as an effective means for promoting student achievement and decried as an evil force contributing to the downfall of America's schools", Gentry (2014). Besides these concerns, the authors also identified the potential "Big-Fish-Little-Pond effect." Reis, S. (2016) suggest a careful use of this classroom strategy because research indicates that academic self-concept is negatively affected when students of high ability are too often grouped in homogenous high-ability classes, rather than mixed-ability classes, Mendaglio (2013). However, the available literature on the impact of such strategies on gifted students' socio-emotional well-being is still significantly scarce and provides contradictory results, Centre for Education Statistics and Evaluation (2019).

Ability grouping for gifted students can also occur within the regular (mix-ability) classroom. When using within class grouping, gifted students are grouped together for specific tasks, subject or activity. In such settings, students identified as gifted may be grouped and receive differentiated instruction while being included in the "mainstream" classroom. Steenbergen-Hu, Makel and Olszewski-Kubilius (2016), for example, found that both specific ability grouped programmes and within-class grouping for gifted students have a moderate, though statistically significant effect on their academic achievement.

It is, overall, regarded that grouping gifted learners based on ability through approaches such as cluster groupings, pull-out classes and special classes can be very effective when paired with a differentiated curriculum, VanTassel-Baska (2017). Differentiated learning and specialist-trained teachers is essential to ensure the efficiency ability grouping strategies that may otherwise have negative effects, Centre for Education Statistics and Evaluation (2019). Furthermore, an approach increasingly emphasised in the literature is "cluster grouping". Although definitions may vary, in the cluster grouping model, students are purposefully placed in classrooms to create a balance of ability and achievement levels in all classes, Brulles, J. Peters and Saunders (2012).

Despite variations in its definitions and applications as reflected in particular models such as the School-wide Cluster Grouping Model (SCGM) and Total School Cluster Grouping (TSCG); Gentry (2014) stated that this method retains three key elements: 1) groups of students identified as gifted are placed in classrooms consisting of students with different levels of achievement; 2) teachers differentiate the curriculum and instruction for the high-achieving students in the clustered classroom; and 3) successful teachers have an interest or background in working with gifted students.

There has been increasing attention to the use of cluster grouping, mainly because of the development of the inclusive education paradigm, as well as other factors such as budget cuts, and heterogeneous grouping policies that have eliminated programs for gifted students (Ibid.). Defendants of this approach emphasise that while it allows for students of different abilities to be in the same classroom, it also makes targeting differentiated pedagogies easier for teachers and can therefore help increase all students' achievement (Brulles, J. Peters and Saunders, 2012[177]).

Though cluster grouping aims to realise the potential of gifted students, their integration with students of mixed abilities is such that heterogeneous classes become the norm. Such a strategy allows all students to have the opportunity to work according to their own challenges through the aid of teachers trained to create differentiated learning environments, Brulles and Winebrenner (2018).

While the available research emphasises the positive effect of ability grouping on gifted students' performance, little seems to be available on the effectiveness of specific differentiation models on learning outcomes in mixed-ability setting, Centre for Education Statistics and Evaluation (2019). Teachers can also choose to resort to the diversification of teaching materials and carefully designed cooperative learning techniques to encourage students with different abilities to work together and support each other. This can enhance all students' interests and potential while keeping them included in the same classroom as other students.

3.8   Benchmarking Identifying Gifted Students

3.8.1   Identifying Gifted Students (OECD)

"In terms of identification processes in the field, the literature points out the existence of several and non-exclusive identification methods in educational policies and practices, Sekowski and Łubianka (2015):

1. Psychological and pedo-psychological diagnosis, conducted by a psychologist and specialised educators "through complex intelligence quotient assessments, administered by professional psychologists, who provide comprehensive reports on the finite nuances of cognitive performance", Parekh S. Brown and Robson (2018).

2. Ability tests, most of which focus on the academic performance, although some look at the way students learn and/or their involvement in a specific domain, Cao, Jung and Lee (2017).

3. Teacher nominations, which are thought to be one of the most reliable methods as teachers spend a large amount of time with her/his students and can have an extended pedagogical experience.

4. Parental nominations, which constitutes a subjective tool in the identification process and is usually not used alone.

5. Peer opinion, also not used alone, can give a quick and adequate idea of what students are the best in a certain a domain.

6. Self-identification, consisting in letting students participate in out-of-school educational, scientific, artistic, creative etc. activities and programmes in order to identify their motivation and potential.

Usually, methods 3 to 5, and in some cases method 2, are used for an initial screening in order to identify who may be eligible for a gifted education programme.

Method 1, and often method 2, are used in order to confirm an initial assessment and confirm a child or adolescent's participation in such a programme.

Most countries use several of these methods at the same time, such as France which primarily relies on both teacher and parents' nominations, Sekowski and Łubianka (2015), following which a school board decides whether or not the student should benefit from special provision.

It should nonetheless be noted that "while there is consensus that identification of gifted and talented pupils must be by multiple sources, there is still lack of clarity and understanding about the relative advantages and disadvantages of different identification procedures, White, Fletcher-Campbell and Ridley (2003)."

3.8.2

NEW SAUDI
UNIVERSITY VISION

3.8.3 Theoretical Models for Gifted Identification

Year	Theoretical Models for Gifted Education		
1976	Talent Search Model (Stanely Model)		
1976	Enrichment triad model (Renzulli)		
1983	Tannenbaum's Star model		
1986	Co-incidence model		
1998	Pyramid model		
2000	DMGT. Gagné		
2003	Wisdom, Intelligence, Creativity Synthesized (WICS)		
1985	Triarchic theory of intelligence		
1992	The Munich model of giftedness (MMGA)		
1993	Three-stratum theory		
1999	The emergenic–epigenetic model (Simonton)		
2002	The parallel Curriculum Model (Tomlinson)		
2005	The scholarly productivity/artistry (SP/A) model		
2005	The Actiotope Model of Giftedness		
2011	Talent-Development Mega-Model		

	Identification				
	Mainly Those Who Show Ability Early	**Quantitative Testing**	**Qualitative Assessment**	**Recommended (Formal Observation & Evaluation Programs)**	**Allow Multi-Entry Paths**
				x	x
		x	x	x	x
	x		x		
	x		x		
		x	x		x
		x	x	x	x
	x		x	x	x
	x		x	x	x
				x	x
	x	x	x	x	x
		x	x	x	x
	x	x	x	x	x
		x	x	x	x
		x	x	x	x
	x	x	x	x	x

3.8.4 World Organisations Identification

World Organisations		
OECD		
WE Forum		
European Union		

3.8.5 National & International Organisations Identification

National & International Organisations		
Moheba, KSA		
Supporting & Advocating for Gifted Education (SAGE)		
National Association For Gifted Children (NAGC), US		
National Centre for Research on Gifted Education (NCRGE), Connecticut Uni, US		
MENSA		
International Gifted Consortium		

	Identification				
	Mainly Those Who Show Ability Early	Quantitative Testing	Qualitative Assessment	Recommended (Formal Observation & Evaluation Programs)	Allow Multi-Entry Paths
					x
					x
					x

	Identification				
	Mainly Those Who Show Ability Early	Quantitative Testing	Qualitative Assessment	Recommended (Formal Observation & Evaluation Programs)	Allow Multi-Entry Paths
		x		x	x
				x	
				x	x
				x	x
		x			
			x		x

3.8.6 National & International Organisations Identification

World Renowned Universities	
Massachusetts Institute of Technology	
Carnegie Mellon University	
John Hopkins University	
University of Illinois Chicago/ Urbana-Champaign	
The University of Arizona	
Northwestern University	
University of California, Berkeley	
University of Southern California	
Texas State University	
Imperial College	
Kings College	
University of Toronto	
Waterloo University	

		Identification			
	Mainly Those Who Show Ability Early	Quantitative Testing	Qualitative Assessment	Recommended (Formal Observation & Evaluation Programs)	Allow Multi-Entry Paths
		x		x	x
		x		x	x
		x		x	x
		x		x	x
		x		x	x
		x		x	x
		x		x	x
		x		x	x
		x		x	x
		x		x	x
		x		x	x
		x		x	x
		x		x	x

3.9 Attracting Gifted Students

World Renowned Universities	
Massachusetts Institute of Technology	
Carnegie Mellon University	
John Hopkins University	
University of Illinois Chicago/ Urbana-Champaign	
The University of Arizona	
Northwestern University	
University of California, Berkeley	
University of Southern California	
Texas State University	
Imperial College	
Kings College	
University of Toronto	
Waterloo University	

	Attraction					
	Reputation			Attraction Program		
	University Ranking	Gifted Students Achievements	Gifted Student Satisfaction	Acceleration	Early Registration	Giftedness Programs
	X	X	X	X	X	X
	X	X	X		X	X
		X	X	X		
	X	X	X			X
		X	X	X		X
		X	X	X	X	X
	X	X	X	X		X
	X	X	X	X	X	X
		X	X	X	X	X
	X	X	X			X
	X	X	X			X
	X	X	X	X		X
		X	X	X	X	X

CHAPTER 4

Talent Philosophy at the University of Jeddah

NEW SAUDI
UNIVERSITY VISION

4. Giftedness at the University of Jeddah

A. Philosophical underpinning, overall goals & mission for Giftedness Development

B. Impact, Pillars, Enablers, Risks & Opportunities

C. Governance Strategic Directions

D. Operational principles

E. Operational Framework: from Strategic Directions to Programs

4.1 Philosophical Underpinnings, Overall Goal & Mission to Nurture Gifted Students at UJ

4.1.1 Philosophical underpinning:

1. High-achievements is the true criterion for measuring capabilities of giftedness and not traits

2. "Holistic & Agentic" development empowers giftedness for eminence-driven

high achievements.

