



Accelerating Saudi Students into Higher Education Programs: Identifying Potential Educational Interventions to Expedite Development

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تسريع الطلاب السعوديين إلى البرامج الجامعية: التعرف على الخيارات التعليمية الممكنة لتعجيل التنمية

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ABSTRACT

Academic acceleration is an intervention that can reduce the effort, time and cost required for the educational process. In 2014 Saudi Arabia released a new regulation for acceleration (grade skipping) as one of the provisions for gifted students: it allows gifted students in the fourth grade (age ten) to move to the sixth grade (age twelve), and from the seventh grade (age thirteen) to the ninth grade (age fifteen) after passing several criteria. Although these practices are useful for talented students (Col Angelo *et al.*, 2004), A clear policy for acceleration at tertiary-level education was missed in Saudi Arabia. This article discusses the potential educational interventions that can be offered to those students, in addition to the possibility for inserting a university-based school as one of the suggested options to smooth the transfer to university life for gifted students; key educational components to support the implementation of such interventions are also highlighted.

المخلص

التسريع الأكاديمي للطلاب الموهوبين من الممارسات التي تقلص الجهد والوقت والمال المتطلب للعملية التعليمية. تطبق المملكة العربية السعودية في الوقت الحالي سياسة التسريع الأكاديمي كأحد خيارات الرعاية المتاحة للطلاب الموهوبين، حيث يسمح للطلاب المتفوق دراسياً التسريع من الصف الرابع الابتدائي إلى الصف السادس، و/أو من الصف الأول متوسط إلى الثالث متوسط وذلك بعد اجتياز مجموعة من المحكمات مثل المقاييس والإنجازات والتوصيات. على الرغم من جدوى هذه الممارسات للطلاب الموهوبين (كول انجلو وآخرون، 2004) إلا أن هذه الرعاية المتعلقة بالتسريع الأكاديمي في المملكة العربية السعودية لم تطبق بشكلها الكامل فربما تتوقف عند المرحلة الثانوية، والخدمات التي تقدم ليهؤلاء الطلاب المرشحين الذين يصلون للمرحلة الجامعية بعمر أقل من أقرانهم غير متوفرة. لذا يناقش هذا المقال الخيارات الممكنة لتقديمها ليهؤلاء الطلاب بشكل عام مع إمكانية إدراج مدرسة مقرها الجامعة كأحد الخيارات المقترحة التي تسهل انتقال الطلاب المرشحين أكاديمياً إلى المرحلة لجامعية. كما يسلط هذا المقال الضوء على المكونات التعليمية التي تدعم إنشاء مثل هذه المدارس.

KEYWORDS

الكلمات المفتاحية

Educational components, gifted education, transition school, university-based programs

العناصر التعليمية، المدرسة الانتقالية، برامج مقرها الجامعة، تربية الموهوبين

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1. Introduction

The provision for gifted students typically varies from one country to another, according to the country leaders' vision, and the culture's values and norms about giftedness and gifted individuals. Some countries rely on several kinds of provision, such as specialised academies and schools, special classes and curricula, and/or extra-curricular activities. In some cases, gifted individuals are monitored and receive appropriate counselling from the relevant institutions. Other countries rely on exclusive programmes for gifted students and continue to produce more creatively gifted individuals than anywhere else. For example, the USA and China have a large number of special programmes for gifted students, and several programmes have been designed for gifted students, to smooth and enhance the transition process between tertiary level and secondary education. These include Advanced Placement (AP) programmes, dual enrolment or dual credit courses and early entrance approaches. In spite of the diversity in gifted provision across developed countries,

there is much disagreement as to which form of gifted provision is appropriate for achieving excellence (Freeman, 2002; Passow, 1993; VanTassel-Baska, 2013). Plucker and Callahan (2014) pointed out that the lack of research into gifted practice has left the field with considerable ambiguity regarding the efficiency of programmes.

In the United Kingdom, policies encourage educational institutions to consider the variety of gifts. However, groups streamed by ability and pull-out programmes are applied in the UK. Additionally, some schools conduct acceleration in the form of accelerated content. In Germany, gifted provision tends to rely on several strategies, such as special schools, special classes, special curricula, and extra-curricular activities. (Freeman, 2002; Heuser, Wang & Shahid, 2017). However, there have been a variety of programme options available in developed countries (Freeman, 2002).

