



Accepted: 14 August 2017
Published: 24 August 2017

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INTERNATIONAL & COMPARATIVE EDUCATION | RESEARCH ARTICLE

Gifted education in the United Arab Emirates

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Abstract: Gifted education, defined as the schooling of students demonstrating some exceptional abilities, is relatively new in the education system of the United Arab Emirates (UAE); hence, research on gifted education in the UAE is limited. This study is the first to investigate the implementation of gifted education programmes at seven primary government schools in Dubai—UAE. The main research question of the study was: What programmes are offered for gifted learners in primary government schools in Dubai? And what is needed in order to improve the provisions of gifted education? The study adopted the National Association for Gifted Children (NAGC) gifted programmes standards as a framework. A sequential exploratory mixed-methods research design was employed with triangulation of data to test the validity of the findings. The methods used to collect the data include classroom observations, interviews and a questionnaire with teachers, a focus group with parents, and a review of official documents. The conclusions demonstrate that the provision of education for gifted students has progressed in Dubai—UAE in the last 10 years, However, more improvement is required in identification of gifted students and implementation of gifted policies and programmes. School administrators and teachers need to better understand and implement the policies prescribed by the Ministry of Education. Based on the findings, a set of recommendations is offered to better serve the gifted students of the UAE.



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PUBLIC INTEREST STATEMENT

This paper evaluates the implementation of gifted programmes in the United Arab Emirates (UAE) focusing on a study conducted in Dubai. The UAE is striving to reach excellence in many sectors including its economy, industry, finance and education. Gifted education is a relatively new initiative in the UAE. Various gifted education programmes have been implemented in public schools in the UAE. Only limited research has, however, been conducted to evaluate these programmes, providing a direction and rationale for the current study. This study is the first to investigate the implementation of gifted education programmes in public schools in Dubai, UAE.

Subjects: International & Comparative Education; Inclusion and Special Educational Needs; Gifted & Talented

Keywords: gifted education in UAE; gifted programmes; gifted identification

1. Introduction

In order to prepare children for the expanding global economy in the twenty-first century, the education of all students needs to be competitive and innovative. Countries that do not prepare all children for a new world may lose their economic and cultural status (Gardner, 2004). World-class educational standards are currently being established, and educational policies are being formulated based on international best practices. Consequently, more than ever, the field of education, including gifted education, is required to provide meaningful outcomes for all students (Basham, Israel, Graden, Poth, & Winston, 2010).

Although gifted education has been well established in the United States of America and Europe for many years (Davis & Rimm, 2004), gifted education is a relatively new initiative in the United Arab Emirates (UAE). For the last 16 years, various gifted education programmes have been implemented in government schools in the UAE (Ministry of Education [MoE], 2014). So far however, only limited research has been conducted to evaluate the effectiveness of these programmes, providing a direction for the current study. Accordingly, the aim of this study has been to (a) explore and assess the provision of gifted education at seven governmental primary schools in Dubai—UAE; and (b) provide recommendations based on the findings, in order to enhance the provision of gifted education in the UAE.

2. The United Arab Emirates

The United Arab Emirates (UAE)—see Figure 1—is a rapidly developing country, located on the Arabian Peninsula in Asia on a land area equal to 83.600 square kilometres.

Seven emirates form the UAE with Abu Dhabi as the capital. The other emirates are: Dubai, Sharjah, Ajman, Umm Al Quwain, Ras Al Khaimah and Fujairah (Gaad, Arif, & Scott, 2006). The UAE was declared in 1971 when six emirates joined the federation, and Ras Al Khaima joined in 1972. The population of the UAE as of 2016 was 9,317,849 based on the latest United Nation estimation. The Federal National Council (FNC) represents the legislative authority, and the Cabinet of Ministers represents the executive.

The UAE is striving to reach excellence in many sectors including its economy, industry, finance and education (Gaad et al., 2006). The government vision agenda (UAE Vision, 2010) calls for six national priorities, as follows: (1) Cohesive society and preserved identity; (2) safe and fair judiciary; (3) competitive knowledge economy; (4) first-rate education system; (5) world-class healthcare; and (6) sustainable environment and infrastructure.

Figure 1. Map of UAE.

Source: World Bank.



3. Gifted education in the UAE

In the year 2000, the Ministry of Education (MoE) started offering gifted education programmes at government schools; nevertheless, there was no law regulating the services provided for gifted students (Abood, n.d.). Merry (2008) suggested that to ensure that gifted students have justice in education, they should get an appropriate education, which should challenge and help fulfil their abilities. The UAE translated Merry's suggestion into an initiative called "School for all". This initiative guaranteed equal education opportunities for all students regardless their abilities or disabilities. "School for all" is a strategic improvement initiative, which was created in response to international calls for inclusive education as a form of equity in education. "School for all" is the umbrella that encompasses all special needs services for both gifted students and students with disabilities. "School for all" is in line with the Ministry of Education's Strategy 2010–2020, which embraces a "student-centric education model" focused on improving the educational outcomes by achieving 10 goals. "School for all" is associated with the sixth goal in the MoE strategy 2010–2020, to "ensure that students with additional needs receive extra and individualized support to integrate them into the educational system". This goal strongly supports the principle of "equity in educational opportunities for all students", fulfilling the identified gifted students' needs in the strategic plan of the MoE (Ministry of Education Strategy, 2010–2020).

Equity in education is a fundamental right for all human beings and inclusion can be seen as a translation of this equity. According to Roach (as cited in Bennett, Deluca, & Bruns, 1997), inclusion can be defined as providing equal educational opportunities for all students regardless of their ability or disability. "School for all" includes gifted education services as gifted students are considered students with special needs, which have to be met.

A set of implementation initiatives was created to achieve the sixth strategic goal which emphasizes equity in education. In 2008, the MoE created the "development of gifted and talented students' skills" initiative to better serve gifted students in government schools. Two hundred and fifty schools joined this initiative between 2008 and 2015; a total of 8,081 gifted students benefitting from the initiative. This initiative included training 200 teachers per year on identification and various gifted programmes. More recently, in 2014 the MoE introduced a new initiative that is an "integrated system to identify and care for talents".