4.1.2 Overall Goal (Aspirational):

A leading university for developing and empowering gifted students aspirations as pioneers for economic and social impact in line with Saudi Vision 2030 and the vision of the University of Jeddah for national excellence and global competitiveness

4.1.3 Mission:

To be an incubator to empower and develop gifted students through a "Holistic & Agentic" strategy that offers opportunities relevant to priority Domain for eminence-driven achievements as well as integrates human-centric traits (e.g. psychological, psychosocial etc) (ii) objective traits (e.g. analytic, cognitivism, connectionism, etc), (iii) traits for creativity, and (iv) contextual factors.

4.2 Impact, Pillars & Enablers of Giftedness Development at UJ

4.2.1 Expected Impact:

Increase the percentage of achievements of the gifted with economic and social impact according to the aspirations of Vision 2030 and the vision of the University of Jeddah for national excellence and global competitiveness .

4.2.2 Overall measure of success:

Achieving a high percentage (more than 20%) of gifted people who have accomplished national and international recognition for their creativity & innovation.

4.2.3 Pillars

1. Engagement and support of senior management in empowering the Gifted for high-achievements for global leadership.

2. Programs of activities and events that support and empower the Gifted for high-achievements for global leadership Experienced faculty in giftedness development.

4.2.4 Enablers

1. The link between the vision programs and initiatives of the Saudi Modern University with the strategic directions of giftedness development.

2. Motivated students to develop their talents and achieve eminenc.

3. Learning environment and processes aligned with the requirements and needs of giftedness development.

4. Partnerships with the relevant stakeholders including private and public sectors and national bodies and funds that support giftedness development.

4.2.5 Risks (not inclusive)

1. Lack of human competencies with experience in giftedness development.

2. Lack of the right environment for giftedness development.

4.2.6 Opportunities

1. The need of the huge investment projects of Vision 2030 in the Western Region and Jeddah in particular for distinguished and entrepreneurial human capabilities especially those who strive for excellence.

2. The diversity of the private sector in the Western Region and Jeddah in particular that need distinguished and entrepreneurial human capabilities.

4.3 Governance Strategic Directions: Enabling Eminence-Driven Achievements through a Holistic & Agentic Strategy

| Opportunities relevant to Priority Domains for High Impact |
| Developmental Trajectories for High Impact Achievements |
| Holistic Development Strategy |
| Empower Agentic capabilities |
| Enabling & Supporting Environment |

Governance of Developing Giftedness

Empowering Eminence-Driven Achievements
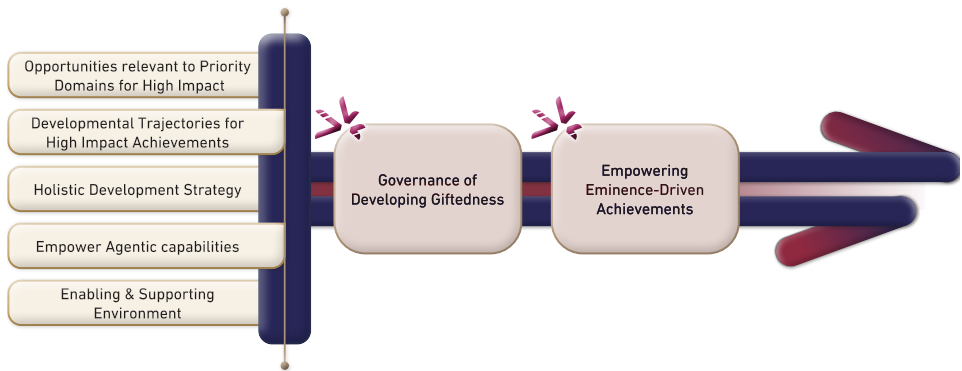
University of Jeddah's Governance Strategic Directions – Adapted from OECD and Subotnik et al. (2011). What are the Governance strategic directions for Giftedness development to empower High-Achievements-driven trajectories at the University of Jeddah?

1. Giftedness Development for life long High-Achievements-driven Trajectories

2. Holistic and Agentic based development for High-Achievements-driven Trajectories of Giftedness

3. Facilitates domain-driven developmental trajectories for High-Achievements

4. Facilitates supporting domain-general and human-centric abilities & skills

5. Facilitates developmental trajectories for High-Achievements-driven creativity and innovation

6. Developing capabilities for multiplicative manifestations of domain-specific, domain general, and human-centric abilities and skills

7. Facilitates appropriate contexts including opportunities from within and without, as well as identifying relevant stakeholders

8. Enables an agency for life long commitment, development and understanding of the confluence effect of including a multitude of biological & educational factors, human-centric factors (psychological, psychosocial etc.) and contextual factors on the development of giftedness

9. Incorporates Governance and multiple, appropriate and on-going Monitoring, Assessment and Evaluation as an integral part of Giftedness Development over-time for maximum efficacy

10. Incorporates a supportive environment and contextual factors for development

11. Incorporate flexible & agile Teaching, learning, coaching and mentoring to maximise efficacy and contextual dependency

12. It is flexible to incorporate different giftedness development models.

4.3.1 Benchmarking OECD Threads for Holistic Development of Giftedness

Universities	Bases of Giftedness		
	Nature (Innate)	Nurture (Develop)	
University of Jeddah		x	

- List of Main Elements of a "Holistic" Development of Giftedness (OECD)

1. Domain-Specific
2. Domain-General
3. Educational Perspective of Development
4. Psychological & Human-centric Perspective of Development
5. Outside of Education System
6. Within Education System
7. Facilitating Environment
8. Opportunities from Within & Without
9. High-Achievements Driven
10. Creativity
11. Additive Development (Essence)
12. "Multiplicative Development (Essence)"
13. Flexibility According to Potential & Needs
14. External Support
15. Challenging and supportive teaching, learning, and mentoring

4.3.2 Benchmarking Strategic Directions

Universities	
University of Jeddah	

- List of Governance Strategic Directions for Giftedness Development

1. Giftedness Development for Life-long High-Achievements-driven Trajectories
2. Holistic and Agentic based Development for High-Achievements-driven Trajectories of Giftedness
3. Facilitates domain-centric High-Achievements-driven Developmental Trajectories
4. Facilitates supporting domain-general and human-centric abilities & skills
5. Facilitates developmental trajectories for High-Achievements-driven creativity and innovation (Subotnik et.al)
6. Developing capabilities for multiplicative manifestations of domain-specific, domain general, and human-centric abilities and skills (psychological & psychosocial)
7. Facilitates appropriate contexts including opportunities from within and without, as well as identifying relevant stakeholders
8. Enables an agency for life long commitment, development and understanding of the

Main Elements of a "Holistic" Development of Giftedness (OECD)														
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
CO	UW	CO	UW	UW	CO	UW	UW	CO	CO	UW	CO	UW	UW	ES

(ES) Ecosystem for Staged Development, (CO) Colleges, and (UW) University Wide

Governance Strategic Directions for Giftedness Development– Adapted from OECD & & Subotnik et al. (2011)											
1	2	3	4	5	6	7	8	9	10	11	12
x	x	x	SA	x	x	SA	x	GC	x	x	x

confluence effect of a multitude of biological & educational factors, human-centric factors and contextual factors on the development of giftedness

9. Incorporates Governance and multiple, appropriate and on-going Monitoring, Assessment and Evaluation as an integral part of Giftedness Development over-time for maximum efficacy

10. Incorporates a supportive environment and contextual factors for development

11. Incorporate flexible & agile teaching, learning, coaching and mentoring to maximise efficacy and contextual dependency

12. It is flexible to incorporate different giftedness development models

(SA) KSA Human Capability Development Program, (GL) Aim for Global Leadership, (GC) Aim for Global Competitiveness.
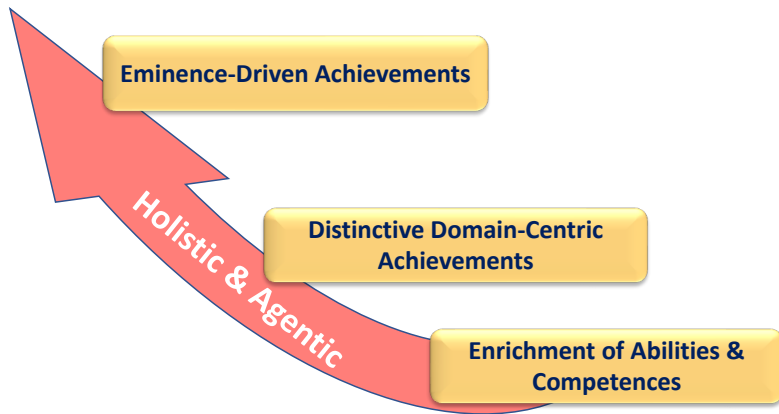
4.4 Operational Principles to Nurture Gifted Students at the University of Jeddah