In contrast, Saudi Arabia provides more limited services for gifted students in general education which starts from primary and goes up to secondary school level. These include offering enrichment

* Some of the materials contained in this article were extracted from the author's thesis mentioned in the References

programmes, teaching advanced curricula in some private schools, and operating a 'pull-out strategy' (where the gifted students are moved from the regular classroom to a resource room and given more advanced material to study). Saudi Arabia also encourages gifted students by offering the chance to receive desirable awards (Aljughaiman & Grigorenko, 2013; Al-makhalid, 2012; Bin Yousef, 2014; Qarni, 2010).

In 2014, Saudi Arabia introduced new regulations for acceleration. Offered at primary school level only, the Saudi acceleration system enables students to skip an entire grade and transfer to an appropriate grade that is compatible with their level of development. The Ministry of Education (MOE) disseminated an instructional manual for the acceleration process in Saudi schools and announced the existence of a committee that will act on acceleration issues (MOE, 2016). However, Saudi students are often not ready for higher education. Indeed, a great deal of research has shown that Saudi students have been found to be particularly lacking in the highly demanding skills required for tertiary academic programmes. As a result, many fail to thrive and end up quitting in the first year (Khoshaim, 2017). Despite this, the Ministry has not announced any special intervention and/or plans to offer counselling to the accelerated gifted students that join university with students who are two or more years older than them. As a result, the fate of those accelerated students who finish high school earlier than their peers is still ambiguous, as the educational options and alternatives are limited. In addition, faculty members at universities are often unaware of gifted students' academic, social, and emotional needs at university level (Muratori *et al.*, 2015).

Given Saudi Arabia's latest regulations regarding its acceleration system, this article will highlight the potential approaches for the country to establish specialised intervention for accelerated students (in the form of a special school/unit), to smooth their transfer to university, and to extend the services for gifted students in post-secondary education. This article will also present the main components of the possible proposed intervention. It will conclude by offering a possible suggestion to expedite the establishment and implementation process for the intervention.

Saudi regulations have determined the acceleration intervention for gifted students, who pass only the identification criteria that includes the National Test for Giftedness by the National Centre for Assessment. Therefore, in this article, the terms 'gifted' and 'accelerated' students will be used interchangeably to refer to gifted students and/or accelerated students.

2. A Brief Background of Gifted Education in Saudi Arabia

The interest in gifted provision started in 1970, when the MOE produced a policy document titled 'Document for the General Policy of Education in the Kingdom of Saudi Arabia', which included regulations for gifted provision. The document stipulated:

It is very important to discover and identify the gifted learners among all Saudi youth, nurture them by all means to unveil their potential, and pay extra attention and make an effort to provide them with special programmes and appropriate opportunities that can be easily integrated into the country's public educational system (Rule 57) (MOE, 2014; UNESCO, 2010).

The document highlighted the importance of integrating the programmes and opportunities easily within the Saudi system, that is to say, providing gifted students with programmes that simulate best practice internationally and applying them within the Saudi system as seamlessly as possible.

However, in 1990, the MOE, together with King Abdul-Aziz City for Science and Technology, took action to apply this policy by establishing the Initiative for the Identification and Detection of Gifted Students. This initiative had a number of aims: to identify gifted students and prepare enrichment programmes for them; to raise awareness in the community about issues related to talents and giftedness; and to identify and recognise efforts supporting the gifted in schools and other institutions (MEP, 2013). One of the significant outcomes of this identification and detection project was the preparation and standardisation of intelligence scales. In addition, the identification project created two enrichment programmes, one in science and one in mathematics, as a first phase of the enrichment programme. Aligned with the aim of tailoring education for gifted students in Saudi Arabia, many significant actions have been undertaken to promote the nurturing of gifted students. The Saudi government has established a non-profit organisation that specialises in giftedness and creativity, called The King Abdul-Aziz and His Companions' Foundation for Giftedness and Creativity (Mawhiba). Furthermore, the MOE has established the General Directorate for Gifted Nurturing, which aims to provide comprehensive care for gifted Saudi students. This directorate is responsible for identifying and detecting those students in general education who are gifted, as well as designing an educational plan and providing enrichment programmes. The General Directorate also provides training for professionals in the field of Gifted Education (Aljughaiman & Grigorenko, 2013; MOE, 2014).