To support the "School for all" initiative the MoE launched "general rules for the provision of special education programmes and services" in May 2010. These rules aim to regulate all services provided for students with special needs whether they are disabled or highly able. "General rules for the provision of special education programmes and services" consists of a framework for inclusion, services and roles of whoever is involved in inclusion practice and educational considerations, including the examination system for students with special needs.

The UAE Government declared 2015 as the "Year of Innovation" and developed the National Innovation Strategy, which aims to place the UAE among the most innovative nations in the world in seven years (UAE Ministry of Cabinet's Affairs's, 2015). Innovation is defined as "the aspiration of individuals, private institutions and governments to achieve development by generating creative ideas and introducing new products, services and operations that improve the overall quality of life" (UAE National Innovation Strategy, 2015, p. 7). According to this strategy the key pillars are: an innovation-enabling environment, innovation champions and innovation priority sectors. Several initiatives were developed to translate the Innovation Strategy into reality (e.g. the Mohammed bin Rashid Smart Learning Programme (MBRSLP), Think Science programme, Abu Dhabi Centre for Technical and Vocational Education and Training programme and others including innovation labs in schools and universities in addition to Specialized research centres in universities). In addition, Hamdan Award launched UAE "fab lab" as a response to the national innovation strategy and declaration of year 2015 as year of innovation (Hamdan Bin Rashid Al Maktoum Award for Distinguished Academic Performance, 2015). Because the National Strategy of Innovation is new and was launched after finishing the data collection stage of the current research, it was excluded from the current

study. In addition, the current study places emphasis on evaluation and assessment of current running programmes rather than newly admitted programmes. The subject of innovation is considered for further research.

In addition to the MoE, there are several other organizations in Dubai that implement programmes for gifted students in the community. The two most prominent are (a) the Hamdan Bin Rashid Al Maktoum Award for Distinguished Academic Performance; and (b) the Emirates Association for the Gifted. The first is a non-profit organization in Dubai. Its activities vary from rewarding the excellent performance of students, teachers and administrators, to providing programmes for gifted students. By the year 2006, this organization adopted a national plan for nurturing gifted students, supported by scholars from Ulm University in Germany. The plan consisted of seven components: (a) identification; (b) gifted programmes; (c) guiding and counselling for the gifted and their parents; (d) professional development in gifted education; (e) campaign to raise the awareness of gifted programmes in the society; (f) Hamdan centre for creativity and innovation; and (g) Hamdan incubation schools and partnership with gifted-oriented entities inside and outside the country (Hamdan Bin Rashid Al Maktoum Award for Distinguished Academic Performance, 2015).

The second organization is the Emirates Association for the Talented, which works mostly in the summer breaks by identify gifted students and offer them summer programmes (Dubai Police). Other agencies that support gifted education include the Abu Dhabi Education Council (ADEC) established in 2005 (Abu Dhabi Education Council, 2011) and the Knowledge and Human Development Authority (KHDA) in Dubai created in the year 2006 (Knowledge & Human Development Authority [KHDA], 2011). Both agencies were created to meet the development goals of each emirate and both oversee the education systems at regional level. Many new regulations have been created by these various agencies; however, due to the short time limitation, government schools were used as the focus for this study. Some other entities are recommended for further studies in the recommendation section of the current study.

4. Methodology

The study used a mixed-methods approach with a sequential explanatory design involving multiple case studies to address the research question: What programmes are offered for gifted learners in primary government schools in Dubai/UAE? And what is needed in order to improve the provisions of gifted education? Triangulation was used in this study to improve the validity of the findings by comparing data collected from multiple sources. Five data collection instruments were used in the current research: (1) questionnaire; (2) classroom observations; (3) semi-structured interviews; (4) focus groups; and (5) documents review.

4.1. Sampling

Participants were from seven primary schools in Dubai, UAE which were chosen using purposive sampling. The inclusion criteria for the selected schools were established as follows: (a) primary school; (b) female teachers; (c) existence of gifted programmes; (d) willingness of school administrators and teachers to participate; and (e) a recommendation from the authorized educational zone.

An informed consent form was obtained from the school principals before the data were collected. The principals were informed that it is their responsibility to obtain teachers' and parents' approval. All participants were assured that their participation is voluntary and they can withdraw anytime. Their identities, confidentiality and job security will not be compromised. The anonymity of the names of the schools and the participants is assured through the use of pseudonyms.

4.2. Interview

Three levels of individual participants were selected for semi-structured interview including (a) available and volunteer subject teachers at each school, along with gifted classes teachers and principals or administrators when available; (b) the parents of gifted students; and (c) policy-makers from the MoE represented by the head of the gifted section at the Special Needs Department. A total of eight teachers were chosen for the interviews. One decision-maker at the MoE who helped in setting the

rules for gifted programmes and who supervised the implementation of those programmes was interviewed. Additionally, two parents were interviewed, which made the total of 11 participants for the interviews.

The interview questions were first piloted with three teachers to ensure their clarity. An interview guide was created and piloted with doctoral colleagues whose feedback was used to clarify ambiguous questions. The instrument was piloted with three further teachers, again to ensure clarity. The final version of the instrument was revised following their feedback. The instrument was prepared in Arabic and translated to English. The approximate time for each interview was 45 min. Each interview took place in the participant's place of work. The interviews were conducted at the most convenient time for the interviewees. Permission was obtained from the participants to record the interviews; however, the majority did not agree to recording. Consequently, field note-taking with pen and notebook was used during the interviews. Then summaries of relevant responses were transcribed.

4.3. Observation

Five classroom observations were conducted. The observations were organized prior to the interviews of teachers in order to avoid leading the participants towards any desired actions based on the interview questions. The main focus of each observation was the practice of gifted programmes in the classroom and how gifted students participated in class. The approximate time for each classroom observation was 45 minutes. A coding scheme was used to record the data. In addition, the lessons were voice recorded whenever the teacher gave permission. A semi-structured observation instrument was created for observing the classroom lessons. A pilot study was conducted to develop this instrument to ensure its non-subjectivity and it needs for minimal interpretation. In addition, a reflective journal was used to record the details.