1. Using the strategic direction, Develop programs and initiatives for giftedness in selected focus areas that offer opportunities as well as challenges to re- alise eminence-driven achievements for economic and social impact in line with the aspirations of Vision 2030 and the vision of the University of Jeddah for national excellence and global competitiveness

2. Using the strategic direction, adopt effective governance and continuous evaluation processes with the aim of empowering eminence-driven achieve- ments of the Gifted as well as ensuring the quality of giftedness develop- ment through continuous impactful aspirations for national excellence and international competitiveness

3. Adopting high-achievement developmental trajectories with teaching, learn- ing and environment that facilitate "Holistic & Agentic" and challenge-orient- ed development process for gifted students based on the following levels:

    a. Enrichment & Little-c Creativity

    b. Distinctive Domain-Centric Achievements with (Big C) Creativity

    c. Eminence-Driven Achievements

4. Provide opportunities & Challenges for High-Achievements.

High-Impact Achievements

Percentage of Students

Enrichment

Distinctive Achievements

Eminence

Levels of Achievements
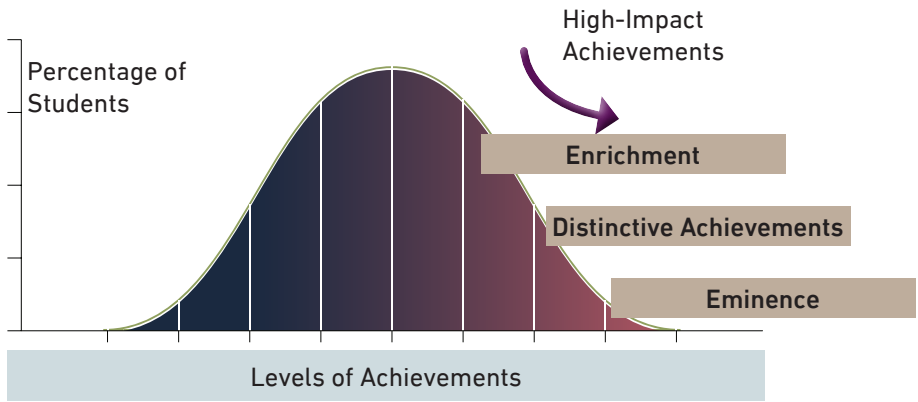
Basis of Trajectory Development of Giftedness

Eminence-Driven Achievements

Distinctive Domain-Centric Achievements

Enrichment of Abilities & Competences

Holistic & Agentic

Holistic & Agentic Achievements-Driven Trajectory Levels of Giftedness Development: Adapted from OECD Transformative Competencies & from Subotnik et. al. (2011)

4.4.1 Types & Levels of Developmental Trajectories

Universities	Types of Development		
	Track	Personal	
University of Jeddah	Challenges based	Personal Plans, Mentoring, Coaching, Monitoring & Improvements	

4.4.2 Opportunities & Challenges (examples)

1. Neom Challenge
2. Container (Logistics) Challenge
3. Future Environments Challenge
4. Future Jeddah Challenge

	Holistic & Agentic Achievements-Driven Trajectory Levels of Giftedness Development: Adapted from OECD Transformative Competencies & from Subotnik et. al. (2011)			
	Acceleration & Curriculum Compactness	Ability & Competence Enrichment & Little c Creativity	"Distinctive Domain-centric Achievement (Big-C Creativity)"	Eminence-Driven Achievements
	Direct Entry and Self Learning Credits	Analytic, Little c Creativity, Psychological, etc	Personal Development Plans in pathways in Specific Specialities	Personal Development Plans in specific area of focus

NEW SAUDI
UNIVERSITY VISION

4.5 Operational Framework: From Strategic D for Giftedness Development at the University of Jeddah

4.5.1 Overview of Operational Framework

a. Levels of Giftedness Developmental Trajectories

b. Governance System of Giftedness Development

c. Domains & Impact

d. Giftedness Development Levels & Their Governance
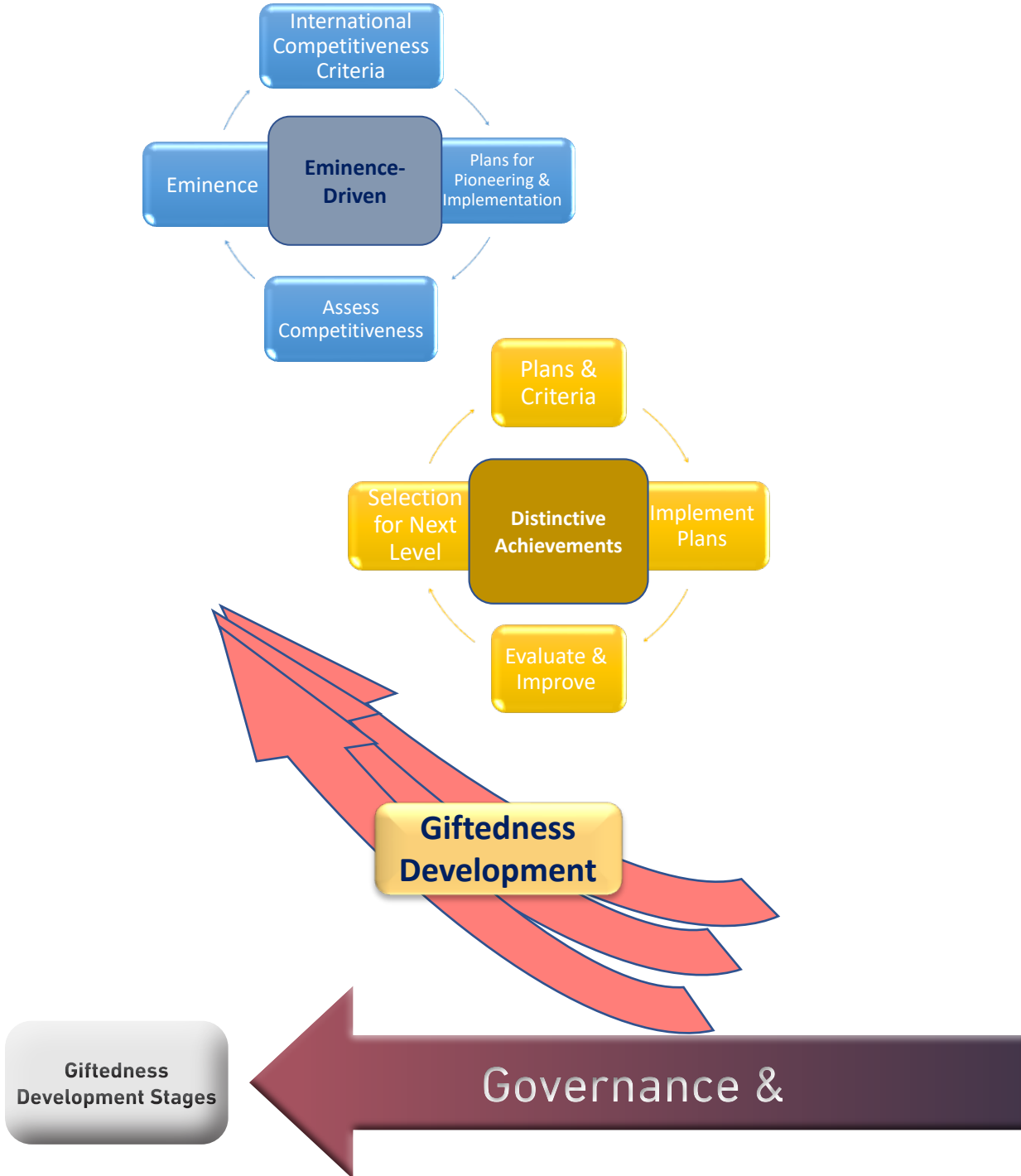
e. Teaching & Learning