The General Directorate works in alignment with The King Abdul-Aziz and His Companions' Foundation for Giftedness and Creativity and the National Centre for Assessment. Together they coordinate the implementation of a national survey to identify the gifted and talented, and to oversee the distribution of gifted enrichment programmes in schools throughout the country. They also donate prizes to encourage the gifted and innovation (see Al Garni, 2012; Al-makhalid, 2012; Bin Yousef, 2014; Qarni, 2010).

Saudi Arabia is also focused on gifted provision in higher education. For example, in the Eastern region, the National Research Centre for Giftedness and Creativity (NRCGC) at King Faisal University is the first centre of its kind at the national level. Its aim is to provide a research platform to achieve excellence and originality in the field of gifted and talented education. The main achievement of this centre is in building cooperation between prestigious institutions in the field of giftedness. An example of this is the Standardized Aurora Battery, which is one of the largest research projects of the National Research Centre for Giftedness and Creativity done in collaboration with Yale University (USA), Tufts University (USA), and Durham University (UK) (KFU, 2015; Tan *et al.*, 2009).

In the Central region, the Innovation Centre at King Saud University, which was established in 2007, encourages creators to contribute to the community by transforming innovative ideas and inventions into products with economic value. Aimed at fostering the creativity of both undergraduate and postgraduate students, as well as faculty members at King Saud University, the centre has attracted scholars from around the world to compete in international innovation competitions. It aims to promote innovation within the university community, encourage students to present their ideas and turn them into innovations with economic value, spread a culture of innovation, and communicate with faculty, students, and the wider community (KSU, 2015).

Despite these efforts, there is a lack of coordination between the relevant authorities in gifted policy development towards acceleration. What is more, in Saudi Arabia there has been a lack of effort put into acceleration procedures which are considered an

effective provision for gifted students (Colangelo *et al.*, 2004). Updating gifted policy to include acceleration practices, training school personnel who are involved in acceleration application, and assessing acceleration application and its efficiency may have to be done by the relevant departments at universities in Saudi Arabia.

In addition, Gifted Education in Saudi Arabia is facing numerous challenges, particularly in terms of the lack of varied support. The Saudi literature on Gifted Education reveals a number of deficiencies within both administrative and academic arenas (Alamer, 2015; Bin Yousef, 2014; Qarni, 2010). Moreover, Gifted Education in Saudi Arabia is facing numerous administrative obstacles relating to institutions, schools, staff, curricula, and policies (Algefari, 2010).

In terms of the programmes themselves, the current services in Saudi Arabia are, according to some, insufficient and do not meet the global criteria and conditions for gifted and talented education (Aljughaiman & Grigorenko, 2013). Therefore, numerous studies have called for the improvement of Gifted Education in Saudi Arabia in terms of more specialised programmes that offer diversity in education, including enrichment programmes and resource rooms that provide an appropriate learning environment that meets the needs of gifted students (Alamer, 2015; Al Arfaj, 2011; Aljughaiman & Grigorenko, 2013, Algefari, 2010; Bin Yousef, 2014, 2018; Qarni, 2010).

From the perspective of the students themselves, Al-Zoubi and Bani Abdel Rahman (2016) conducted a study to measure the level of satisfaction amongst gifted students regarding the performance of the Saudi centres that provide specialised education services in the Najran district. The study revealed that the gifted students are highly satisfied with the teachers and administration. However, they are only moderately satisfied with enrichment activities, student relationship facilities, equipment, and teaching methods. The findings of this study are similar to Bin Yousef's (2014) conclusions that the infrastructure in Riyadh in Saudi Arabia is limited and that improvement is required in the following areas: financial allocation, programme diversity, administration, and policy updates.

In light of the above, it is evident that the appropriate educational interventions are insufficient and do not reach all students in Saudi Arabia. Moreover, the quality of teacher training and the school environment and curriculum are insufficient for gifted students. In addition, the outcomes of the gifted provision are not quite aligned with the Saudi government's vision for human development (Saudi Vision 2030, 2016) and the plans for human development in the country (Alyahya & Irfan, 2016; MEP, 2013). Therefore, improving the situation for Saudi gifted through the development and diversification of services and provision might help to address the deficiency in gifted provision in Saudi Arabia.