4.4. Focus group

A focus group with parents was conducted to explore opinions about the programmes offered for their gifted children. The approximate time for the focus group was 90 min with a 15 min break. A set of questions was prepared and used by the researcher during the focus groups; however, the meetings were informal, and in conversational manner, in order to encourage the parents to give their opinions freely. The role of the researcher at the focus group was as a facilitator rather than participant in order not to influence any of the participants' views and also to encourage the participants to elaborate their comments. The data collected from each focus group session were recorded by the researcher and summarized in a Microsoft Word file.

4.5. Questionnaire

A descriptive exploratory cross-sectional questionnaire was administered. The fundamental characteristics of the questionnaire instrument were that (a) the teachers were asked to respond to a series of self-report questionnaire items; (b) the responses provided descriptive information about the target population, without changing their environment; (c) the researcher did not assign the participants into groups, nor was any part of the environment manipulated by the researcher.

The questionnaire consists of open-ended and closed-ended items which were divided into three sections. The items were grouped into dimensions according to the research questions. Section 1 elicited demographic information about the participants. Section 2 consisted of closed-ended items about the existence of gifted programmes including definition, identification, programming, policies, budgeting and evaluation. Section 3 contained open-ended questions asking for the participant's suggestions and recommendations to enhance the provision of gifted education. The open-ended questions provided more qualitative details than the closed-ended questions.

Three professors in the field of gifted education reviewed the content validity of the questionnaire. Based on their feedback some items were revisited and rephrased, whilst other items were added or removed. Further validation was conducted by piloting the questionnaire with nine randomly

selected teachers at three schools, before administering it to the larger number of teachers in seven schools. The feedback from the pilot study was used to revise the questionnaire. Because the teachers in the pilot study did not favour online surveys, the final version of the questionnaire was distributed on paper.

The final version of the questionnaire survey was translated from English into Arabic and distributed to the seven schools, which use Arabic as their medium of instruction. Back translation was used to translate the responses from English into Arabic. The English version of the questionnaire was translated into Arabic by three native colleagues who are fluent in English. The Arabic and English versions were reviewed and revised by another group of bilingual colleagues. The Arabic version was reviewed by another group of bilingual colleagues who translated it back to English. The back-translated Arabic version was found to be similar to the original English version.

The questionnaire was administered to 123 teachers from the 150 questionnaires distributed in seven schools to survey the existence of gifted education in Dubai. The number of teachers recruited from each school ranged from 9 to 24. The nationality of the majority (84, 68.3%) of the teachers was Emirati, with the remainder coming from Syria, Jordan, Palestine, Egypt, Yemen, Tunisia and Sudan. Most of the teachers (110, 89.4%) had been awarded a Bachelors Degree. The teachers ranged in age from 20 to 60 years old, but the majority were aged 31 to 40 (51, 41.5%) or 41 to 50 (47, 38.2%). Their experience ranged from less than five to more than 25 years in the teaching profession. The most frequent range of experience was 16 to 20 years (35, 28.5%) followed by 20 to 24 years (25, 20.3%) and 11 to 15 years (25, 20.3%).

4.6. Data analysis

A descriptive exploratory approach was used to analyze the questionnaire survey data. The frequency distributions of the responses to each item were analyzed in SPSS in order to address the research questions. The frequencies (counts and percentages) of the responses to each question were tabulated.

The qualitative data were analyzed using content analysis. The data were first horizontalized, assuming that all of the statements had equal value. After conducting a critical review of the text, irrelevant information was excluded, including the names of the participants, to ensure their right to confidentiality was respected. The content analysis was based on the constant comparison method. The units of the content analysis were the responses of each participant to the questions posed by the researcher. These responses were recorded verbatim, and were entered into the content analysis in full. The responses were not summarized, slanted, or distorted, and the researcher avoided subjective interpretation of their meaning. This strategy ensured that the responses of the entire participant were included, and all were given equal priority. Each primary theme represented a separate issue, topic, concept or proposition. The four research questions and their corresponding themes were identified prior to the content analysis. Consequently, a top-down or “a priori” approach (i.e. identifying the units of analysis which corresponded to each primary theme) was applied. A natural classification of subthemes occurred with each theme, based on the phrasing of the research questions. The coded categories were then grouped by similarity, and a theme was identified based on each grouping.

5. Results

5.1. Policies and provision

Different participants provided variable evidence for the existence of policies and plans for the regulation of gifted education in Dubai/UAE in form of the “General Rules of Special Needs Programs and Services” booklet, in addition to the existence of some Ministerial Decrees. The policy-maker participating in the current study said that the MoE created appropriate policies to serve gifted students better; however, none of the interviewed parents knew about these policies. About half of the teachers believed that there was a national policy for gifted education in Dubai. This finding

confirms that policies to regulate gifted education in the UAE have been created in the last decade; however, many teachers are still not fully aware of their content. The interviewees who said that they knew about the existence of policies or rules regulating gifted education did not possess a copy of the document. They said, however, that the document was available from the resource room teacher, who is responsible for gifted learners and programmes in their schools.

The evidence collected in the current study revealed that discrepancies exist between the official policies developed by the MoE and how the policies are actually implemented in school practice. This finding was consistent with that of Al Qarni (2010) who evaluated gifted education programmes in Saudi Arabia. Al Qarni found a similar disparity between the practices that were recommended in the official Saudi policies and the implementation of gifted education policies in Saudi schools. The disparity may indicate that issues related to gifted education policies may be common between the Gulf Countries. This disparity is also supported by Al-Lawati (2016) who studied the attitudes of Gulf Country citizens towards the services offered to gifted children. Al-Lawati suggested that the gap between the recommendations provided in the policy documents and the implementation of the policy had a negative effect on both gifted education programmes and gifted students. This gap restrained the progression of gifted education provision and resulted in a deficiency to meet the needs of gifted students.

