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للإدارة الحكومية
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SCHOOL OF GOVERNMENT

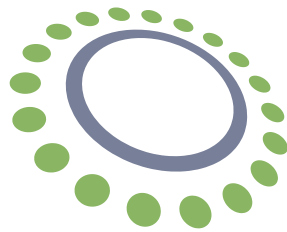منتدى الإمارات للسياسات العامة
UAE Public Policy Forum

A FERTILE OASIS:
THE CURRENT STATE OF EDUCATION IN THE UAE

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منتدى الإمــارات للسياسات العامة
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About Mohammed Bin Rashid School of Government (MBRSG)

Launched in 2005 under the patronage of His Highness Sheikh Mohammed Bin Rashid Al Maktoum, UAE Vice President, Prime Minister and Ruler of Dubai as the first research and teaching institution focusing on governance and public policy in the Arab world. The School aims to support good governance in the UAE and the Arab world, and build future leaders through an integrated system offering education and training programs, as well as research and studies.

The School's operations are founded on global best practices developed in collaboration with the Kennedy School at Harvard University, and it is considered a unique model for academic institutions in that it focuses on the practical side of governance. The School also collaborates with several government and private institutions both regionally and internationally.

The overall design and implementation of training programs is built on the foundation of scientific thought and is inspired by the reality of Arab public administration and with a view to addressing the issues and helping future leaders meet the challenges facing public administration in various parts of the Arab world. The School also organizes international and regional conferences and specialized workshops, and holds forums to facilitate the exchange of ideas and knowledge between Arab region and the world.

Executive President Note

With increased access to vast amounts of knowledge, and with the cultural openness and technological advancements of the twenty-first century, the world has become a small village where the politics and economies of states affect one another. Dubai is no exception with the city's name becoming synonymous with globalization. It is with this in mind that Mohammed Bin Rashid School of Government strives to embed the guidelines set forth by the UAE and to support the vision of its leaders for national growth. By preparing, qualifying and empowering tomorrow's leaders, and by strengthening government capacity in the UAE and the Arab world, our School aims to promote effective public policy through focusing on applied research and engaging the public and private sectors in the development process.

Over the 12 years since its establishment in 2005, the School has proved its importance as a unique role model for academic institutions. The School works in close partnership with UAE government departments, combining applied research, training and education programs, and provides a platform for knowledge exchange.

In order to achieve its mission, the School adheres to global best practices developed in collaboration with US-based Harvard Kennedy School that prepares leaders for democratic societies and contributes to finding holistic solutions to public problems. Such collaborations have enabled MBRSG to become the first research and teaching institution focused on governance and public policy in the Arab world. In this context, the School has taken on the task of disseminating the UAE's exceptional experience in governance and implementing the vision of His Highness Sheikh Mohammed Bin Rashid Al Maktoum, Vice-President and Prime Minister of the UAE and Ruler of Dubai.

Dr. Ali Sebaa Al Marri
Executive President
Mohammed Bin Rashid School of Government

The Imperative for Education Expansion and Reform

Education in the UAE is currently undergoing a period of remarkable reforms. The nation has pursued policies which are in line with not only its neighbors and the wider MENA region, but which have affected most countries around the world. Global education reforms (GERM) are taking place as part of the OECD and UNESCO sponsored initiatives to improve access and the quality of education around the world. Simply put, the past few decades have seen a widespread expansion in the coverage of schools and educational opportunities. Indeed, in examining the MENA region, the World Bank (2014) recently listed a number of achievements experienced by states, including increased access to the point of universal education among both boys and girls (and reduction of the gender gap whereby many girls are now outperforming boys), reduced illiteracy and greater government financial investment.

The fervor with which these reforms are being pursued raises questions about what are the objectives of these developments and the reforms associated with them. What do they say about the purpose of education in the country more generally? Is it to socialize children and young people into society, to transmit prevailing norms and values? Is it a largely utilitarian phenomenon, designed to prepare young people for the labor market and the world of work? Alternatively, are the reform goals broader and less material? Is it meant to be transformational, to challenge the prevailing system and build a new world? In examining such questions, it is necessary to study the actions and intentions of the state in question. States use policies to transmit a society's values, knowledge and beliefs. How they do that, tells us much about its power and the relative influence of other actors it encounters, whether they are social, political or economic (Apple 2003, Kivinen and Rinne 2000, Lawton and Gordon 2002).

To address these questions, the paper initially examines the state of educational reform in the UAE in two parts. The first section considers the purpose and practice of education and recent trends in global education reform. It notes that despite the increased coverage and opportunities, the intention of such changes have been contested. During the middle decades of the last century, a 'progressive' agenda has arguably accompanied the universalization of education for boys and girls. However, the extent to which this development constituted a transformative or pragmatic objective varied. In the last quarter of the twentieth century, these ideas were challenged by the 'human capital model' of education, which incorporated both market and conservative ideas and goals. While this model has dominated the policy debate into the present, it has been challenged by other, more critical voices concerning the purpose of education. A second section then considers how the situation is further

compounded by historical legacies in the global South and the MENA/Arab world especially. In particular in this region much of the educational expansion of recent decades has been associated with a Western-oriented 'modernization,' which inherently challenges and undermines local and indigenous forms of knowledge.

The paper then explores the character of the recent educational reforms in the UAE and situates them in relation to the perspectives offered in the first section. It considers the role and purpose of education in the UAE and the current reform agenda for education as set out in the UAE's National Agenda 2021. There are four main pillars associated with the plan: to improve students' experience and attainment at all levels; to improve the quality and professionalism among educators; to ensure higher standards at an international level; and to ensure greater accountability within the education sector. Analysis of these pillars is then followed by observations relating to the reforms from education leaders in the UAE who were interviewed for this project. Finally, the paper summarizes some of the main and outstanding challenges facing education reform in the UAE and possible ways forward.