f. Environment

(a) Levels of Giftedness Developmental Trajectories
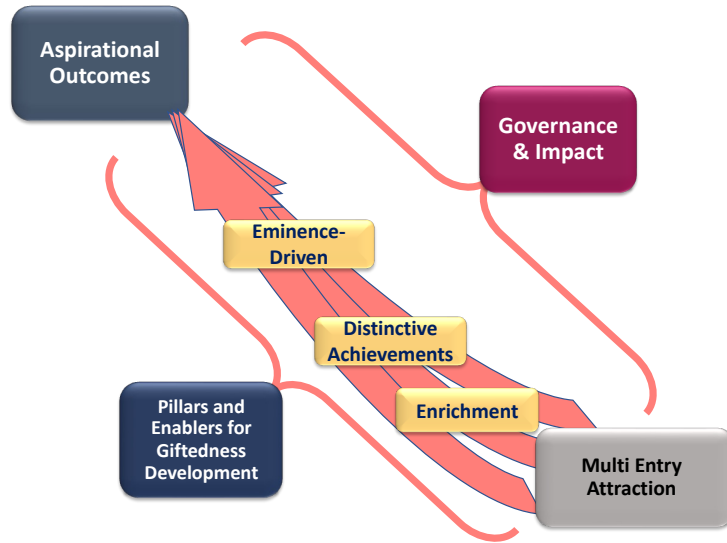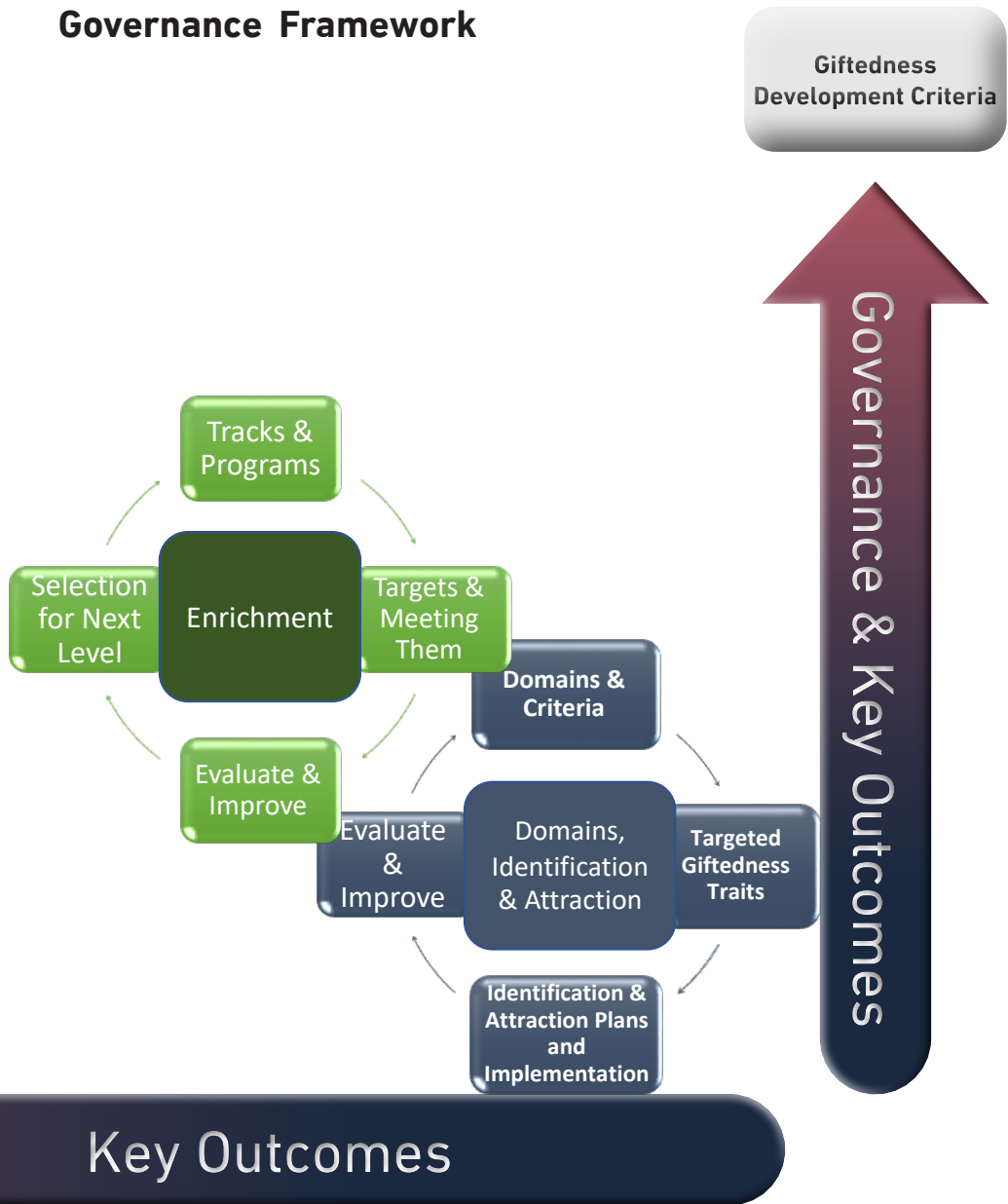

Basis of Giftedness Development Governance

(b) Governance System of Giftedness Development

International
Competitiveness
Criteria

Eminence-
Driven

Eminence

Plans for
Pioneering &
Implementation

Assess
Competitiveness

Plans &
Criteria

Distinctive
Achievements

Selection
for Next
Level

Implement
Plans

Evaluate &
Improve
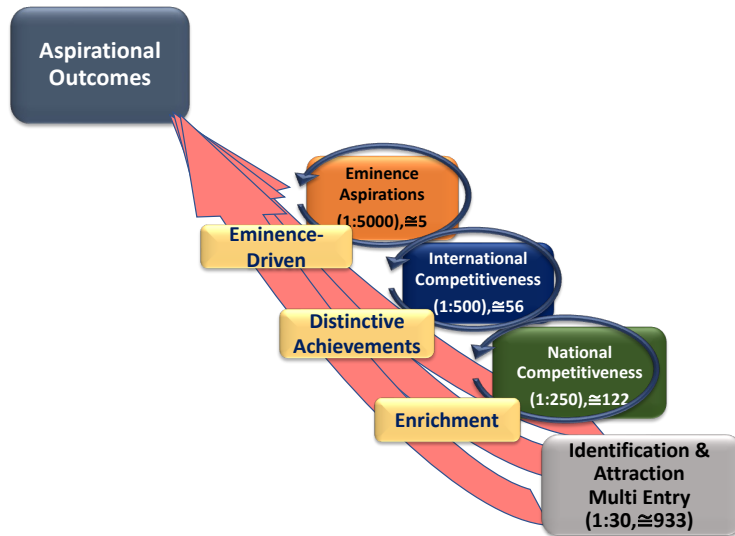
**Giftedness
Development**

**Giftedness
Development Stages**

Governance &

Giftedness Development Governance Framework

Giftedness Development Criteria

Governance & Key Outcomes

Tracks & Programs

Selection for Next Level

Enrichment

Targets & Meeting Them

Evaluate & Improve

Domains & Criteria

Evaluate & Improve

Domains, Identification & Attraction

Targeted Giftedness Traits

Identification & Attraction Plans and Implementation

Key Outcomes

Principles of the Governance for giftedness development are as follows:

1. Economic and social impact and the "Portfolio" record of Giftedness achievements (Outcome Driven) is the true criterion for measuring capabilities of giftedness and not traits.

2. The aim of Governance, strategic directions, policies and procedures are to ensure the development system for the gifted is based on the developmental trajectories for eminence-driven high-achievements at the University of Jeddah, and that Governance, strategic directions, policies and procedures are continuously evaluated and improved according to best practices and modern methodologies for the development of giftedness, and the assessment and evaluation of performance.

3. Enabling effective partnerships and engagements with relevant stakeholders to increase the economic and social impact of high-achievements of the Gifted.

4. Setting relevant criteria and standards to ensure continuous assessment & evaluation, and the appropriate progression of the Gifted from one level to another along the trajectories for eminence-driven high-advancements .

5. Provide the appropriate teaching, learning, mentoring and coaching as well as the appropriate resources for eminence-driven high-achievements at the University of Jeddah and ensuring.

6. Develop a system to ensure integration between the development process for each Domain of the Gifted and the relevant colleges related to the gifted and evaluate the effectiveness of its performance and improve it.

7. Continuous assessment of the whole system of giftedness development, and periodic survey of the latest methodologies, practices, methods and methods of exploring, attracting, developing and developing the Gifted to "ensure" eminence-driven high-advancements of giftedness for national and global leadership.

Governance for Continuous Evaluation (OECD)

Operational Tools	Outcome	
Governance System for eminence-driven high-achievements at the University of Jeddah and based on the strategic directions	A system of governance for attracting and developing talented people at the University of Jeddah	

Resources, Efficiency & Effectiveness (OECD)

Operational Tools	Outcome	
Develop plans to provide the necessary resources to ensure eminence-driven high-achievements of the Gifted and based on the strategic directions	A budget that ensures eminence-driven high-achievements of the Gifted at the University of Jeddah	

		Governance Evaluation Cycle		
	Using the strategic direction as a frame of reference, develop a governance system, policies and procedures for attracting and developing talents, for eminence-driven high-achievements at the University of Jeddah, periodically identifying obstacles, risks and related opportunities, and providing plans and solutions to deal with them.	Implement the governance system for eminence-driven high-achievements at the University of Jeddah	Evaluate the performance of the governance system to ensure eminence-driven high-achievements at the University of Jeddah	Improve the performance of the governance system to ensure eminence-driven high-achievements at the University of Jeddah

		Governance Evaluation Cycle		
	Using the strategic direction as a frame of reference, develop a budget to support the activities and programs of attracting and developing the Gifted to ensure eminence-driven high-achievements at the University of Jeddah, and develop plans to provide them	Implementing plans to provide resources which ensure their effective utilisation in supporting the performance of activities and programs to attract and develop the Gifted to ensure eminence-driven high-achievements	Evaluate the effectiveness of the use of resources in achieving eminence-driven high-achievements	Improve the effectiveness of the use of resources for ensuring eminence-driven high-achievements

(c) Domains, Opportunities, Impact, Identification and Attraction

Governance of Domains, Opportunities & Impact

Operational Tools	Outcome	
Priority Domains & Relevant Opportunities Especially those that align with Vision 2030, and their overall standards of excellence for distinctive and high achievements	Impact of Achievements in Priority Domains	