The decision-maker who participated in the current study confirmed that policies regarding gifted education in the UAE were available in the form of a document entitled “The general rules for the provision of special needs programmes and services” published by the MoE in 2010. The purpose of this policy is to regulate, define and identify all special needs for gifted learners. The philosophy behind the education of gifted students in the UAE is also outlined in the guidelines. The clear philosophy for gifted education, based on UNESCO’s “Education for all” movement is that all learners should get equity in educational opportunity. In the UAE, this philosophy has been translated into the “Schools for all” initiative.

It is evident that the MoE is striving to deliver education for gifted student by responding to international calls in the field. Nevertheless, the core focus of the UAE’s policy is not for gifted students, but for the provision of special education for students with disabilities. Only a few pages of the guidelines are allocated to the regulation of gifted education programmes. The emphasis on disabled students is a result of a government initiative to serve people with disabilities, which were guaranteed by law 26/2006 and its amended version 14/2009 for the rights of persons with disabilities. The special needs of gifted students, however, is not included in this law. Any regulation regarding gifted education is not perceived as a right for gifted students, but as a privilege. This is contrary to Van Tassel-Baska and Johnsen’s (2007) claim that gifted education should be seen as a right, rather than a privilege. There is a need for a federal law to support the rights of gifted persons.

Some of the parents who participated in this study stated that they were not aware of any policy regulating the practices of gifted education in Dubai, or they were uncertain whether a policy exists. Others said that they heard about the policy but had never seen it. The majority of the parents did not have a copy of the policy, and could not recall the name of the policy or the date of its publication. Neither did the parents refer to any kinds of plans for their gifted children’s education. This finding is contrary to the recommendations based on previous research regarding the importance of parental involvement to support the educational plan of gifted students. For example, Lopez, Kreider, and Caspe (2004) suggested that schools should encourage parents to advocate for policies and practices in special education that benefit their children’s education.

It appears that the steps taken to disseminate “The general rules for the provision of special needs programmes and services” published by the MoE in 2010 were insufficient, contrary to the requirement for equity in education. The lack of knowledge amongst both teachers and parents concerning national policy indicates that it has not been well distributed, and that teachers have been given

insufficient training about the contents of the document. This finding highlights a need for greater awareness and training regarding the policies regulating gifted education in the UAE.

The results indicate that most of the teachers are not aware of the policies included in the budget allocation for gifted education in their schools. Furthermore, there is a lack of resources for gifted education, reflected by the limited number of teachers specializing in this field. Although the budget for education in the UAE is high (10 billion AED in 2009 according to National Qualification Authority [NQA], 2013), it is suggested that the special needs budget is insufficient. Budget allocation priorities for special education may have been affected by political or other priorities in the MoE (This speculative statement seems out of place here).

Aljughaiman, Ibrahim, and Khazali (2012) highlighted the importance of conducting continuous evaluations to improve the quality of gifted education programmes, however, again the evaluation of gifted education programmes in the UAE appears insufficient. Except for end of year evaluation reports, there seems to be no regular follow up from the authority represented by MoE on the implementation of gifted education programmes. The decision-maker at the MoE in her interview said that insufficient evaluation of gifted education programmes could be a result of a shortage in staff at the Gifted Programmes' Section. In addition, the decision-maker suggested that there is a difficulty in evaluating gifted education, because the number of staff trained in evaluation was too small compared to the 250 schools enrolled in the "School for all" initiative in 2014. The lack of sufficient human resources to evaluate gifted education in the UAE may consequently affect the quality of the programmes.

Previous research (Johnsen, 2006) has indicated that it is important for gifted students to have allocated governmental provision to supervise programmes created for them. Over 90% of the teachers from the seven schools in Dubai who participated in the survey also believed that it is important to have a specialized governmental department for gifted learners. The MoE allocated the Special Education Department as a section in the Federal Ministry in the new organizational chart of 1999/2000. This department is in charge of setting plans and initiatives for gifted education programmes in addition to evaluating their implementation. However, it appears that the human resources allocated to the Special Education Department are insufficient compared to the amount of work that the department has to do.

The findings of the current study indicate weaknesses in distributing plans and initiatives for gifted education created by the MoE. Parents and teachers do not have access to official documents, except for "The general rules for the provision of special needs programmes and services" published by the MoE in 2010. The only way that the researcher could access other documents was through the decision-maker at the MoE, who was very helpful in sending copies of internal documents about plans and initiatives for gifted students. It seems that there is a lack of publicly available information to document the Ministry's considerable efforts towards improving the provision of education for gifted students in the UAE.

The internal documents that the researcher reviewed in this study did not make clear how the initiatives for gifted education in the UAE are integrated into a strategic plan. For example, there appears to be little or no relationship between the three initiatives entitled "School for all", "Nurturing gifted students", and "Developing gifted students' skills". Nevertheless, at the school level, some of the teachers recognized the existence of a strategic plan for gifted education in their school, despite not having a copy. The teachers said that the strategic plan was kept by the principal of the school, or was with the resource room teacher. These findings offer further evidence of the limited distribution of documents applying to gifted education in the UAE, and the need for more training of teachers to make them more aware of strategic plans for gifted education. Although the MoE statistics show that around 400 teachers have been trained on gifted programmes, this study's findings also suggest the limited effect of training on teachers' knowledge about what exists in the field of gifted education.

5.2. Definitions

The review of documents and an interview with the decision-maker confirmed that an official definition of giftedness has been adopted by the MoE, documented in the Ministry's guideline for services and provision of gifted education, as follows: "Gifted students are those who have an outstanding ability in one or more areas of intelligence, or creativity, or academic achievement or special talents such as poetry, drawing, handicrafts, sports, drama, or leadership". This definition of giftedness supports Subhi's (1997) study claims that Gulf countries tend to define giftedness according to achievement and creativity. Although most of the teachers in the survey knew that there was an official definition of gifted students for their schools, a considerable number of them did not recall it. Additionally, over three quarters believed that this definition was considered as part of special education. The teachers tended to define giftedness differently to the official definition, according to their own experiences and beliefs. The teachers' definitions of giftedness were very variable, including giftedness depends on speed, being different, being creative, having high abilities, skills and talents, or acting well above the average levels of attainment for their age group. One teacher stated that she defined gifted learners by the use of the Renzulli's Schoolwide Enrichment Model model. Some teachers defined giftedness in terms of the students' scores on subject tests, mental ability tests and IQ tests. The parents similarly related giftedness to scoring high marks in school achievement tests.