Education Expansion in historical and ideological perspective

The contemporary drive to expand educational coverage and opportunities has its roots in the nineteenth century. However, in most societies – and especially those in the Arab world and particularly in the Gulf – the significant period was from the middle decades of the last century. Since the mid-1960s there has been a general drive towards education expansion at the primary, secondary and higher levels, as well as pre-schooling and in relation to previously excluded groups. That drive was broadly associated with the 'progressive' moment, which coincided with the rise of significant state and nation-building process in both the global North (also synonymous with the West) and South. The period was defined by the rise of political parties, movements and leaders concerned with advancing the concerns of the subordinate or laboring classes. Miliband (1982, 1989) memorably described this group as the 'have nots'. This was an era saw the construction of more schools, training of more teachers and the production of entitlements to increase access by marginalized groups (Dewey 2007, Whitty 1997, Trowler 1998). By 2000, many of these notions had become enshrined in the Millennium Development Goals, which advocated universal primary education and measures to enable marginalized groups to acquire more of it.

Education is not preparation for life; Education is life itself.

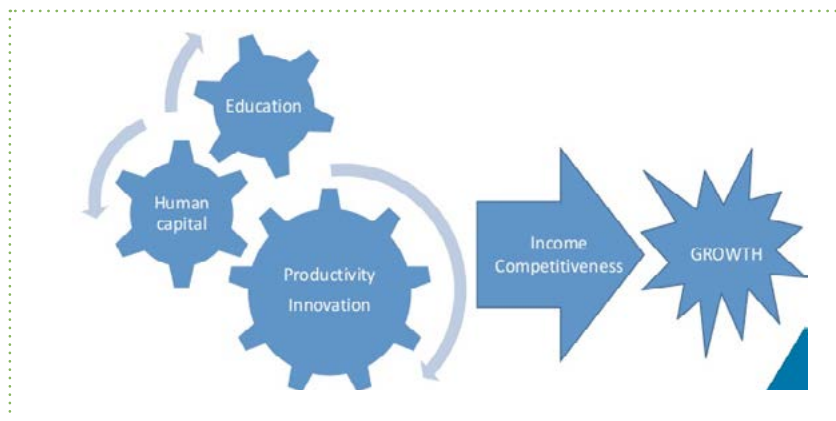### - John Dewey

The progressive move was not uniform though. Within it, there were at least two distinguishable trends: its 'shallow' and 'deep' versions (Burton, 2008). Drawing on the educationalist Paulo Freire's work, 'shallow' progressivism emphasized education as a process of 'banking', in which teachers deposited information into students within a wider context of non-transformation inside and outside the school; the status quo prevailed. By contrast a 'deeper' version assumed education to be a dialogue, in which students not only acquired information and knowledge but applied it in such a way as to change their own immediate and surrounding reality. Here, deep progressive education was associated with transformation of relationships within and beyond the school (Sarup 1982, Freire 1978, 1985).

Seen from a broader perspective, this process and its purpose was identified by Cohen (2010: 25) as a largely Western-led project. Since the nineteenth century, the intention by policymakers and educators was to use schooling as a tool to build tolerant societies from the diverse immigrant and native cultures (in the US). That goal continued into the twentieth century,

but on a global level, with the intention being to build such tolerance at an international level and cross-nationally. At the same time, the process of educational expansion coincided with a debate about the purpose of education had remained constant: whether it was to acquire specific technical skills or for the whole education of the child. Agencies such as the OECD and UNESCO became effective vehicles for this movement.

However, a number of factors undermined the rise of this 'progressive' education. Although more children were being educated, the quality of that schooling remained relatively limited. Furthermore, the advance of education was undermined by its growing cost to the public purse and – especially in the global North – growing political opposition to professional teachers' employment demands and organization. By the 1970s, political parties and governments had come to power in North America and Europe who sought to curb their agitation and to reduce the size and role of the state.

While the gains of expanded coverage were not rejected, the purpose for which they had been implemented was reconstituted. Increasingly a more conservative and market-led approach to education emerged. From the 1970s and 1980s these elements came to the fore and obscured the gains made by progressivism (Giroux and McLaren 1989, Sarup 1982). Both shared the common belief of education as a utilitarian project to prepare young (and – as the definition of education was expanded to include adult and life-long learning – older) people for work. During the 1980s, this was evident in their greater calls for more vocational training (Moore 1987, Fernan 1997). This common objective transcended any differences that were present between them: namely the market-led approach's focus on the individual and conservatives' more communitarian orientation. Whereas market reformers pursued policies that promoted greater choice, competition and diversity in the education sector, conservatives favored government interventions that would maintain societal traditions, morals and order (Whitty 1997, Apple 1997, Trowler 1998, Giddens 1998, Manzer 2003). Indeed, although apparently contradictory, both trends complemented each other: market reformers pursuit of a smaller spending role by the state meant and greater diversity and competition in schooling options was aided by conservatives' standards, tests and assessments of students and schools; those which met or exceeded them prospered, those which did not were subject to sanctions (Apple 1997).

Despite their initially differing outlooks, the market and conservative strands have coalesced into a singular, general concept: the human capital model. Moreover, that model has persisted into the present and debatably constitutes the prevailing ideological and policy discourse in education today. Indeed, recent analysis of educational objectives and policies have emphasized this approach: Cheng (2010) has argued that unless people gain particular skills and the ability to work in teams, they will not be prepared to compete in the increasingly competitive global economy. Indeed, as recently as 2008, Soguel and Jaccard (2008: 2) could still claim that the main aim of most governments was to expand education to universal coverage and increase student attainment in order to realize greater equality and efficiency – but at the least possible cost to the public purse as possible. At the same time, if government

needed to invest in education, the investment could justified on the grounds of its 'spillover' effect. Other than direct student attainment, other factors could result, including economic development, reduced poverty, better health, less crime, more tolerance, less extremism and greater political stability (Soguel and Jaccard 2008: 2, Cummings 2010).