Governance of Identification and Attraction

Operational Tools	Outcome	
Admission pathways, their criteria and identification and attraction programs	Effective identification and attraction programs	

	Governance Evaluation Cycle		
Using the strategic direction as a frame of reference (i) identify Priority Domains and relevant opportunities especially those that align with Vision 2030, and identify their relevant stakeholders, (ii) Define their overall standards of excellence and progression criteria for each level for distinctive and high achievements, (iii) identify their requirements for each level, and (iv) determine the attributes and traits of the gifted in these priority domains,	Evaluate the overall impact of the Gifted achievements in the Priority Domain & Relevant Opportunities, and evaluate the effectiveness of the corresponding traits of the gifted, progression criteria and provide feedback to relevant stakeholders	Evaluate the effectiveness of the partnership and engagements with the relevant stakeholders in developing giftedness in the identified Priority Domains and provide feedback to them	Improving the impact of achievements of the gifted in priority domains and improve the performance of partnerships and engagements with the relevant stakeholders

	Governance Evaluation Cycle		
Identify admissions pathways for the priority Domains for giftedness development and their admission criteria, and develop relevant programs for identification and attraction	Evaluate the identification and attraction programs for the priority Domains and for the relevant pathways and provide feedback to relevant stakeholders	Evaluate the effectiveness of the partnership and engagements with the relevant stakeholders in identifying and attracting the Gifted in the Priority Domains and provide feedback to them	Improving the effectiveness of the identification and attraction programs for the different pathways for admissions in the priority domains

Domains, Opportunities, Impact, Identification and Attraction

1. Using the strategic direction as a frame of reference, Identify priority domains & Relevant Opportunities at the university to attract the Gifted based on their alignment with KSA Vision 2030, national and international trends, and based on their economic and social impact and identify relevant stakeholders including authorities, bodies, institutions and companies, as well as:

   a. Define overall standards of excellence and progression criteria for the trajectories for distinctive and high achievements of the Gifted for these Domains according to international standards and in partnership with the relevant stakeholders

   b. Determine the attributes and traits of the gifted in these priority domains according to international standards which are used as a frame of reference for the identification and attraction programs

2. Identify admission pathways in these priority Domains according to international practices and Determine the criteria and requirements for the admission of the Gifted in these priority domains for the different admission pathways

3. Develop gifted identification programs for the specified priority domains according to their admission criteria and related admissions pathways, and develop relevant develop implementation plans .

4. Develop gifted attraction programs for the priority areas and their different

University of Jeddah Identification Program

Universities	University Identification Programs		
	Mainly Those Who Show Ability Early	Quantitative Testing	
University of Jeddah		National Criteria	

University of Jeddah Identification Program

Universities	Attraction			
	Reputation			
	University Ranking	Gifted Students Achievements	Gifted Student Satisfaction	
University of Jeddah	International Ranking Criteria	Measures of Gifted Students Achievements	Criteria	

admission pathways to attract students from general education schools or university students, and develop plans for their implementation,.

5. Announcing programs to attract talented people and preparing a program to communicate with gifted and talented students in general education or within the university .

6. Implementation of plans for identification and attraction programs in priority Domains related to the gifted.

7. Periodic evaluation of priority domains and their relevant opportunities, performance of talent identification and attraction programs, ensuring the satisfaction of stakeholders, developing performance improvement plans.

8. Training, evaluating and developing the performance of faculty members in terms of methods of identifying diverse talents and abilities related to priority Domains according to international practices..

9. Follow up the processes of admission of gifted students at the university in coordination with the Deanship of Admission and Registration, evaluate them and submit recommendations for improvement Periodic identification of obstacles, risks, facilitators and opportunities to identify and attract talented students at the University of Jeddah and provide plans and solutions to deal with them.

University Identification Programs			
	Qualitative Assessment	Recommended (Formal Observation & Evaluation Programs)	Allow Multi-Entry Paths
		University Programs	Multi Exit and Entry Criteria

Attraction			
Attraction Program			
	Acceleration	Early Registration	Giftedness Programs
	Acceleration	Early Registration Criteria	Criteria for the achievements of the Gifted and clear executive plans and programs to achieve them

(d) Giftedness Development Levels & Their Governance

Enrichment Level

Governance of Enrichment Level

Operational Tools	Outcome	
Enrichment programs and activities to develop skills and capabilities (including intellectual, non-intellectual traits and psychological factors) with the aim of enabling ambitious aspirations for national and international competitiveness and based on the strategic directions	Gifted with a personality, skills and competencies to enable ambitious aspirations for national and international competitiveness	

		Governance Evaluation Cycle		
	Using the strategic direction and the requirements of the Domains as a frame of reference, (i) Identify enrichment tracks and corresponding criteria of success, and develop their programs to achieve excellence in the development of giftedness at this level with the aim of enabling ambitious aspirations for national and international competitiveness, (ii) identify relevant stakeholders and plans for their engagements at this level, and form relevant partnerships, (iii) identify needs and requitements of the gifted participants, develop targets plans and provide guidance and guidance for their achievements	Implement target plans for the gifted, and evaluate their performance in achieving the standards and targets of success for enrichment to enable ambitious aspirations for international and national competitiveness, and provide feedback, guidance, and plans to improve their performance	Periodic evaluation of the enrichment tracks and their programs for enrichment to achieve international and national competitiveness, as well as ensuring satisfaction of stakeholders & partners, and provide feedback to the relevant stakeholders on the performance of enrichment programs and submit proposals to improve performance, especially with regard to achieving excellence of the gifted participants in this stage	Identifying qualified students to move to the distinctive achievements (big C creativity) level according to the approved criteria

Operational Steps for Enrichment Level

1. Using the strategic direction as a frame of reference, identify enrichment tracks (including intellectual, non-intellectual traits, and psychological factors) and their excellence achievements criteria, and developing their programs to support enrichment and development of giftedness and the appropriate skills and personality to achieve excellence in their development at this level with the aim of enabling aspirations for international and national competitiveness.

2. Identify relevant stakeholders, and develop partnership and participation of relevant bodies, bodies, institutions and companies that can enable gifted participants to achieve excellence at the enrichment level

3. Identify the personal requirements and needs of each gifted participant at this level that are necessary for achieving excellence in the enrichment level.

4. Develop personal target plans for the gifted in the enrichment tracks and their programs that prioritize their talents and according to their needs and determine the criteria for their success in order to support the development of their giftedness.

5. Provide guidance, coaching and mentoring for the implementation of personal targets of gifted participants in partnership with the relevant stakeholders

6. Continuous evaluation of performance of the gifted participants in the enrichment level and their accomplishments according to the standards for international competitiveness, and provide feedback, guidance, and plans to improve performance.

7. Identifying qualified students to move to the distinctive achievements (big-C creativity) level according to the approved criteria.

8. Periodic evaluation of enrichment tracks, programs, methodologies, and success criteria, ensuring the satisfaction of stakeholders, developing performance improvement plans for the programs at this level.

9. Provide feedback to the relevant stakeholders regarding the performance of gifted students in enrichment programs and submit proposals to improve performance.

10. Training, evaluating and developing the performance of faculty members with regard to methodologies, methods and methods of enriching and developing giftedness in accordance with international practices.

11. Periodic identification of obstacles, risks, facilitators and opportunities for the enrichment of giftedness at the University of Jeddah and providing plans and solutions to deal with them.

Performance Indicators for the Enrichment Level

1. Number of advanced skill and professional certificates obtained (specialized and general)

2. Achievement level of excellence in internal competitions (specialized and general).

3. Number of entries in national competitions.

4. Number of participation in innovative, creative and entrepreneurial projects.

5. Achievement in IQ Test Standards (Level and Improvement).

6. Achievement level of excellence in leadership and motivated personality (Psychometric).

7. Achievement level of excellence in academic acceleration program.

8. Achievement level of excellence in their specialized programs.

9. Achievement level of excellence in extra-curricular activities and events for gifted programs.

10. Achievement level of excellence in specialized or general activities and events proposed by the gifted participant, which were adopted and implemented, as well as the effectiveness of their participation in their management (number, number of participants and impact).

11. Level of excellence in achieving goals and completion of approved plans and tasks that are set for each gifted participant.