The evidence obtained in the current study indicates that although there is an official definition of giftedness adopted by the MoE and published for schools in Dubai, the teachers and parents continue to define giftedness partially and differently. This finding is consistent with the view that giftedness is a complex, multivariate concept, which continues to be defined in different ways. McAlpine (2004) reported that researchers have identified 213 definitions of giftedness. The evident failure of teachers and parents in the UAE to adopt the official national definition of giftedness indicates that awareness of this definition is insufficient. These findings offer further testimony to the limited distribution of documents applying to gifted education in Dubai, and the need for teachers to be made more aware of the strategic plans for gifted education. Definition of giftedness and identification are two faces of the same coin. They are both of equal importance to the gifted education system. According to Bracken and Brown (2006), definition of giftedness and identification of gifted students both affect the "placing and providing appropriate services" (p. 112).

5.3. Identification

The MoE recognizes the importance of identification procedures for the gifted population in schools in order to serve them better. Official procedures for the identification of giftedness have been published in the MoE's guidelines for special education. The decision-maker interviewed in the current study stated that the MoE has published the identification process in "The general rules for special education programmes and services". The rules define the process for identification, and the steps which educators can follow when identifying a student who is gifted. The rules emphasize that all gifted students in the school should have the chance to be discovered and benefit accordingly. Moreover, the MoE has published a guideline entitled, "The practical manual for gifted programmes", which in addition to the official procedure, provides suitable tools for each step of the identification procedure. The teachers who participated in the current study supported the statements of the MoE decision-maker. The majority of them said that there are official identification procedures; however, the teachers did not necessarily follow these guidelines. Nearly three quarters of the teachers reported that they had specific screening and identification procedures for discovering gifted students in their school, the most frequent of which included teachers' nominations, achievements tests, IQ tests and students' products. The identification procedures found in the current study is inline with Kornhaber's findings (1999); that assessment tools are too often limited to referral or nomination of teachers, schools grades and IQ tests. In contrast, the responses of the parents who participated in this study revealed that they did not know about the identification procedures used in the schools. In spite of the importance of identification for proper gifted programmes, awareness about the procedures is mostly not followed in the participants' schools. Opportunities for gifted students should be provided (Miller, 2005). Identification was found to be overly reliant on one instrument: a

teacher's referral. To improve matters, it would appear that a multidimensional approach would benefit gifted students more than relying on a single means of identifying them. Such an approach is supported by Ziegler and Perleth (1997) in their research findings.

The evidence indicates that teachers rely too heavily on their own nominations to determine if a student is gifted, based on their own teaching experience, while parents see the school as main source of identification. A disparity was revealed between the identification procedures defined by the MoE and the procedures used by the schools. This finding was consistent with that of Al Qarni (2010) who found a similar disparity between the procedures adopted by teachers, and the procedures that were recommended in the official policies for identification of gifted students in Saudi Arabia. This disparity further confirms that issues relating to gifted education policies may be common between the Gulf countries. This finding agrees with Al-Lawati's (2016) research on the Gulf countries.

5.4. Programmes and implementations

The findings of this study relating to the availability of gifted education programmes reveal that there is a relatively restricted range of programmes available for gifted students in the seven participating schools. According to the MoE decision-makers, these programmes should include identification, enrichment, teacher training, equipping schools with resources, giftedness awareness campaigns, publications and related books and strategic/operational gifted plans. Evidence obtained from the teachers indicated that the common types of programmes were enrichment, followed by competitions or Olympiads, field trips, gifted clubs and advanced curricula or curriculum adaptation/modification. The least frequent types of programme were acceleration and advanced placement, International Baccalaureate, and differentiated curriculum. Competitions are seen by some researchers as a common form of provision. For example, Freeman (2002) found that competition can be used to define gifted students' abilities. She emphasized, "Many highly able children used [competition] quite consciously to improve their skills, because of the reward it offered them. But they knew that in order to be effective, the comparison had to be meaningful, as well as part of the process of getting to the top. Which is not the same as the simple thrill of winning" (p. 93). This observation emphasizes the importance of competitions, however other provisions are similarly important for gifted students.

In spite of the number of available programmes, teachers tend to rely heavily on competitions. The majority of teachers in the current research were not aware of all the choices of programmes the MoE offers. When teachers were asked what the Ministry offers for gifted learners, 53.7% of the teachers responded "national and international competitions". The second highest response was "Resource Room Teacher knows them" (referring to the teacher who is responsible for gifted programmes in the school). One of the teachers summarized all the programmes offered by the Ministry of Education as "enrichment activities, summer camps and international activities". Another teacher said competing in international Olympiads is one of the opportunities the Ministry offer those who are gifted. The reason for the discrepancies between the programmes described by the Ministry, and those implemented by the schools may be that teachers tend to choose the easiest way of teaching gifted students due to their heavy schedules in catering for all students. Another reason is possibly that teachers do not receive sufficient training, resulting in them not being aware of the range of programmes available, and not implementing all the gifted programmes prescribed by the MoE in their classrooms. Additionally, the lack of evaluation of programmes implemented may result in the repetition of the same programme because it is the one the teacher has mastered; for example, enrolment in competitions.

The parents' responses regarding the available gifted education programmes indicate that they believe that enrolment in competitions and Olympiads was the most frequently offered programme. However, parents generally lack involvement in planning their children's gifted education programmes. One parent stated that gifted education programmes at schools were insufficient. Generally, parents continue to be excluded from planning their children's education. These findings

are consistent with Hill-Anderson's (2008) study which also indicated that parents of gifted children seem not to be very closely involved in their children's educational planning.

As for the provision of gifted education, the results of this study indicate that gifted education facilities appear to be adequate. The most frequent type of provision, reported by nearly half of the teachers was the Resource Room, followed by mainstream class rooms, enrichment programmes after school hours and weekend programmes. Separate gifted schools, separate units/classes within mainstream settings and summer camps are provided less frequently. The results of considering the resource room provision common in Dubai, is consistent with Subhi-Yamin (1997). His research on the programmes for gifted education in Arab countries showed that the resource room is a common provision among different countries.