Alongside the prevalence of the human capital model and its supposed spillover effects, recent decades have seen the phenomenon of globalization affect the education debate. Policymakers around the world, whether in government or in international organizations like the World Bank, OECD and IMF, came to share the same goals. The result was a greater willingness by policymakers to borrow and transplant policies applied in one part of the globe to the other. Sometimes this was done wholesale; in other cases they were redesigned and adapted to suit local circumstances (Spring 2009). Pasi Sahlberg, an influential Finish educator, researcher and policy adviser, has noted a common trend in such reforms, from a standardization of education policies and a focus on core subjects (especially literacy, numeracy and science), to the use of corporate management models and test-based accountability in schools. All of this is underpinned by 'the search for low-risk ways to reach learning goals.' (Sahlberg 2017) In addition, the inputs are subject to evaluation as well, through performance evaluation of teachers. In terms of content, schooling in the human capital model has incorporated more scripted lessons and the learning of languages, especially English, which is seen as way to prepare young people for jobs in a competitive global market (Spring 2009: 16-7).

However, the human capital model has not gone unchallenged. Despite the obstacles faced by 'progressive' education in the 1970s and 1980s, a critical view of education and its purpose has persisted. Today progressive education advocates emphasize teacher professionalism and autonomy, active learning associated with students' interest and participation in those subjects. The purpose, to which these measures are put, is that of achieving social justice (Spring 2009: 18). Examples of the assumptions implicit in this are present in the analyses offered by Mahbubani (2010) and Cummings (2010). Mahbubani sees the role of education as imparting commonalities and the universality of the human experience in children. Such themes are arguably best served by cultivating enquiring minds that are questioning and given to critical reasoning. Cummings adds to this perspective by noting that many of the 'spillover' effects associated with education might be achieved less with public spending and more with the (re)design of educational infrastructure (schools, curricula, teachers) and technology use as a means to achieving them.

While the progressive approach to education can co-exist with some of the developments associated with the (Northern/Western) human capital model, a more challenging analysis is also present. One, associated with post-colonialism and world systems, has drawn on world systems analysis and the separation of the world into a dominant Northern (or Western) core and a subordinate (and more dependent) periphery in the developing South. The asymmetrical relationship between the two is manifested not only materially, between an economically richer North and poorer South, but in the realm of ideas, with organizations like the OECD, World Bank and IMF providing both intellectual credibility and financial influence (Spring 2009). In addition, other perspectives – religious and indigenous based – have also contested the prevailing human capital model. Religious education aims to compensate for the oversight of moral and spiritual values within education, while the indigenous model seeks to protect the identities and practices of groups, who see themselves as distinct from the prevailing and dominant Western model (Spring 2009: 19-20).

Educational Development in the Arab World

The previous section has highlighted the strong association of prevailing educational trends at the global level with the global North and West. This is especially pertinent when considered in relation to the MENA region and the Arab world. In his survey of the educational debate in the region during the first decade of the present century, Abi-Mershed (2010: 2) has noted distinct differences between policymakers and scholars. The former have tended to subscribe to the human capital model of education to promote economic growth and development, the latter more critical of such policies, seeing within them a reconstituted form of (Western) cultural imperialism and neo-colonialism.

Three main concerns have vexed Arab educational observers. The first concerned the role of education for development and the relative failure of policies to achieve this to date. Even though earlier reforms had expanded coverage and investment, the failure was due in large part to a mismatch between the content and quality of that education and the surrounding requirements of the domestic and global economy Abi-Mershed (2010: 2-3). The World Bank (2008) noted this in its analysis of Arab education. On one hand, educational expansion has broadened to cover a wider section of the population, including girls – even though it has been of largely poor quality. This has increased the available labor supply. Population growth is set to increase the number of graduates from the school and university sector as well. On the other hand, economic growth across the region has slowed in recent decades compared to the 1960s-70s and has proved unable to accommodate more educated workforce. This observation has prompted recommendations that education reform should occur alongside economic and labor market reforms.

The second concern for Arab educational observers was the relationship between education and the Arab nation-state and citizenship. Critics of reform claimed that policymakers' actions have led to education models that mirrored the 'modern' Western model at the expense of local, culturally and historically rich Arab-Muslim forms of education (Abi-Mershed 2010). Indeed, writing about the Gulf and Qatar in particular, Bashshur (2010: 268) has warned against such wholesale adoption of such ideas and practices. He notes that notwithstanding the consensus in favor of reform, the present vertical relationship – in which institutions from the West have taken a lead in designing, shaping and overseeing their branches in the Gulf – needs to be rebalanced in favor of a more horizontal version. Such an approach would result in a relationship, which is mutual and collaborative between local and foreign institutions and actors.

The third issue concerns the extent to which education in the Arab world contributed to less extremism and terrorist threats. Among the criticisms made of Arab education has been its poor quality and anti-Western content that has limited young people's economic opportunities and increased frustration (Abi-Mershed 2010: 3-5). The Arab spring was unmistakable evidence of this conundrum. Reformers and policymakers try very hard to strike the right balance to appease the religious majority and the employability demands of industry.