3. Recent Regulations Regarding Acceleration in Saudi Arabia

In 2014, Saudi Arabia released and applied new regulations for acceleration. The Saudi acceleration system requires students to skip an entire grade and to transfer to an appropriate grade that is compatible with their level of development. The MOE disseminated the instructional manual for the acceleration process among Saudi schools and the General Directorate for Gifted Care. The manual includes the justification for applying acceleration, including differentiation among the students and evidence about the influences of acceleration. The manual defined acceleration as a procedure that allows the students to move to a higher grade faster than their peers. The students who are eligible to accelerate are those who have mastered all the compulsory skills in school modules earlier than their peers, and/or who have achieved 98% or above in each compulsory module assigned in the previous academic year.

The manual specifies the permitted grades for acceleration.

The manual sets out the procedure for acceleration. Firstly, the students must have scored in the top two per cent on the national test (Qiyas Test for Giftedness). Secondly, at primary level, students should have mastered all the compulsory skills, and for elementary and secondary school levels, they should have achieved 98% or above in each compulsory module. Thirdly, the school should establish a preparation programme regarding acceleration. Fourthly, nominated students should be interviewed and their parents' approval obtained for accelerating their child. Fifthly, the student record and information should be completed. Lastly, the achievement test should be given to all the nominated students and the results announced.

A further issue is that Saudi Arabia has allowed the top two per cent in the National Project for Gifted Identification to be accelerated, whereas in Germany approximately 0.05% of all students skipped a grade (Gronostaj *et al.*, 2016). Furthermore, in the USA, successful acceleration programmes (e.g. the Study of Mathematically Precocious Youth SMPY) follow a similar procedure in screening their students, but they only accept students who score in the top one per cent in the Scholastic Aptitude Test (SAT). However, Saudi Arabia remains conservative in the students' ratio, compared to the statement of Colangelo *et al.* (2004) that all students scoring in the top five per cent could be referred to acceleration programmes. Another concern is that the manual does not include a detailed counselling plan for the schools that apply the acceleration. Furthermore, the Saudi instructional manual has a mismatch with the guidelines by Feldhusen, Proctor and Black (1986) that help practitioners determine how best to accelerate gifted students.

An important point to note is that the instruction manual by the MOE is not based on research, and acceleration had not been used in Saudi Arabia before the dissemination of this manual. Although the regulations were introduced in 2012, the application of acceleration did not commence until 2014. Due to the short period in which the acceleration programme has been in operation, it is not possible to gauge its efficiency; rather, a longitudinal study is required to track students, in order to determine its efficiency. In addition, research on acceleration efficiency has accumulated over many years (Colangelo *et al.*, 2004). Therefore, it might be better simply to benchmark and simulate best practice in acceleration for Saudi Arabia at this time.

In addition, the MOE has not included a plan for those students who have been accelerated and then graduate two years early from school (or more than two years in the case of students taking summer credit courses at secondary school), because acceleration services stop at intermediate school level. For university admission, the students have to take the Qiyas Test (the General Aptitude Test by the National Centre for Assessment), which is tailored for secondary level students aged 17 to 18, not for those aged 14 or 15, which is a dilemma confronting accelerated students in Saudi Arabia.

Indeed, transitioning to university is considered a critical problem for gifted students, since a difficult transition to university may lead to underachievement and possibly withdrawal from university. In addition, gifted students excelling at high school are not guaranteed to reach such high achievement at university (Sayler *et al.*, 2015). Mendaglio (2013) argued that a successful transition from school to university is essential for the academic achievement of gifted students. Furthermore, he claimed that unsuccessful transition from school to university could lead to a negative effect on the academic experience of gifted students. Therefore, one solution would be to put in place a special intervention to prepare accelerated students for university life, which might also help them to become more engaged at university.

However, having intervention at the post-secondary level could

address the main issues confronting those involved in gifted provision in Saudi Arabia, and perhaps offer educational alternatives for gifted students. The intervention could be in the form of a special programme or specialised school/unit within the university campus (university-based school), which must possess the following: the use of an ability and aptitude measurement appropriate to the accelerated students' age; the inclusion of a counselling plan for gifted students, conducted by trained staff; provision of a curriculum to meet gifted students' needs; and the alignment of educational outputs with those of the Saudi Vision 2030.