Resource Rooms have dominated the provision of gifted education in Dubai and the UAE for many years. The reason for the widespread use of Resource Rooms appears to be that this type of facility has been recommended by the MoE since 2000 when the gifted education system was first introduced to the schools (Abood, n.d.). Any school with a Resource Room is therefore counted as having the proper facilities for gifted students. Fifteen years of practicing gifted education through the provision of Resource Rooms has made this facility widely acceptable in the schools. Schools see Resource Rooms as appropriate for gifted students, as they do not require them to make extra effort. Mainstream teachers of regular classroom teaching see sending students to a resource room as better than catering for them themselves. They see the resource room teacher as more knowledgeable and trained in gifted education programmes.

The findings of this study relating to the implementation of gifted education in the participating schools, based on classroom observations, reveal that the majority of lessons attended offered only limited opportunities for gifted students (e.g. enrichment, differentiation and problem-solving). Furthermore, these lessons were not specifically designated for gifted learners; rather they were for the whole class. Gifted students appeared to be bored in regular classroom lessons, this result is in line with several other studies. For example Davis, Rimm, and Siegle's (2011) research found that some students are bored in school because it is insufficiently challenging. Renzulli and Park (2002) also found that gifted students often become bored and frustrated. Tassel-Baska (1995) highlighted the importance of having differentiated curricula that help gifted students to challenge their abilities and realize their potential. A need emerges from the findings of the current research to have a curriculum which caters for the unique needs of gifted students. Many researchers support the importance of differentiation for gifted students in the regular classroom (Hong, Greene, & Higgins, 2006; Schlichter & Brown, 1985; Tomlinson, 2001). All of the observations done for this study were in regular classrooms, meaning that gifted students are in mainstream classes receiving the same curriculum as others.

No gifted programme was offered nor were gifted students recognized. In one of the observation settings, the teacher used problem-solving in one of the workshops provided for the students in addition to brainstorming, however it was for the whole class, and not just for the gifted students. In observation C, the teacher used problem-solving to explain the lesson and deliver the content in addition to enrichment within the curriculum. In observation D, no gifted-oriented programme was implemented. In observation E, a differentiation strategy was used for the groups according to their ability. It was noticed that the teacher was energized in terms of delivering the content of the lesson, which affected her students positively. She had differentiated for all students' needs in the class. In conclusion, none of the observed settings provided challenging educational opportunities to meet the needs of gifted students. Other educators who have evaluated gifted education programmes (e.g. Sternberg & Davidson, 2005; Sternberg & Grigorenko, 2002) have suggested that gifted students need more challenging educational opportunities to meet their unique needs and nurture their abilities.

When the teachers were asked what they offered in their class for gifted learners, most of them replied “differentiation in content” and worksheets. The majority of the observed lessons were differentiated, whether in the content or in the worksheet provided at the end of the lesson. Higher order thinking skills seemed to be targeted while delivering the content for three of the observation settings. However, the students were not encouraged to be creative. Previous research has indicated that these types of teaching strategies do not push the students towards creative production (Rogers, 2007).

The teachers tend to encourage the gifted students to enrol in competitions related to their gifted domain rather than to developing these gifts within the classroom. Other teachers offered gifted students an extra activity worksheet, to help improve their thinking skills. These types of activities lack the specialization and effectiveness to challenge gifted students. For the most part, it appears that the unique needs of gifted students are not being met during lesson delivery. The evidence obtained by observing gifted programmes offered in classrooms does not appear to encourage their motivation towards learning, including interesting elements, differentiate between individual need, or employ different teaching strategies, as recommended by specialists in gifted education (e.g. Callahan & Hertberg-Davis, 2013). The classroom observations indicate that the schools have not created an educational curriculum to meet the needs of gifted students, as recommended by Aljughaiman, Ibrahim, and Khazali (2011).

Furthermore, no evidence was found by the researcher for the existence of supporting programmes, such as counselling and guidance for gifted students, their teachers or their parents. Effective programmes for gifted students and their parents are also rare in other countries. Brown (2010) and Johnsen (2012) complained that gifted students frequently suffer from the ineffectiveness of the programmes that are allocated for them in school. In his evaluation of gifted education programmes in Saudi Arabia, Al Qarni (2010) found that there is no special curriculum which meets the unique needs of gifted students. Such similarities in the findings regarding gifted programmes demonstrates the need in many countries for specialized curriculum that care for gifted students’ needs—and not just in the UAE.

Additionally, the findings show limited out-of-school enrichment programmes. All the available opportunities were provided within the school and inside a regular classroom. Some of the opportunities were received in the resource room. However, out-of-school enrichment programmes have proved interesting to gifted students and challenge their abilities. Moreover, such programmes seem to be enjoyable for gifted students. Subotnik et al.’s (2010) and Pereira, Peters, and Gentry’s (2010) research illustrated the positive side of gifted programmes offered for gifted students as out of school enrichment programmes. Wallace (2009) suggested another form of enrichment programme that is offered out of school, namely, distance learning opportunities. That form of programme was not found among the participating schools. The existence of such programmes would benefit gifted students through exposure to more opportunities.

5.5. Challenges regarding gifted education

The findings of this study regarding the barriers to the development of gifted education provision in UAE shows that the majority of teachers believe that there is a lack of training in the field of gifted education. Some teachers believe that the lack of experts in gifted education remains a barrier for improving the provision of gifted education in Dubai. The parents’ responses to the question relating to barriers to the development of gifted education provision indicate that providing training and counselling services for gifted learners’ parents would also help to improve gifted education provision. The need for more training and expertise in gifted education is not, however, restricted to Dubai. Recent studies have also indicated that there appears to be a general lack of professional development to support gifted education by teachers who are already trained in regular education (Hertberg-Davis & Callahan, 2013). Besides training, other forms of professional support are required for teachers, e.g. co-teaching and mentoring. Neither programme was found in this study. Co-teaching and mentoring can help teachers to become knowledgeable in working with gifted

students. Research also found such programmes can benefit the field of special needs in general and gifted education specifically (Bauwens, Hourcade, & Friend, 1989; Hughes & Murawski, 2001; Magiera & Zigmond, 2005; Sileo & van Garderen, 2010). Griffin, Winn, Otis-Wilborn, and Kilgore (2003) called for more experts who could act as mentors or counsellors to support the needs of teachers working in a special education environment. Bryan, Moore-Thomas, Day-Vines, and Holcomb-McCoy (2011) also commented on the need for more school counsellors to support parents in their efforts to improve the education of their children.