Purpose and practice of education in the UAE

Moving from the global and regional to the national level, it is clear that the education sector in the UAE has experienced unparalleled growth over the past 20 years and that the UAE has, in one sense, detoured from the historic practice of education in the wider Arab world (See Appendix). The sector has become a key driver in the country's developmental goals. Out of respect and in memory for the late visionary leader His Highness Sheik Zayed Bin Sultan Al Nayhan who said 'the greatest use that can be made of wealth is to invest it in creating generations of educated and trained people', the current leaders of the UAE have allocated more than a third of the national budget to education. According to Meed Middle East in 2010, the UAE's spent $2.7 billion on education, representing 22.5 percent of its annual budget (Meeds.com 2016). This figure doubled in 2011 when the allocation for education and social development increased to 46 percent of the federal budget. This tangible action indicates a firm commitment to investing in and developing the education sector. The strong focus on developing the human capital of the UAE in order to meet the UAE 2021 Vision of making the UAE one of the best countries in the world by the time the national celebrates its Golden Jubilee is a recurring theme in education literature. The vision for the population of the UAE to be highly educated and skilled, aligns well with the ambitions for economic competiveness and the progressive brand of education that is being plied as the mechanism through which these educational goals are to be realized.

In 2014 Highness Sheikh Mohammed Bin Rashid Al Maktoum, Vice President and Prime Minister of the UAE and Ruler of Dubai announced a mechanism for achieving the UAE Vision 2021 when he announced the UAE National Agenda 2021. The main goal of National Agenda is to develop a first rate education system in which all school will be transformed in smart learning environments. The national Agenda includes eight pillars that will lay

the foundations for the future development of the UAE. They are education, healthcare, economy, police and security, housing, infrastructure and government services education system. Under the pillar of education, eight empirical indicators will measure the progress of the sector toward the National Agenda. They are:

1. To be among the top 20 countries with highest performance in the Program of International Student Assessment (PISA) test

2. To be among the top 15 countries with highest performance on Trends in International Mathematics and Science Study (TIMSS)

3. The ensure that all schools (public and private) in the UAE have high quality teachers

4. To ensure that all schools (public and private) have highly effective leadership

5. To ensure that 90 percent of students in the ninth grade of public and private schools have a proficiency in Arabic

6. To increase the high school graduation rate to 98 percent among Emirati students

7. To provide early years education to 95 percent of children between age 4 and 5 through public and private preschool provisions

8. To eliminate the need of Emirati students having to complete a foundation programme to qualify them for university entry.

Inherent in these indicators is a focus of the country's education reform goals of better preparation of students at all stages of their education, greater accountability among leaders in the sector, higher standards on the international scale and improved professionalism among teachers. There are obvious synergies among the indicators in relation to the focal points of the outlined reforms.
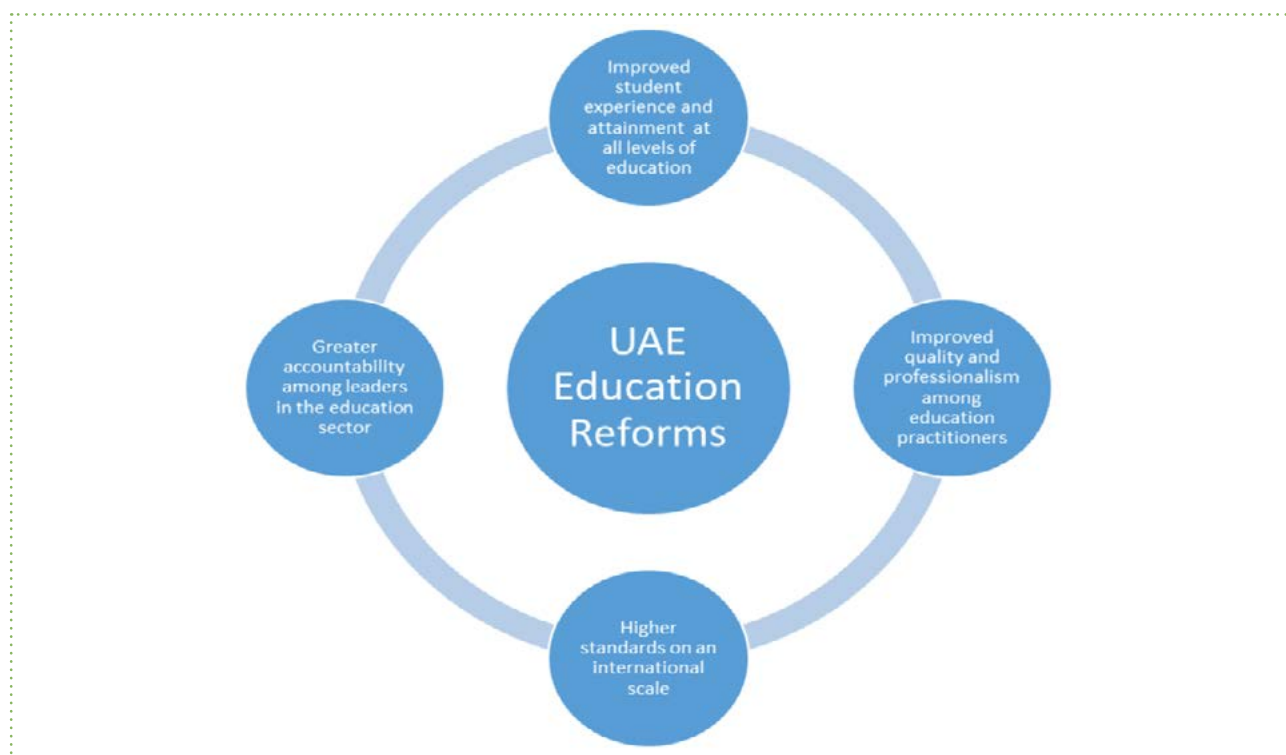

Figure 2: Focal points of UAE Education Reform 2016

While there is some altruism in these goals, it is evident that this huge investment in human capital through prescribed performance indicators in education is expected to yield economic success in an increasingly knowledge–based and competitive world. In January 2017, Hussain Ibrahim Al Hammadi, the UAE's education minister, captured this point when he said:

We want to move from an economy based on oil to a new economy based on the human knowledge of both nationals and expatriates alike who will use knowledge as a tool to compete and move the country forward… We know there is a continuous change in our world in terms of employment, and that the global trend is that a person will not have one sole job or skill. That is why we have to equip graduates with general and specialized skills so that they can be flexible with their jobs and the requirements of the fourth industrial revolution (Zaatari 2017).