The university-based school or unit is a space allocated for gifted students who have been accelerated and those who finish high school earlier than their peers. This space managed by the hosting university in terms of staff employment, curriculum design, allocation of structural funding, and provision of support services, such as counselling.

This article seeks to explore the potential educational interventions for Saudi Arabia and the components to implement such interventions, and to understand the Saudi context in terms of its potential to adopt new interventions for accelerated gifted students. The article may contribute towards understanding the process of instituting provision for accelerated students, whether for Saudi Arabia or for other countries where there is sufficient financial allocation for gifted provision, as well as for those who may follow the example of Saudi Arabia in the field of gifted education. Adopting the concept of allocating a special intervention for accelerated gifted students might potentially increase the number of enrichment hours for gifted students, which may help the country enhance their performance in specific disciplines.

4. Early Entrance Approach

Early entrance to university is a common intervention for accelerated students in many countries such as the USA, China, and Australia (Jung, Young, & Gross, 2015). It is one of the acceleration approaches permitting high-ability learners to enrol in a college or university one, two or more years earlier than normal, without their first obtaining a high school diploma (Brody *et al.*, 2004).

The gifted students can engage in the university and select their university-level courses, unlike the Transition School where they are grouped together in one place (Brody & Stanley, 2004; Hertzog & Chung, 2015; Olszewski-Kubilius, 1995). However, students who attend an Early Entrance approach are subject to several criteria that vary from one institution to another. Standardised testing is the major factor that affects the admission to these approaches. In addition, some colleges or universities also evaluate other aspects to determining the readiness of applicants, such as their performance during the interviews, readiness for college life, family support, and social and emotional maturity (Brody *et al.*, 2004; Olszewski-Kubilius, 1995).

The Early Entrance approach varies in several areas. Students can take advanced curricula that align with what is studied in traditional schools; However, some universities restrict the number of courses that the students can take per semester. However, there are concerns that involving students who are younger than normal in university life may affect their social and emotional progress. However, the main goal of the Early Entrance approach at many universities is to support the entrants socially and emotionally, by providing students with several support services such as special residence halls, an assigned counsellor, student lounge, and suitable social events (Brody *et al.*, 2004). These supportive services permit the students to meet their true intellectual peers, so the Early Entrance approach may be a welcome enrichment to their social lives. However, in the Saudi

case, the accelerated students will certainly be involved in university at a younger age after all, so having this approach might be an option for those who want to skip secondary school and enrol in challenging tasks that meet their needs (Brody *et al.*, 2004; Hertzog & Chung, 2015; Janos *et al.*, 1989). However, Saudi accelerated students must have a secondary certificate to enrol at university, whatever their ages. Therefore, it might be better if Saudi policymakers think about enrolling 14 or 15-years old gifted students in university immediately, without making obligatory the possession of a secondary school certificate.

5. Transition school

Specialised transition schools are considered by some to be an educational intervention that meets the academic development needs of gifted students, as the students work together in a heterogeneous group to maximise their potential (Borland *et al.*, 2000; Klimis & VanTassel-Baska, 2014; Schroth, 2008; Stanley, 1991). A Transition School allows the gifted students to skip their secondary school and be involved in a programme within the university campus that is designed to meet their needs. Gifted students may achieve several positive outcomes if attending a transition school, as there are a number of benefits to this solution. Firstly, all elements of their education can take place in one location, under the supervision of trained teachers with high level qualifications, the advanced curricula are designed especially for gifted students, and it is an optimal environment for supporting gifted learners. Furthermore, the fact that all of this is housed 'under one roof' could provide further advantages that may help gifted students to learn and achieve higher levels of performance (Feldhusen, 2005). However, the link between secondary school and post-secondary education for accelerated students has not been addressed in Saudi policy. This is a subject that needs addressing, as the existence of a special school that prepares young accelerated students for university life might help them to engage and become actively involved at university.

6. The Main Components of Saudi Arabia's Potential Educational Intervention

The proposed intervention for Saudi accelerated students who graduate early from high school and are at least two years younger than their peers might be in the form of a university-based school or unit, as an allocated space that groups the accelerated students in one place; as Klimis and VanTassel-Baska (2014, p. 174) argued, gifted students 'need to work together in flexibly grouped settings to maximise all aspects of their talent development process'.