Another group of interviewees suggested that the lack of proper identification tools is preventing gifted education from progressing in Dubai. The reporting of inadequate identification procedures as a barrier was consistent with the disparity that the researcher found between the identification procedures defined by the MoE and the actual identification procedures used by the schools in Dubai/UAE. Ineffective school management was also perceived to be a barrier that may reduce the quality of gifted education in Dubai. This view was consistent with the suggestion that effective management, underpinned by strong school leadership, has an important role to play in the implementation of special education programmes (Kilgore, Griffin, Sindelar, & Webb, 2002).

The most frequent barrier reported by the parents was their exclusion from participation in planning their children's gifted education programmes. The schools appeared to contravene the overlapping spheres of influence model developed by Epstein (2010), which places the student at the centre of a triangle, with connections to the school, parents and the community. Epstein's model may help parents to play a more central role in the schooling of their children; however, it only operates effectively if the role of parents is accepted as part of school policy (Bower & Griffin, 2011).

Some teachers suggested that opening a specialized centre for gifted students would be beneficial. In addition, a suggestion was made about allocating special schools for gifted children. Another parent suggested having specialized centres and a school for gifted learners. The majority of parents called for establishing a community centre for gifted students which would provide all services related to gifted programming. One parent said, "A replication of Hamdan Centre for giftedness should be available in every neighborhood". These suggestions supported the benefits of providing gifted students with specialized facilities, as implemented in different practices (Thomas, 2000; Thompson, 2011). The other needs reported by the participants of the current study included (a) having a national day to celebrate giftedness; and (b) introducing incentives for gifted students and teachers of gifted students. Incentives e.g. financial award or recognition or promotions were also seen as important to encourage teachers to work with gifted students.

6. Summary and conclusions

The current study is the first of its kind to assess the needs for the provision of gifted education in Dubai using NAGC's (National Association for Gifted Children [NAGC], 2010) programme standards. The reviewed documents include a needs assessment for gifted education in the UAE based on empirical data. The current study fills this gap in the literature. The findings of this study show that there has been positive progression in the field of gifted education in the twenty-first century. On the other hand, the findings raise questions about the modes of implementation of gifted education and related issues, including the definition and identification of giftedness. There are several discrepancies between the existence of official policies prescribed by the MoE and the definition of giftedness, the methods used to identify gifted students, and the perceptions of the parents and some of the teachers. There seems to be a deficiency in the planning, dissemination and implementation of official policies. Haddad and Demsky (1995) stressed that "once a policy has been chosen, planning for policy implementation should begin immediately" (p. 35). Although a policy is in place and a plan was adopted by the authority represented by MoE, the implementation does not reflect clearly the policy or the plan. The introduction of a policy needs to be supported by effective action plans and information on procedures (Taylor, 2001). Although the MoE introduced new initiatives for developing gifted students' skills and formalized improvements in the provision and practice of gifted

education, these initiatives do not appear to have been widely implemented in the participating schools. Few teachers appear to be benefitting from the guidelines. In addition, training of those teachers is perceived as insufficient.

The evidence provided in this study supports the need to organize more training in gifted education for teachers and to develop new curricula and programmes for gifted education. It is important that the curriculum meets the unique needs of gifted students in order for them to reach their potential and benefit their countries. The need for more gifted education centres is also emphasized along with the necessity of involving parents in their gifted children's educational plans, including more training and counselling for parents. Although there is evidence for the existence of policy on gifted education in the UAE, the findings of this study reveal a gap between the written policy and the practice of implementation. There is also no Federal Law to guarantee gifted persons' rights, similar to law 26/2009 that guarantees the rights of people with disabilities. The absence of federal law for gifted students is in line with Elhoweris's (2014) research. Although the Ministry did its best to provide schools with official guidelines relating to the definition of giftedness and the identification of gifted learners, there remains a problem in implementing these guidelines in practice.

Although the MoE has recommended various types of gifted education programmes, the majority of teachers tend to rely on enrolling students in national and international competitions. Although a number of gifted education programmes were observed in the schools, these were delivered to the whole class. No programmes created specifically to cater for the unique needs of gifted students were implemented, and no special curriculum exists for gifted students. In most of the observations conducted by the researcher, the teacher's role was a facilitator and students' engagement level was high. However, some gifted students felt bored and seemed to view the lesson as being too easy for their levels of attainment.

The parents of gifted students who participated in this study were aware of the need to improve the provision of education for their gifted children. Although they defined giftedness according to their own experience, they realized the importance of designing specialized programmes for their identified gifted children. Parents clearly believe that schools have the main responsibility for identifying gifted learners; however, they seem unaware of the identification procedures. Although parents understand the value of specialized programmes, they remain concerned that the main programmes seem limited to Olympiads and international completions.

In conclusion, this study has revealed a distinct gap between the national policies for gifted education developed by the MoE, and how these policies are being implemented in schools. This disparity is causing confusion among teachers, parents and the community with regard to the definition of giftedness, the identification of gifted students and the availability of programmes offered for them. Moreover, the lack of Federal Law to enshrine and ensure the rights of gifted persons has resulted in taking gifted education as a choice. Gifted students, according to Davis and Rimm (2004) should be defined as students with special needs. Their unique needs should be met in the right forms of educational setting in order to realize and promote their potential for their benefit and the benefit of nation as a whole. Gifted students are thought by the majority to succeed in their education without support; nevertheless, many of them will not excel without having their needs met by the educational system. Therefore, the educational system should be enhanced by providing a quality of education for the gifted and talented in order to meet their needs so that they can achieve their full potential. Quality in gifted education starts with identification and ends with programmes provided for gifted and talented students.