Through its active role in defining the national agenda for education reforms, the UAE government is ensuring that the happiness, quality of life, empowerment, dignity, security and self-respect of it people can be achieved. The concerted effort being taken by the UAE government is clearly an attempt at mitigating past failures experienced in the reform of education in the Arab world. The issue of coverage and investment are being closely aligned with content and quality that are being publicly benchmarked against international standards. The provision of education in the UAE has intentionally been moved from the sole domain of government and has become a joint function of the public and private sector. This public private partnership approach has incentivized investment in the sector and resulted in unparelled growth of education provision from early childhood to the tertiary level that was not experience in many other Arab states.

Recent trends in education reform in the UAE

1. Improved student experience and attainment at all levels of education

National agenda indicators related to Arabic proficiency, high school graduation rates, early childhood provisions and eliminating the need for a foundation year are all geared toward improving the educational experience students have in UAE schools and increasing their levels of attainment. To operationalize these goals there have been a number of recent declarations.

Changes to the K-12 curriculum for public schools, designed by the Ministry of Education, were approved by Sheikh Mohammed Bin Rashid Al Maktoum in summer 2016. Updated textbooks, a cohort of English –speaking teachers, and revised subject choices, from grade 10 onwards, such as life skills, creative design and thinking, entrepreneurship, technology and health science, form part of the 2016 reforms. These new subjects will complement the existing offerings of Mathematics, science, social studies, Islamic studies and languages. It should be noted, that social studies curriculum has been upgraded to include relevant and contextual information about history, geography, economics and politics because the UAE is keen to avoid exclusion of its history and culture from the education system. There will be an increased frequency of physical education, arts and music. The content of the revised curriculum aligns with international standard and all subjects except English Language will be taught in Arabic up to grade 9. A system of streaming students has been introduced as part of the reforms. Students who are performing to a high standard will be moved to advanced classes in Math and Science disciplines and they will be taught using English as the medium of instruction. Presently, the MOE is working on a curriculum for moral education, which will be piloted in January 2017. The Ministry of education has expressed confidence and optimism that these reforms to the curriculum will 'tackle several issues in the education system in the UAE.' (Yahyaei 2016)

One of the pertinent issues that requires tackling is the UAE's performance on International standardized tests such as PISA, TIMMS and Progress of International Reading and Literacy Study (PIRLS). The UAE's participation in these international assessments provides a mechanism for comparison of the education system against international benchmarks. Among regional Arab states, the UAE has often placed at the top for literacy and numeracy benchmarks, however the same cannot be said against international standards. In the 2011, TIMMS report Dubai Ranked 42nd place Grade 4 Mathematics, 43rd in Grade 4 Science and 23rd in Grade 8 Science, out of 63 countries. In the 2015 TIMMS report released in November 2016, the UAE is one of 17 countries to show overall improvement in Math and Science in grades 4 and 8 (TIMSS2015.org 2016). However, the race toward to National

Agenda goal of ranking in the top 15 countries by 2021 seems like it will be more of a well-paced jog than a sprint. In PIRLS assessment UAE's reading achievement average was 439 points of a possible 600, placing the country in between the intermediate to low bands on the international reading scale. In the PISA 2012 report, Dubai ranked 48th place for mathematics, 44th for science and 46th for reading out of 65 countries. The National Agenda goal for 2021 is to be in the top 20 ranked countries. In the most recent round of the PISA test, the results of which were published in December 2016, the UAE as a whole, moved up one place in math, but fell two places in science and reading (Educationjournalme.com 2016). By contrast, private schools were performing at or above the average in science and reading and had seen a 3-point increase in math. Notably the latter still remains under the OECD average.

A most significant initiative to improve national reading levels was the declaration of 2016 as the Year of Reading based on the directive of the President His Highness Sheikh Khalifa bin Zayed Al Nahyan. Going one-step further to legislate reading into the culture of the UAE, a reading law was passed on November 2016. The rulers of the country see this as a necessary step in achieving the vision of making the UAE a knowledge based economy. His Highness Sheikh Mohammed Bin Rashid Al Maktoum, Vice President and Prime Minister of the UAE and Ruler of Dubai said 'Our goal is for 2016 to be the start of a sustainable cultural change among generations – a change that consolidates the importance of reading, celebrates knowledge and boosts the status of reading.' (UAEcabinet.ae 2016).

Improving the student experience and levels of attainment across all levels of education is a fundamental step in achieving the vision of Sheikh Khalifa, who said:

> [O]ur goal is to prepare generations that work towards excelling and achieving the vision of the UAE, which since its inception has recognized the importance of knowledge, science and culture, and harnessed them in the best interests of the homeland and Emiratis (UAECabinet.ae 2016).