The suggested school or unit applies a full one year of provision that can be credited to their academic achievement and exempt them from having the Preparatory Year that applies for freshmen in Saudi universities. The main goal of this intervention is to make sure that those students transition smoothly to the university, and that their social and emotional needs required at this level are met, as well as directing them to the appropriate career path for their future. In this section, the main educational components possibly appropriate for inclusion within any interventions for gifted students are briefly discussed.

6.1. Educational Sitting:

As an essential component of gifted intervention, Clark and Zimmerman (2002) asserted the significance of having a differentiated educational setting, allowing gifted students to have suitably equipped allocated spaces, up-to-date laboratories for special research and investigations, professional-level books and materials, and scientific journals and periodicals.

Tan *et al.* (2016) similarly pointed out the impact of the environment on fostering the creativity of gifted students, as the environment is a shared system of behaviour, cognition, and values, in which individuals interact.

Therefore, it could be ideal for Saudi universities to adopt such these interventions (in the form of a transition school, or separate unit within a relevant department that advocates giftedness) within their campus, in order to have suitable space. Several benefits of locating such interventions within universities are as follows: allowing the school/unit to benefit from and capitalise on university facilities, including technology, amenities, and learning resources such as laboratories; facilitating the recruitment of teaching staff to take charge of the school/unit; and being sustained by reliable sources of funding from the university.

Callahan *et al.* (2017) stressed that the allocation of a financial structure is a major factor playing a significant role in the quality of the programme. Therefore, the suggested intervention has to be funded by the government and/or receive funds from external sources, such as donations or grants (Jones *et al.*, 2002; Rapp, 2008).

6.2. Identification:

The identification process in Saudi Arabia was conducted through coordination with three principal authorities: the MOE, the National Centre for Measurement and Assessment (Qiyas), and Mawhiba. The integration between these three authorities might be the cause of deficiencies in identification that have been indicated in the literature (Al-zoubi & Bani Abdel Rahman, 2016; Bin Yousef, 2014; Qarni, 2010) in terms of the length of the process, delay in making decisions, and complicated procedures. In addition, the decision on acceleration enrolment is only released once a year by the Minister of Education for a certain cohort of students, which makes the process heavily centralised and complicated. Colangelo *et al.* (2010) released research-based recommendations which specify that the decision on acceleration should be made by a team not an individual, as a common impediment to acceleration occurs when acceleration decisions are made by a gatekeeper who may have negative personal views about acceleration.

Decentralised decision-making is suggested to facilitate the process. The proposed intervention suggests targeting the ninth, tenth, and eleventh grades, accelerating the students to university without their obtaining the secondary school certificate, as the Qiyas test is an alternative criterion to enrol in college or university. Otherwise, the standards for nomination and acceptance must align with what is revealed in the gifted literature, such as academic aptitude, reference to students' scores in the Saudi Standardised National Achievement Tests, written essays, interviews, accomplishments, and awards. Furthermore, recommendation letters from a parent or teacher are also required. However, student maturity could be an important factor in the identification process, as the students have to show their sense of responsibility in going through an intensive acceleration process to the university, which can be evaluated through interviews with the students and their parents or peers (see Abdulkadiroğlu *et al.*, 2014; Abdulkadiroğlu *et al.*, 2005; Bin Yousef, 2018; Corcoran & Baker-Smith, 2015). Lastly, admission committees often consider indicators of learning motivation and commitment, in order to ensure students' success in rigorous programmes (Corcoran & Baker-Smith, 2015; Rapp 2008). Outreach strategies have to be included with the identification process: visiting targeted high schools, involving the stakeholders with the promised intervention, launching a summer programme – all these strategies can assist in reaching out to potential students.

6.3. Curriculum:

According to Klimis and VanTassel-Baska (2014, p. 174), 'Gifted students require a comprehensive and ongoing differentiated curriculum and instruction to develop their abilities appropriately.' Establishing a special intervention for gifted students demands more than that provided by a traditional school or university in terms of curriculum priorities, because of the level of subject matter and the breadth of the required courses (Stanley, 1991). That is to say, the curriculum has to meet the learning needs of gifted students, align with the academic abilities of gifted students, who learn faster and possess a level of problem-solving skills that are not challenged by the ordinary curriculum (Borland *et al.*, 2000; Schroth, 2008; Stanley, 1991). Specifically, the curriculum has to provide students with enrichment activities and extracurricular experiences such as seminars, scientific trips, and internships with university researchers (Rapp, 2008). Having a sequenced curriculum from introductory level to advanced level for gifted students was mentioned by Clark and Zimmerman (2002) and others (Klimis & VanTassel-Baska, 2014; Renzulli & Reis, 1997; Stanley, 1991).