12. Number of creative projects and innovations submitted to the private sector by the gifted participant .

13. Level of achievement in obtaining buy-in or adoption by third parties for the innovative and creative projects of the gifted participant

Distinctive Achievements Level (Big-C Creativity)

Governance of Creative Efficacy & Productivity (OECD)

Operational Tools	Outcome	
Integrative Programs and activities in pathways in specific domains & relevant opportunities to develop capabilities for distinctive achievements (big C creativity) for national and international competitiveness at this level which are based on the strategic directions	Gifted capabilities for distinctive achievements with the aspiration for national and international competitiveness at this level	

	Governance Evaluation Cycle		
	Using the strategic direction as a frame of reference, (i) Identify pathways in specific domains, relevant opportunities & requirements, and corresponding programs for gifted participants in this stage which are expected to have high international and national impact and competitiveness of their distinctive achievements (big C creativity) after consultations with experts, (ii) identify the personal requirements and needs of each gifted participant at this stage; develop plans for each participant for distinctive achievements (big C creativity) with aspirations for international and national competitiveness that prioritize their giftedness and according to their needs, (iii) determine the criteria and targets for their success in order to support the development of their giftedness in the specific domain at this level, and (iv) develop necessary partnership with the relevant authorities, bodies, institutions and companies.	Implement personal plans, and evaluate the performance of gifted participants in achieving the standards and targets of success for distinctive achievements (big C creativity) for international and national competitiveness, and provide feedback, guidance, and plans to improve their performance	Periodic evaluation of the pathways of specific domains & relevant opportunities, and their programs to achieve distinctive achievements (big C creativity) for international and national competitiveness, and ensure the satisfaction of stakeholders, and provide feedback to the relevant stakeholders on (i) the performance of achieving distinctive achievements (big C creativity) for national and international competitiveness of the gifted, (ii) the performance of programs, criteria and targets for its success, and submitting proposals to improve performance, especially with regard to achieving distinctive achievements (big C creativity) of the gifted participants in this level	Identify qualified students to move to the eminence-driven achievements level according to the approved criteria

Governance of Outcomes Evaluation

Operational Tools	Outcome	
Determine the standards of outputs for distinctive achievements (big C creativity) for national and international competitiveness, and corresponding national and international competitions and awards	Outcomes with the Highest level of Distinctive Achievements (big-C creativity)	

Operational Steps to Develop Capabilities for Distinctive Achievements Level (Big-C Creativity)

1. Using the strategic direction as a frame of reference, Identify pathways in specific domains for gifted participant in this level which are deemed to have high international and national impact and competitiveness of their distinctive achievements (big C creativity) after consultations with experts, and identify a mentor with a trach record in distinctive achievements (big C creativity) in the specific domain

2. Develop integrative programs for the identified pathways in specific domains with the relevant stakeholders including associated partners and initiatives with the aim of achieving distinctive achievements (big C creativity)

3. Identify the personal requirements and needs of each gifted participant in this level that is necessary for achieving distinctive achievements (big C creativity) in their pathways in specific domains

4. Identify and develop partnership and participation with relevant bodies, bodies, institutions and companies that can enable gifted participants to achieve distinctive achievements (big C creativity)

5. Develop personal plans for the development of gifted participant in this stage to achieve distinctive achievements (big C creativity) according to the pathways in their specific domains based on international best practice and methodologies, and including active participations in international and national competitions

6. Provide guidance and coaching for the implementation of personal plans of gifted participants in partnership with the relevant authorities, bodies, institutions and companies .

7. Continuous evaluation of the level of distinctive achievements (big C creativ-

	Governance Evaluation Cycle			
	Develop plans for the Gifted to participate in national and international competitions and their operational programs in order to support the Gifted to accomplish distinctive achievements to obtain awards in national and international competitions.	Implementing plans and support the participation to accomplish distinctive achievements in national and international competitions.	Evaluate the performance of the Gifted participants level in national and international competitions and provide feedback	Improving the performance of the Gifted participation at this level in national and international completions

ity) in the pathways in specific domains and their corresponding integrative programs for the gifted participants according to international standards, and provide feedback, guidance, and plans to improve performance.

8. Identify qualified students to move to eminence-driven achievements level according to the approved criteria

9. Periodic evaluation of the effectiveness of the giftedness development methodologies, programs, initiatives and projects to achieve distinctive achievements (big C creativity) in the pathways in specific domains and their corresponding integrative programs, and ensure the satisfaction of stakeholders, as well as develop plans to improve performance

10. Training, evaluating and developing the capabilities of mentors and faculty members with regard to methodologies, methods and methods of developing giftedness to achieve distinctive achievements (big C creativity) in the specified domains in accordance with international practices.

11. Periodic identification of obstacles, risks, facilitators and opportunities for the level of developing giftedness to achieve distinctive achievements (big C creativity) at the University of Jeddah and provide plans and solutions to deal with them .

12. Provide feedback to the relevant stakeholders regarding the performance of achieving distinctive achievements (big C creativity) in the specified domains of the gifted participants, and submit proposals to improve performance.

Performance Indicators for Distinctive Achievements Level (Big-C Creativity)

1. Number of advanced skill and professional certificates obtained (specialized and general)

2. Number of prizes won in internal competitions

3. Achievements in participation in national and international competitions

4. Number of innovations and creative projects submitted

5. Number of patents submitted

6. Level of achievements according to standards of excellence for traits and characteristics of leadership and motivated personality (Psychometrics)

7. Level of achievements according to standards of excellence in academic acceleration program (Acceleration)

8. Level of achievements according to standards of excellence in participation in extra-curricular activities and events for gifted programs

9. Number of creative projects and innovations of gifted participants that are adopted by the private sector

10. The level of direct and indirect investment in creative and innovative project of the gifted participant in this level

11. The degree of excellence in achieving the set goals, commitment and completion of approved plans and tasks required to be implemented by the gifted participant in this level.

NEW SAUDI
UNIVERSITY VISION

Eminence-Driven Achievements Level

Governance of Eminence-Driven Achievements Level

Operational Tools	Outcome	
"Personal" programs and activities based on the strategic directions to enable achievements for eminence	Capability to achieve eminence	

Operational Steps for Eminence-Driven Achievements Level

1. Using the strategic direction as a frame of reference, identify a specific area of focus for achievements for eminence for each gifted participants at this level after consultations with renowned experts, and identify a mentor with a trach record in pioneering work in the specific area of focus.

2. Identify the personal requirements and needs of each gifted participant at

		Governance Evaluation Cycle		
	Using the strategic direction as a frame of reference, identify a specific area of focus & relevant opportunities for achievements for eminence for each gifted participants at this level after consultations with renowned experts and identify personal requirements and the needs of each gifted participant at this level given the specific area of their focus, and develop relevant personal plans based on the relevant international best practice and methodologies for globally competitive achievements for eminence as well as developing necessary partnership with the relevant stakeholders, including authorities, bodies, institutions and companies.	Implement personal plans and provide guidance and mentoring for their implementation in partnership with the relevant mentors and partners with the aim of achieving accomplishments for eminence	Measuring the impact of achievements for eminence and Improving performance	Celebrating achievements for eminence

this level necessary for esteemed success in the specific area of their focus and to achieve pioneering accomplishments and strive for eminence.

3. Develop personal plans for the development of gifted participant at this level to achieve pioneering accomplishments and strive for eminence based on international best practice and methodologies, and including active participations in international and national competitions.

4. Develop partnerships and participation with the relevant renowned experts, bodies, bodies, institutions and companies.

5. Provide guidance and coaching for the implementation of personal plans of gifted participants at this level in partnership with the mentor and relevant authorities, bodies, institutions and companies .

6. Continuous evaluation of the level of achievements for eminence of the gifted participant according to international standards, and provide feedback, guidance, and plans to improve performance.

7. Periodic assessment of the effectiveness of the giftedness development methodologies, programs, initiatives and projects to achieve pioneering and leadership accomplishments and strive for eminence, ensure the satisfaction of stakeholders, and develop plans to improve performance,..

8. Training, evaluating and developing the capabilities of mentors and faculty members with regard to methodologies, methods and methods of developing giftedness to achieve pioneering accomplishments and strive for eminence in accordance with international practices.

9. Periodic identification of obstacles, risks, facilitators and opportunities for the stage of developing giftedness to achieve pioneering accomplishments and strive for eminence at the University of Jeddah and providing plans and solutions to deal with them

Performance Indicators for the Eminence-Driven Achievements Level

1. Number of prizes won in national competitions.

2. Level of achievements in international competitions.

3. Number of patents obtained.

4. Number of creative and innovative projects they lead or have principle roles which are adopted and implemented by the private sector.

5. Leadership level achievements in specialized national and international programs and projects relevant to their specific area of focus.

6. The level of leadership of the specialized or general activities and events proposed by the gifted and adopted and implemented, as well as the distinction of his participation in their management.

7. The level of success in attracting international tangible and non-tangible investment in their achievements and outcomes for eminence .