All reforms and initiatives to improve experience and attainment the past 5 years have clearly been driven by this national agenda. There are however, still gaps in the focus of school inspection frameworks that are being used to evaluate the quality of education, because they reflect only literacy, numeracy and science metrics based on standardized tests. In order to give a better picture, these frameworks must be revised to include humanities, business and art disciplines. Benchmarking against international standardized tests should not be to the exclusion of proper evaluation of the efforts to develop students with the required problem solving, critical thinking and life skills that will position them to be the labor forces that is required for a knowledge -based economy.
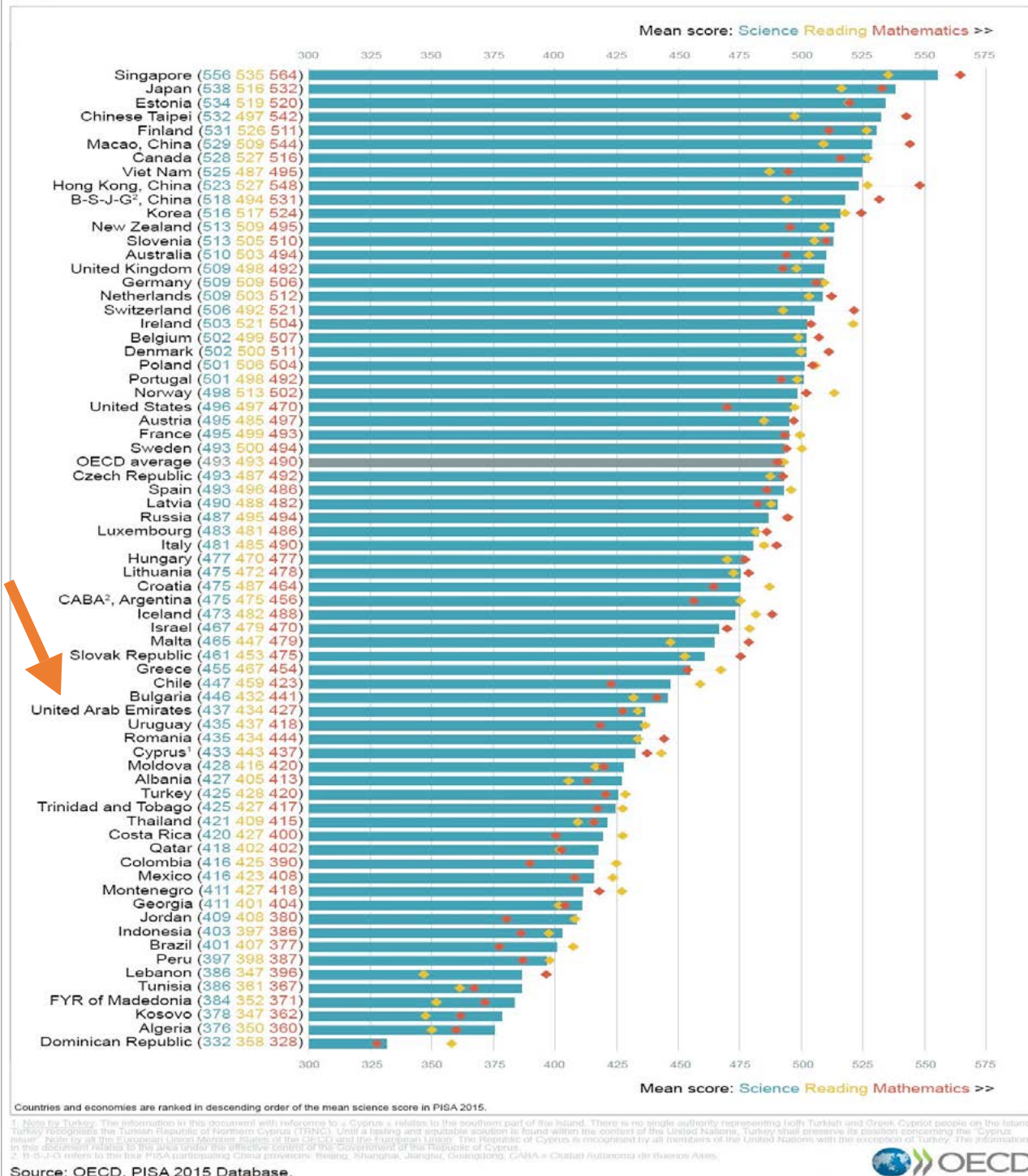
Figure 3: PISA Caption for 2015

2. Improved quality and professionalism among education practitioners

Providing education is a most ubiquitous and costly responsibility of the public sector in modern societies. In the GCC, the private sector will invest Dhs550 billion in the education sector in 2016-17 financial year (Ardent Advisory & Accounting LLC 2016). With a compound

annual growth rate (CAGR) of 6.3 percent in the private education sector between 2013 and 2020, the high level of private sector investment is understandable. A growing population, favorable investment climate, drives growth in the education sector and increasing demand for school places in the UAE. Between 2013 and 2016, student enrolment in private school increased from 225,099 to 295,157 (Oxford Business Group 2016). The large investment from private sector into education underscores the market driven nature of education in the UAE. Altruism aside, investors expect a return on their investment and so school and universities operate using a business model. In the UAE, which is branded as 'the most developed education market in the region', the government has set up a model of public private partnership for the delivery of education to a high standard. The federal budget allocation for education was 20.5 percent for 2016-17, which amounts to Dhs25.2 billion (UEAcabinet.ae 2016). According to Oxford Business Group (2016), Dubai will require 53 new schools by 2020 and Abu Dhabi will require 44. The Abu Dhabi Education Council (ADEC) reported in 2015 that private schools in Abu Dhabi earned close to Dhs3 billion in profit over the preceding four years. Investment in private schools in Abu Dhabi between 2010 and 2015 reached Dhs2.3 billion between 2010-2015. Besides the huge profits, another direct result of these massive joint investments in education is the employment opportunity for teachers and administrators who play a pivotal role educational effectiveness and by extension, the economic success of schools.