The proposed curriculum has to be sequenced and focused on a specific area that converges with the Saudi Vision 2030; astronomy, science, and technology are suggested. The intervention (school/unit) could provide courses such as English language, history, biology, math, pre-calculus, chemistry, physics, ethics, and physical education. In addition, the course could foster skills through academic advisory sessions for university preparation, registration tutorials, essential communication skills, and professional etiquette.

Specific teaching strategies have to be used when delivering the differentiated curriculum for the potential students; discussion, academic writing, problem-solving, creative and critical thinking skills, research and investigation skills are suggested. However, providing national standards are required for teaching the high-ability students.

6.4. Leadership and Personnel:

For the Saudi context, an appropriate form of transformational leadership would be urgently needed to initiate reform in the educational system, and boldly adopt the new concept of universities providing policy and intervention for accelerating gifted students (Leithwood & Sun, 2012).

Saudi Arabia has adopted the National Association for Gifted Children (NAGC) standards, and many gifted education strategies and policies for gifted students in Saudi Arabia have been adopted from work completed in the United States but amended for the Saudi context (Al Nafa'a, 2000). Therefore, the Saudi case can follow the criteria of the teachers specified for gifted students by the NAGC. Klimis and VanTassel-Baska (2014) developed the following list of expectations for highly effective teachers, in order to create criteria to guide teacher selection. Firstly, teachers should demonstrate the competencies/skills needed to develop and provide students with optimal educational experiences. Furthermore, they must provide evidence of the following abilities/skills through a portfolio, résumé, or interview: the understanding of gifted learners' characteristics; the ability to develop a differentiated curriculum appropriate for gifted learners; the ability to develop a curriculum that endorses creative, critical, and complex thinking; the use of a variety of methods to deliver instruction appropriate for gifted learners; the use of multiple assessments to meet the academic needs, interests, and learning preferences of gifted students; the ability to address a real-world problem through creative tasks such as service learning; good communication skills with students, school staff, families, and community members; and participation in school improvement,

reform, curriculum teams, or other related duties.

The proposed intervention has to focus on hiring individuals with expertise and advanced knowledge in specific disciplines that converge with the Saudi Vision 2030. Furthermore, teachers have to hold a high-quality academic degree, whether a master's or a doctorate in a specific discipline, as well as teaching experience, or at least a teaching certificate. In addition, given that the jobs in the proposed intervention may be full time or part-time, it is important to note that part-time teachers might have a full-time job at another local institution or university (Rapp, 2008).

7. Simulating the Leading International Best Practices

The US approach is thought to offer a model for guiding the establishment of specialised intervention in developing countries (Zhang, 2009). The first American special school was established in 1901 and, given that America's Gifted Education practice has been honed for over a century, it serves as a benchmark for both developing nations and other Western countries (Freeman, 2002; Plucker & Callahan, 2014). VanTassel-Baska (2010) stated: 'Urban programs can offer important models of successful practice that have been operative across decades for gifted students ...These models represent the best principles and practices of the field' (p. 26). In addition, American research output has global dominance, and this has attracted more scholars to study American practices (Persson, 2012), so it could be wise to start where others end.

Saudi Arabia is determined to improve its education provision through national initiatives such as the Saudi Vision 2030. In addition, there have been some random attempts and ad hoc efforts to allocate and establish specialised schools and STEM schools for gifted Saudi students. However, so far, no official university-based schools/units for gifted students exist in Saudi Arabia to smoothly transfer gifted students to university life. Looking to the US model, several requirements need to be met in order to establish a university-based school/unit for gifted students: policies need to be devised; suitably qualified staff need to be recruited and leadership appointed; and the curricula need to be constructed and possible viable themes identified (US Department of Education, 2008).

Despite the fact that it is difficult to replicate the American model in a very different context (VanTassel-Baska, 2013), the American model of university-based programs and schools for gifted and accelerated students that already has operated in the USA sites can be a benchmark and can tell us what works in practice for our culture, norms, and policies (see Bin Yousef 2018). Benchmarking US practices can clarify the complexities of the process of policy borrowing and replicating between different contexts, as this process involves layers of structures, actors, and powers (Perry & Tor, 2008) that can influence the development of the expansion in cross-national educational interventions (Winstanley, 2012).