NEW SAUDI
UNIVERSITY VISION

(e) Teaching & Learning Methods

Governance of Teaching, Learning and (OECD)

Operational Tools	Outcome	
Framework that maps outcomes, teaching, learning and development methodologies for giftedness with the requirements of the strategic directions	A framework that define the skills and capabilities of talented people for high achievement and global leadership, and the corresponding development methods as well as criteria for success	

Governance of Teachers Development (OECD)

Operational Tools	Outcome	
Training, evaluating and developing the performance of faculty members with regard to methodologies, and methods of developing the Gifted for high-achievements and global leadership according to international practices and the strategic directions	Aligning the capabilities of faculty members with the requirements and needs of the Gifted methods of developing the Gifted for high-achievements and global leadership	

Governance Evaluation Cycle			
Using the strategic direction and the requirements of the Domains for each level, define a framework that maps the appropriate outcomes, teaching, learning, mentoring, curricula, coaching and development methodologies that to the requirements of the relevant strategic directions and Domains, and develop corresponding programs, activities, and criteria & performance indicators for high achievements trajectory, and then define relevant stakeholders	Implement the framework within the development process and developmental trajectories of the Gifted and in partnership and engagement with the relevant stakeholders for all level	Evaluating the performance of the framework and the partnerships and engagement of the stakeholders	Improving the performance of the framework and the partnerships and engagement of the stakeholders

Governance of Teachers Development			
Using the strategic direction and the requirements of the Domains for each level as a frame of reference, develop plans to provide a supportive and enabling programs for teachers development for all levels	Implementing plans to develop faculty members and empower them to develop the Gifted for all levels	Evaluating performance in developing faculty members and empowering them to develop the Gifted for all levels	Improving performance to develop faculty members and empower them to develop the Gifted for all levels

(f) Environment

Governance of Environment Development (OECD)

Operational Tools	Outcome	
Developing an effective environment for high achievements and global leadership for the gifted according to the strategic directions	A supportive and enabling environment to attract and develop the Gifted for high-achievements and global leadership	

	Governance Evaluation Cycle			
	Using the strategic direction as a frame of reference, develop plans to provide a supportive and enabling environment to attract and develop the Gifted for high-achievements and global leadership	Implementing plans to provide a supportive and enabling environment to attract and develop the Gifted for high-achievements and global leadership	Evaluating the effectiveness of the environment in supporting and enabling the attraction and development of the Gifted for high-achievements and global leadership	Improving the effectiveness of the environment in supporting and enabling the attraction and development of the Gifted for high-achievements and global leadership

5.   References

Adams, C. M., & Pierce, R. L. (2008). Science, elementary. In J. A. Plucker & C. M. Callahan (Eds.), Critical issues and practices in gifted education (pp. 563–577). Waco, TX: Prufrock Press.

Albert, R. S. (1994). The contribution of early family history to the achievement of eminence. Talent development. In N. Colangelo, S. G. Assouline, & D. L. Ambroson (Eds.), Proceedings from the 1993 Henry B. and Jocelyn Wallace National Research Symposium on Talent Development (pp. 311–360). Dayton: Ohio Psychology Press.

ANEIS (2017), Guia para Professores e Educadores: Altas Capacidades e Sobredotação: Compreender, Identificar, Atuar, Associação Nacional Estudo e Intervenção na Sobredotação (ANEIS), Lisboa.

Bakar, A. (2016), "Digital Classroom: An Innovative Teaching and Learning Technique for Gifted Learners Using ICT", Scientific Research Publishing, Vol. 7/1, pp. 55-61, http://dx.doi.org/10.4236/ce.2016.71006.

Bakar, A. (2017), "Developing Gifted and Talented Education Program: The Malaysian Experience", Scientific Research Publishing, Vol. 8/1, pp. 1-11, http://dx.doi.org/10.4236/ce.2017.81001.

Beljan, P. et al. (2006), "Misdiagnosis and Dual Diagnoses of Gifted Children and Adults: ADHD, Bipolar, OCD, Asperger's, Depression and Other Disorders", Gifted and Talented International, Vol. 21/2, pp. 83-86, http://dx.doi.org/10.1080/15332276.2006.11673478.

Benson, M. (2009), "Gifted Middle School Students Transitioning to High School: How One Teacher Helped His Students Feel Less Anxious", Gifted Child Today, Vol. 32/2, pp. 29-33, https://files.eric.ed.gov/fulltext/EJ835838.pdf.

Benson, M. (2009), "Gifted Middle School Students Transitioning to High School: How One Teacher Helped His Students Feel Less Anxious", Gifted Child Today, Vol. 32/2, pp. 29-33, https://files.eric.ed.gov/fulltext/EJ835838.pdf.

Bisland, A. (2001), "Mentoring: An Educational Alternative for Gifted Students", Gifted Child Today, Vol. 24/4, pp. 22-25, https://doi.org/10.4219/gct-2001-550.

Bisland, A. (2001), "Mentoring: An Educational Alternative for Gifted Students", Gifted Child Today, Vol. 24/4, pp. 22-25, https://doi.org/10.4219/gct-2001-550.

Brulles, D. and S. Winebrenner (2018), Maximising Gifted Students' Potential in the 21st Century, American Association of School Administrators.

Brulles, D., S. J. Peters and R. Saunders (2012), "Schoolwide Mathematics Achievment Within the Gifted Cluster Grouping Model", Journal of Advanced Academics, Vol. 23/3, pp. 200-216, http://dx.doi.org/10.1177/1932202X12451439.

Callahan, C. et al. (2015), "What Works in Gifted Education: Documenting the Effects of an Integrated Curricular/Instructional Model for Gifted Students", American Educational Research Journal, Vol. 52/1, pp. 137-167, http://dx.doi.org/10.3102/0002831214549448.

Cao, T., J. Jung and J. Lee (2017), "Assessment in Gifted Education: A Review of the Literature From 2005 to 2016", Journal of Advanced Academics, Vol. 28/3, pp. 163-203, http://dx.doi.org/10.1177/1932202X17714572.

Cao, T., J. Jung and J. Lee (2017), "Assessment in Gifted Education: A Review of the Literature From 2005 to 2016", Journal of Advanced Academics, Vol. 28/3, pp. 163-203, http://dx.doi.org/10.1177/1932202X17714572.

Carroll, J B 1993 Human Cognitive Abilities: A survey of factor-analytic studies Cambridge University Press, Cambridge.

Centre for Education Statistics and Evaluation (2019), Revisiting Gifted Education, NSW Department of Education, https://www.cese.nsw.gov.au/publications-filter/revisiting-gifted-education.

Chen, C. and J. Wong (2013), "Career counseling for gifted students", Australian Journal of Career Development, Vol. 23/3, pp. 121-129, http://dx.doi.org/10.1177/1038416213507909.

Coleman, L. J., & Cross, T. L., (2005). Being gifted in school: An introduction to development, guidance, and teaching (2nd ed.). Waco, TX: Prufrock Press, Inc.

DGESCO (2019), Scolariser un élève à haut potentiel, [Provide education to high potential students], Ministère de l'Éducation Nationale et de la Jeunesse, Paris, https://eduscol.education.fr/document/1083/download (accessed on 3 December 2021).

Eyre, D. (2011), Room at the top : inclusive education for high performance, Policy Exchange, London.

Eyre, D. (2012), "Introduction: Effective schooling for the gifted and talented", in Curriculum Provision for the Gifted and Talented in Secondary School, Routledge.

Feldman, D. H. (1986). Nature's gambit: Child prodigies and the development of human potential. New York: Basic.

Gagné, F. (2000). Understanding the complex choreography of talent development through DMGT-based analysis. In K. A. Heller, F. J. Mönks, R. J. Sternberg, & R. Subotnik (Eds.), International Handbook for Research on Giftedness and Talent(2nded.), pp. 67-79. Oxford: Pergamon.

Gavin, M. K., & Adelson, J. L. (2008). Mathematics, elementary. In J. A. Plucker & C. M. Callahan (Eds.), Critical issues and practices in gifted education (pp. 367–394). Waco, TX: Prufrock Press.

Gentry, M. (2014), An Introduction to Total School Cluster Grouping, Prufrock Press Inc.

Greene, M. (2005), "Teacher as Counselor: Enhancing the Social, Emotional, and Career Development of Gifted and Talented Students in the Classroom", Gifted Education International, Vol. 19/3, pp. 226235, http://dx.doi.org/10.1177/026142940501900305.

Greene, M. (2005), "Teacher as Counselor: Enhancing the Social, Emotional, and Career Development of Gifted and Talented Students in the Classroom", Gifted Education International, Vol. 19/3, pp. 226235, http://dx.doi.org/10.1177/026142940501900305.

Heller-Sahlgren, G. (2018), What works in gifted education? A literature review, Center for Education Economics CIC, London, http://www.cfee.org.uk (accessed on 3 November 2021).

Heller, K. A. (Ed.). (1992). Hochbegabung im Kindes-und Jugendalter [High ability in children and adolescents]. Göttingen: Hogrefe.

Karwowski, M., & Beghetto, R. A. (2019). Creative behavior as agentic action. Psychology of Aesthetics, Creativity, and the Arts, 13(4), 402–415. https://doi.org/10.1037/aca0000190

Kaufman, J. C., & Beghetto, R. A. (2009). Beyond big and little: The four c model of creativity. Review of General Psychology, 13(1), 1–12. https://doi.org/10.1037/a0013688

Kerr, B. and S. Sodano (2003), "Career Assessment With Intellectually Gifted Students", JOURNAL OF CAREER ASSESSMENT, Vol. 11/2, pp. 168-186, http://dx.doi.org/10.1177/1069072702250426.

Laine, S. and K. Tirri (2017), Ethical Challenges in Inclusive Education: The Case of Gifted Students,, Emerald Group Publishing.

Lawrence-Brown, D. (2004). Differentiated Instruction: Inclusive Strategies for Standards-Based Learning That Benefit The Whole Class. American Secondary Education, 32(3), 34–62. http://www.jstor.org/stable/41064522

MacIntyre P.D., Dörnyei Z., Clément R., Noels K.A. (1998). Conceptualizing willingness to communicate in a L2: A situational model of L2 confidence and affiliation. The Modern Language Journal, 82, 545–562.

Mendaglio, S. (2013), "Gifted students' transition to university", Gifted Education International, Vol. 29/1, pp. 3-12, http://dx.doi.org/10.1177/0261429412440646.