Measuring teacher quality in order to determine educational effectiveness has been a sensitive and elusive topic in the literature (Cheng 1996, Mortimore 1991, Sammons 1996). Historically, researchers have not sought to significantly correlate teacher quality with student outcomes, especially in jurisdictions where education is a public service. Most of these researchers studying educational effectiveness focused on equitable distribution of resources, retention rates, academic achievements and infrastructure (Rowe 2003). While these factors for educational effectiveness have not been ignored in the UAE, the governance model in the education sector has adopted a Total Quality Management (TQM) approach to monitor and measure the quality of the service being provided. Teacher quality has been brought under the spotlight and the annual round of school inspections undertaken by the Knowledge and Human Development Authority (KHDA) in Dubai and ADEC in Abu Dhabi for example, forces an outcomes-driven agenda. The overarching belief is that the quality of education offered will not exceed that of the quality of the educators. The results from the school inspections have shown a link between teacher quality, instructional effectiveness and educational effectiveness. In the private schools where the curriculum requires student engagement strategies and a holistic learning framework, the results are characteristically better, than in the public schools where rote learning and memorization are the salient instructional approach.

The fallout from teachers who are not properly equipped to explore pedagogies of engagement are dire (Tapscott 1998, Prensky 2005, Claxton 2007). The UAE National Agenda requires all public and private schools to operate to the same level of professionalism and effectiveness, in order to ensure that the 2021 targets are met. Engaging learners who lack the required motivation to learn is one of the biggest challenges educators face (Willms 2003). In a study conducted in high schools across America, Cothran and Ennis (2000) reported that between 25 and 66 percent of learners suffer from disengagement. In the UAE, a study done by Booz and Company revealed that

> lack of well-trained teachers, outdated teaching methods, curricula that are neither relevant nor innovative, limited use of technology in the classroom, and little in the way of academic advice or career counseling are contributing to the mismatch between the outputs of the GCC's education system and the needs of the employment market (Arabiangazette.com 2013).

Of note, Singapore, which was at the top of the PISA tables in 2016, credits its consistent performance to a cadre of well trained teachers who are the top five percent of graduates from the centrally controlled National Institute of Education (BBC.com 2016). Learners today want to be in social constructivist environment, where meaning is negotiated, where they are given space to be creative and innovative, where they can interact with their peers, be connected to technology and explore the world in an authentic way. In a study by Dunleavy and Milton (2009) students identified three characteristics of an ideal learning environment:

1. Collaborative learning with peers and others in the community
2. Drawing on expert resources
3. The opportunity for extended conversation beyond the classroom about their study. (p.10)

The new curriculum adopted in Abu Dhabi schools facilitate this type of learning but teachers have to be trained in order to make the transition to this learning environment. Over the summer of 2016, the Ministry of Education has invested significant amounts of government resources to the professional development of teachers. The Ministry of Education in Abu Dhabi is planning to train 10,000 public school teachers within the next five years. By 2020, they hope to reach 90 percent level of Emiratization in the public education sector (UAEInteract.com 2016) Initiatives from Abu Dhabi Education Council such as Tanmia and Tamkeen are all effort geared toward the provision of appropriate professional development for school leaders and teacher in 21st century pedagogical strategies. Teachers in the public school system are contractually required to complete a minimum of 30hours of professional development. These initiatives provide the required context in which the in-service professional development can be done.

A less binding, but equally effective professional development initiative launched in the emirate of Dubai by the KHDA in 2012 is the What Works program. Conceptually underpinned by the theory of appreciative inquiry (Cooperrider and Srivastva 1980), What Works is an initiative that encourages collaboration among school leaders and teacher who come together and share best practices across multiple curricular structures. The goal of this exchange is professional development which will improve student learning outcomes (KHDA 2016).

Going a step further to ensure the achievement of the National Agenda goal of a first rate education system, the Ministry of Education announced in May 2016, a five-year plan to have all teachers in the UAE federally licensed by 2021. This unified licensing system was proposed in 2014, but was not activated. The National Qualifications Authority (NQA), the Ministry of Education, the Abu Dhabi Education Council, Knowledge and Human Development Authority

(KHDA), Abu Dhabi Centre for Technical and Vocational Education and Training, and the Institute of Applied Technology will be coordinating efforts to implement the teacher license system. This new requirement is intended to improve the overall professional competence and quality of teachers in the classrooms. Teachers will require a minimum of a bachelors degree to be considered for this license. So far 750 teachers from public school have started the pilot program and will complete the examination by 2017 (ADEC 2016).

3. Higher standards on an international scale

As part of the economic diversification strategy of the past decade, the UAE has established and marketed itself as an educational hub for the region. The Emirate of Dubai has led this agenda as a commercially viable global city in which there are multi-facetted educational opportunities for investment and study across all spectrums of the education dimension-kindergarten to university. The Dubai International Academic City and Dubai Knowledge Park are two examples of education free-zones that were established to attract investment in education institutions at the post-secondary level and to promote Dubai as an educational hub. Surveys of students studying in the free-zones indicate that only 5.8 percent are Emiratis (KHDA 2015). Dubai has clearly succeeded in becoming a preferred destination for international students, from the MENA region and the Indian subcontinent, seeking quality education. The education sector attracts high quality professional talent because of the superlative infrastructure, evidence of innovation and visionary approach the leadership of the emirate has taken in developing the sector. Dubai's position as an international center for education contribute over US$3 billion to the economy each year (Altamont Group, 2016).