Gifted programmes are important and essential for many reasons: (a) they help in early identification of gifted students; (b) they provide an environment which enhances gifted students' learning; (c) they are essential for resource allocation and (d) they help in meeting gifted students' unique needs.

6.1. Recommendations

Based on the findings and discussion of the study, the researcher presents several recommendations. First, there should be a federal law to safeguard gifted person's rights. Such a law should mandate all policies or regulations. The current available policies or regulations regarding gifted education at the MoE level are limited to written policies. The implementation of those policies is not sufficient in case of identification and programmes. Having a federal law would not only mandate but also strengthen the existing regulations. Currently, schools and teachers have other priorities in special needs (e.g. the inclusion of students with disabilities in schools and how to cater for them). Law 26/2006, and its amended version law 14/2009, mandates the rights of persons with disabilities. These laws are federal laws that regulate the lives of persons with special needs. The existence of a similar federal law for the gifted persons would benefit gifted education programmes, by allowing for a higher budget and stricter evaluation systems for gifted education initiatives.

Second, a national authority for gifted education is recommended. This authority should be the official body to follow and organize different related gifted initiatives whether it is from the MoE or other interested entities in the field (e.g. the Hamdan Educational Award). The findings of this study show that definition of gifted students, identification procedures and programmes are seen differently by the participating personnel. Having a national authority would ensure the organization and mandate for best practice in gifted education, in addition to evaluating it. Since the MoE created almost all existing initiatives regarding gifted education, having an external evaluation would benefit its development. The MoE evaluates the current initiatives once each year, but the results are not published and the impact of such initiatives on students' education is not known. Publishing results will help parents consider the educational choices and opportunities available for their children in addition to choosing a school based on its evaluation results.

Third, a wider training plan is needed for all stakeholders related to gifted students, including parents, teachers, schools and the community. The current training appears insufficient. Training for teachers started in 2008; however, there is no evidence to describe the quality of the training nor its impact in the schools. Evaluation of such training for gifted education teachers does not exist. This study has revealed that there is not enough training, and suggests there is a need for more. Although the MoE trains around 200 teachers every year, there is no evidence of training impact on the educational system with regard to gifted children. Training should include all aspects of effective gifted programmes. It should include but not be limited to training on gifted students' identification, the implementation of new programmes and curriculum. This training should also emphasize the need for more parental school involvement. Parents also need specialized training. They need to be educated on the ways of dealing with gifted children, characteristics of their gifted children and what they as a parents can offer to support and nurture their children's gifts.

The fourth recommendation is related to awareness. Currently, the MoE has published policies for gifted education programmes; however, the implementation in schools does not reflect those policies. Many of the teachers and all of the parents who participated in this study had never seen or read the documents describing these policies. There is an evident need for a wider awareness campaign to introduce the philosophy behind educating gifted students and the existing regulations for the gifted programme to teachers and parents.

Last, it is recommended that a "gifted center" should be established to cater for the special needs of gifted students in Dubai. This centre should provide counselling support to schools in discharging their responsibilities for gifted students. A specialized centre for gifted students would also be more attractive to parents as a choice of gifted programme. Although assessment of the Hamdan Award has been excluded from this study, many participating individuals referred to Hamdan Award when discussing gifted students' education. Parents described Hamdan Gifted Centre as a good opportunity and the best investment for the school holidays their children take. Many parents in the study suggested a replication of the Hamdan Centre at more local levels.

6.2. Future research

Based on the findings of the current study, the researcher provides several suggestions with regard to future research. The current study can be replicated within a time span of five years to re-evaluate the implementation of gifted education programmes at primary schools in Dubai. Furthermore, it is recommended that the current study, which was restricted to primary schools, should be extended to focus on the implementation of gifted programmes at a higher level of school education (e.g. level 2 and secondary school). New research is recommended to compare the MoE and the Hamdan Educational Award's gifted education programmes, with regard to their regulations, definition, identification, programmes and evaluation. New studies are recommended to survey the perceptions and attitudes of teachers, parents and members of the community towards the policies and practices of gifted education in the UAE.

An innovative strategy is necessary to make the radical changes necessary to have a positive future impact on the provision and quality of gifted education in the UAE. The UAE has recently introduced an innovation strategy and is working towards achieving its goal. UAE strives to be among the most innovative nations in the world. It is necessary after a few years of implementing the innovation strategy to study its impact on gifted education in the UAE and Dubai. Dubai is focusing on innovation by hosting EXPO 2020, and will rely on those who are gifted to create and innovate for the future.

In rapidly changing environments, a well-designed research strategy is essential to monitor the management of organizational change (Armstrong, 2006). Consequently, the recommendations for future research outlined above should ideally be implemented using a formal Plan-Do-Study-Act (PDSA) cycle (Dean & Linda, 2001).

6.3. Final thoughts

The quality and provision of gifted education in the UAE has improved significantly in the twenty-first century; however, there is still much room for improvement. The future of gifted education in the UAE is dependent not only upon the development, dissemination and implementation of policies prescribed by the MoE, but also upon an evidence-based approach to the evaluation of gifted education and the management of change.

This study has identified the key issues of concern regarding the need for change in gifted education, and placed these issues in the context of previous and future research. To end this paper on an optimistic note, the future looks bright for gifted students in the UAE. As emphasized by one of the interviewees who participated in this study, it is essential "to keep one's mind open and accept the change".

As a final thought, "Giftedness is arguably the most precious natural resource a civilization can have" (Sternberg & Davidson, as cited in Pfeiffer, 2002, p. 32).

Acknowledgements

The author wish to specially thank Prof Albert Ziegler for the encouragement provided in writing this article. In addition the author thank Mohammad Baharoon and Angus Taverner for their help.

Funding

The authors received no direct funding for this research.

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Citation information

Cite this article as: Gifted education in the United Arab Emirates, Mariam A. AlGhawi, *Cogent Education* (2017), 4: 1368891.

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