Moon, S. (2009), "Myth 15: High-Ability Students Don't Face Problems and Challenges", Gifted Child Quarterly, Vol. 53/4, pp. 274-276, https://doi.org/10.1177/0016986209346943.

Mudrak, J., & Zabrodska, K. (2015). Childhood Giftedness, Adolescent Agency: A Systemic Multiple-Case Study. Gifted Child Quarterly, 59(1), 55-70. https://doi.org/10.1177/0016986214559602

Ochse, R. (1990). Before the gates of excellence: The determinants of creative genius. New York, NY: Cambridge University Press.

OECD (2012), "Transitions Beyond Initial Education", in Education Today 2013: The OECD Perspective, OECD Publishing, Paris, http://dx.doi.org/10.1787/888932661497.

OECD (2018), Teaching for the Future : Effective Classroom Practices to Transform Education, OECD Publishing, http://dx.doi.org/10.1787/9789264293243-en.

Olszewski-Kubilius, P. (2000). The transition from childhood giftedness to adult creative productiveness: Psychological characteristics and social supports. Roeper Review, 23, 65–71. doi:10.1080/02783190009554068

Olszewski-Kubilius, P. (2008a). The role of the family in talent development. In S.I. Pfeiffer (Ed.), Handbook of giftedness in children: Psycho–educational theory, research,

and best practices (pp. 53–70). New York, NY: Springer.

Olszewski-Kubilius, P., Lee, S. Y., Ngoi, M., & Ngoi, D. (2004). Addressing the achievement gap between minority and nonminority children by increasing access to gifted programs. Journal for the Education of the Gifted, 28, 127–158.

Parekh, G., R. S. Brown and K. Robson (2018), "The Social Construction of Giftedness: The Intersectional Relationship Between Whiteness, Economic Privilege, and the Identification of Gifted", Canadian Journal of Disability Studies, Vol. 7/2, pp. 1-32, http://www.cjds.uwaterloo.ca (accessed on 3 December 2021).

Peterson, J. (2006), "Addressing Counseling Needs of Gifted Students", Professional School Counseling, Vol. 10/1, pp. 43-51, https://doi.org/10.1177/2156759X0601001S06.

Plucker, J. A., & Beghetto, R. A. (2004). Why creativity is domain general, why it looks domain specific, and why the distinction does not matter. In R.J. Sternberg, J. Lautrey, & T.I. Lubart (Eds.), Models of intelligence: International perspectives (pp. 153–168). Washington, DC: American Psychological Association.

Plucker, J. A., Beghetto, R. A., & Dow, G. T. (2004). Why isn't creativity more important to educational psychologists? Potentials, pitfalls, and future directions in creativity research. Educational Psychologist, 39(2), 83–96. https://doi.org/10.1207/s15326985ep3902_1

Reis, S. (ed.) (2016), The Three Ring Conception of Giftedness: A Developmental Model for Creative Productivity, Prufrock Press.

Reis, S. M. (1995). What gifted education can offer the reform movement: Talent development. In J. L. Genshaft, M. Bireley, & C.L. Hollinger (Eds.), Serving gifted and talented students: A resource for school personnel (pp. 371–387). Austin, TX: Pro-Ed.

Reis, S. M. (2008). Talented readers. In J. A. Plucker & C. M. Callahan (Eds.), Critical issues and practices in gifted education (pp. 655–667). Waco, TX: Prufrock Press.

Reis, S. M., & Renzulli, J. S. (2010). Is there still a need for gifted education? An examination of current research. Learning and Individual Differences, 20, 308–317. doi:10.1016/j.lindif.2009.10.012

Renzulli, J. (1987), "The Positive Side of Pull-Out Programs", Journal for the Education of the Gifted, Vol. 10/4, pp. 245-254, https://doi.org/10.1177/016235328701000402.

Renzulli, J. S. (1976). The enrichment triad model: A guide for developing defensible programs for the gifted and talented. Gifted Child Quarterly, 20(3), 303–326.

Rogers, K. (2007), "Lessons Learned About Educating the Gifted and Talented: A Synthesis of the Research on Educational Practice", Gifted Child Quarterly, Vol. 51/4, pp. 382-396, http://dx.doi.org/10.1177/0016986207306324.

Rutigliano, A. and N. Quarshie (2021), "Policy approaches and initiatives for the inclusion of gifted students in OECD countries", OECD Education Working Papers, No. 262, OECD Publishing, Paris, https://doi.org/10.1787/c3f9ed87-en.

Sahlgren, G. (2018), What Works in Gifted Education?, Centre for Education Economics, London,   https://potentialplusuk.org/wp-content/uploads/2019/01/What-Works-in-

Gifted-Education-CfEE.pdf (accessed on 3 December 2021).

Sękowski, A. and B. Łubianka (2015), "Education of gifted students in Europe", Gifted Education International, Vol. 31/1, pp. 73-90, http://dx.doi.org/10.1177/0261429413486579.

Simonton, D. K. (1994). Greatness: Who makes history and why. New York, NY: Guilford.

Simonton, D. K. (1999). Talent and its development: An emergenic and epigenetic model. Psychological Review, 106(3), 435–457. https://doi.org/10.1037/0033-295X.106.3.435

Simonton, D. K. (2010). Creativity in highly eminent individuals. In J.C. Kaufman & R.J. Sternberg (Eds.), The Cambridge handbook of creativity (pp. 174–188). New York, NY: Cambridge University Press.

Smith, K. and S. Wood (2018), Career Counseling for the Gifted and Talented: A Life Span Development Approach, Springer, Cham, https://doi.org/10.1007/978-3-319-77004-8_18.

Stanley, J. C. (1976b). Identifying and Nurturing the Intellectually Gifted. Phi Delta Kappa, 58(3), 234-237.

Steenbergen-Hu, S., M. Makel and P. Olszewski-Kubilius (2016), "What One Hundred Years of Research Says About the Effects of Ability Grouping and Acceleration on K–12 Students' Academic Achievement: Findings of Two Second-Order Meta-Analyses", Review of Educational Research, Vol. 86/4, pp. 849-899, https://doi.org/10.3102/0034654316675417.

Sternberg, R. (2003). Wisdom, Intelligence, and Creativity Synthesized. Cambridge: Cambridge University Press. doi:10.1017/CBO9780511509612

Sternberg, R. J. (1985). Beyond IQ: A triarchic theory of human intelligence. New York: Cambridge University Press.

Subotnik R. F., Jarvin L. (2005). Beyond expertise: Conceptions of giftedness as great performance. In Sternberg R. J., Davidson J. E. (Eds.), Conceptions of giftedness (pp. 343–357). New York, NY: Cambridge University Press

Subotnik, R. F., Olszewski-Kubilius, P., & Worrell, F. C. (2011). Rethinking Giftedness and Gifted Education: A Proposed Direction Forward Based on Psychological Science. Psychological Science in the Public Interest, 12(1), 3-54. https://doi.org/10.1177/1529100611418056

Tannenbaum, A. J. (1983). Gifted children: Psychological and educational perspectives. New York: Macmillan.

Tomlinson, C. A. , et. al. (2002) . The parallel curriculum: A design to develop high potential and challenge high-ability learners. Thousand Oaks, CA : Corwin.

VanTassel-Baska, J. (2017), "Curriculum Issues: What Makes Differentiated Curriculum Work?", Gifted Child Today, Vol. 40/1, pp. 62-63, https://doi.org/10.1177/1076217516675905.

Watters, J. (2010), "Career decision making among gifted students: The medi-

ation of teachers", Gifted Child Quarterly, Vol. 54/3, pp. 222-238, http://dx.doi.org/10.1177/0016986210369255.

Weilguny, W. et al. (2013), White Paper: Promoting Excellence, Austrian Research and Support Center for the Gifted and Talented, https://talentcentrebudapest.eu/sites/default/files/White%20Paper%20Promoting%20Talent%20and%2 0Excellence.pdf (accessed on 3 December 2021).

White, K., F. Fletcher-Campbell and K. Ridley (2003), What works for gifted and talented pupils : a review of recent research, LGA educational research programme, Berkshire.

Wood, S. (2010), "Best Practices in Counseling the Gifted in Schools: What's Really Happening?", Gifted Child Quarterly, Vol. 54/1, pp. 42-58, http://dx.doi.org/10.1177/0016986209352681.

Wood, S. (2010), "Best Practices in Counseling the Gifted in Schools: What's Really Happening?", Gifted Child Quarterly, Vol. 54/1, pp. 42-58, http://dx.doi.org/10.1177/0016986209352681.

Yang, Y., M. Gentry and Y. Choi (2012), "Gifted Students' Perceptions of the Regular Classes and PullOut Programs in South Korea", Journal of Advanced Academics, Vol. 23/3, pp. 270-287, http://dx.doi.org/10.1177/1932202X12451021.

Ziegler, A. (2005). The Actiotope Model of Giftedness. In R. J. Sternberg & J. E. Davidson (Eds.), Conceptions of giftedness (pp. 411–436). Cambridge University Press. https://doi.org/10.1017/CBO9780511610455.024

جامعة جدة
University of Jeddah

The strategy was written in accordance with internationally approved schools of thought for developing and nurturing gifted and talented, from which all modern studies emerge until 2022.