In order to adapt Gifted Education provision to the Saudi context in general, and in designing university-based schools in particular, it is necessary to explore and study the composition and workings of these schools established for gifted students, in terms of their organizational structure, policies, location, facilities, personnel and leadership, teaching strategies and curricula. It is also important to simulate pioneering practices such as those found in the USA.

This simulation will enable Saudi Arabia to adapt its gifted and talented education provision both regionally and globally. Moreover, by designing and establishing a model for university-based schools for accelerated students, Saudi Arabia will potentially increase the quality of the higher education outputs that can raise the rank level of the university honoured with such interventions; it could also support the

Saudi university to be a model for similar institutions in neighbouring countries, to develop their own gifted provision in higher education.

8. Partnerships: A Possible Solution

Building partnerships, whether locally or internationally, could expedite the establishment and implementation of such interventions. International partnerships might help Saudi Arabia to simulate the pioneering practices of places such as the USA, whether in planning, implementation, and/or assessment, in order to meet global standards in Gifted Education. In addition, it is essential for emerging institutions to build meaningful relationships and partnerships for the implementation of the Saudi Vision 2030 and the National Plan on Human Development, while maintaining their identity, internal cohesion, and staff training and development, and applying the necessary administrative and management mechanisms. In the establishment of any intervention concerned with gifted provision, especially in a third-world country, it is important to have effective partnerships with other organisations, whether at the micro or macro level, in order to resolve its complexity and inflexibility (Brinkerhoff, 2002).

Olszewski-Kubilius and Clarenbach (2014) asserted that partnership and collaboration between community-based entities and universities could offer a rich selection of services and opportunities to students, resulting in a more comprehensive and ultimately successful programme. The partnerships could be in the form of offering summer programs, coursework, or internship opportunities, and facilitating the services and equipping the spaces.

Internal partnership within universities such as partnership with college faculty members to mentor gifted students, had positive results on gifted students' performance (Newman and Hubner, 2012). Partnerships in the proposed Saudi intervention could take place as building a collaboration between the Deanship of Scientific Research, Deanship of Skills Development, and Deanship of Student Affairs, in order to gain qualified services for gifted students.

9. Conclusion

Since releasing new regulations for an accelerated academic system, the Saudi education system is facing new challenges in its gifted provision. The education sector must keep up with the changes and reforms by creating appropriate institutions and bold movements to offer educational alternatives for gifted students. Having university-based schools for a small cohort of students located on university campuses would develop supportive links for accelerated students who want to enter university at an early age. Such schools could also offer advice to accelerated students on academic issues and support them with both social and emotional issues. The proposed intervention could meet the needs of gifted students who require a special place to meet, learn, and prepare for their college life. The presence of a university-based school would allow the school to benefit from the location, with access to academic facilities such as the university library, technical conveniences like the university's Wi-Fi network, and other amenities within the campus that might increase the gifted students' levels of satisfaction in terms of the services. The main government bodies that serve gifted students can work together with individuals and/or international and national relevant institutions to design the advanced curricula for these specialised schools. International partnerships with institutions that have longstanding experience of Gifted Education, such as those in the USA, could help in the implementation and evaluation process.

The key educational components to support implementing such intervention are as follows: an educational setting equipped to support and meet the needs of gifted students; transformational

leadership and qualified trained personnel to advocate gifted provision; a fair identification process that is de-centralized designed to determine the state's vision and future orientation; a sequenced, differentiated curriculum delivering discrete instructions and allowing assessment of students' progress; counselling plans supporting accelerated students on a regular basis and providing advice on future paths or careers, and psychological and/or academic issues (Bin Yousef, 2018).

Biography

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Dr Bin Yousef graduated from the University of Southampton, the UK, where she specialized in gifted and talented education. She works as a full-time consultant at King Abdulaziz and his Companions Foundation for Giftedness and Creativity (Mawhiba). She has contributed to the implementation and assessment of the enrichment programs for Saudi gifted students. She has participated in several conferences and related events locally and internationally and is a member of WCGT and a research reviewer in various journals.

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