Despite the position of Dubai as an education hub, the UAE's ranking on the World Economic Forum (WEF) Global Competitiveness Index fell from 12 to 17 out of 114 countries in 2015. The assessment of the new category of enrolment in higher education and training in the index as of 2015, negatively affected the country's ranking. This is because large majorities of Western expatriates still prefer to send their children back to their home countries for tertiary education, as they do not yet have full confidence in the system here. The UAE is working very hard to address this perception by inviting leading universities to set up off shore branch campuses in the UAE.

New York University (NYU), Paris Sorbonne, Heriot Watt, University of Wollongong, Middlesex University, London School of Economics, Manchester Business School, Amity University are just a few of the international institutions that have branches in the academic free zones. Strict quality assurance standards are monitored by the KHDA and ADEC to ensure that these institutions are the same standard of education that would be delivered on the home campus. Local university provisions are licensed and accredited by the Commission for Academic Accreditation (CAA) and the National Qualifications Authority (NQA) oversees the standards of the programs being offered. After 10 years of operation, the CAA received recognition from the International Network for Quality Assurance Agencies in Higher Education (INQAAHE) for following best practices.

4. Greater accountability among leaders in the education sector

Customer rating of the quality of public services across sectors in the UAE
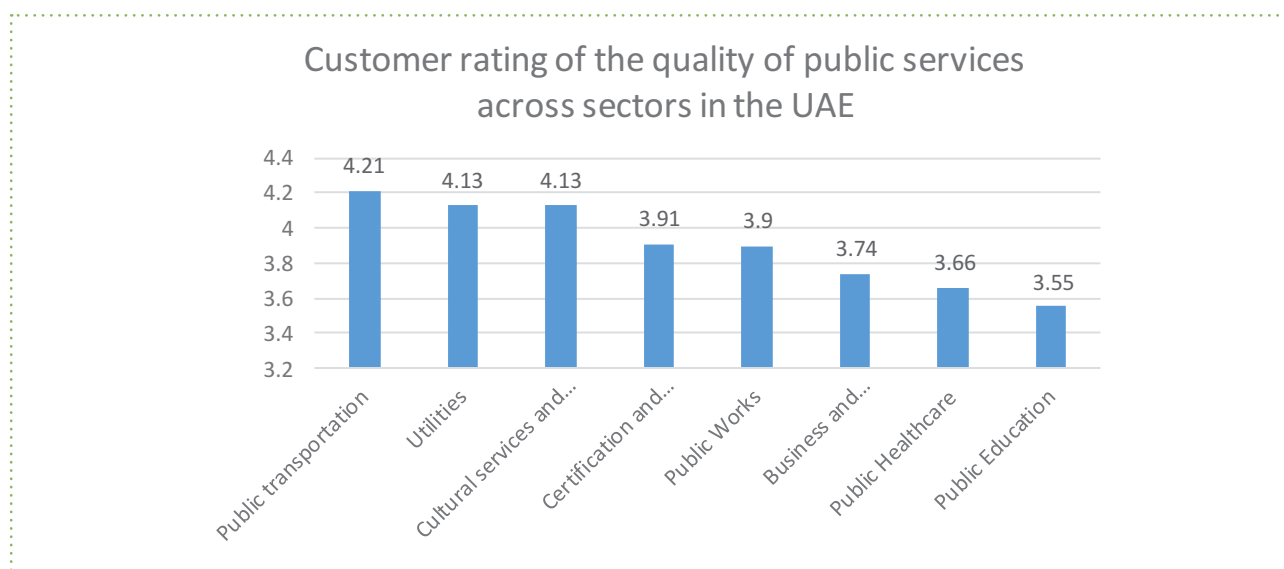
Figure 4: Quality of public service across different sectors in the UAE

In January 2016, the UAE government announced the unification of the Ministry of Higher Education and the Ministry of Education. The new ministry will have a Ministers of State for education and one for Higher Education. This not a surprising development because in the UAE National brain-storming session that was held 2013, customer ranking of public education was 3.55 on a 1 to 5 scale, the lowest among public sector entities as shown in figure 4 (Salem, 2014). The international ranking of the sector on the World Economic Forum Global Competiveness Report was 49 (Ibid).

The government has promised to make necessary changes to improve the education provision. The consolidation of all education ministries aims to centralize the governance structure of the full education spectrum in the country, from early childhood to tertiary, and to increase quality, efficiency and innovation in the sector. The unified Ministry of education is be better able to focus on aligning educational policies with present and future needs among the various sectors in the UAE, in order to achieve the vision of being a knowledge based economy. It is felt that this unification will also to bring greater accountability to those in charge of each division within the ministry. A Higher Council of Education and Human Resources was established to bring federal and private tertiary institutions being under the control of the Ministry of Education and an autonomous management authority, the Emirates Foundation for Schools, was given remit over public schools. The Minister of Education welcomed the decision as one that would align the educational ethos of lifelong learning across all sectors of education from nursery to university and create a smoother transition for students from one level to the next. In essence, the consolidation has modelled the increased level of accountability that is expected among leaders in the education sector. This change reflects the ultimate direction of the UAE leaders, which is that public sector ministries should be functioning more in the area of governance and delegating management functions to other entities such as KHDA and ADEC.

The KHDA and ADEC have focused on empowering school leaders as a pivotal component in education reforms for the past 5 years. Extant research supports this focus on leadership

as being essential to school development (Leithwood & Riehl 2003, Hallinger & Heck 1996). Some researchers purport that

> Outstanding leadership has invariably emerged as a key characteristic of outstanding schools. There can no longer be doubt that those seeking quality in education must ensure its presence and that the development of potential leaders must be given high priority. (Beare, Caldwell & Millikan 1992: 99)

In critical theory, educational leadership posit that it is the type of influence that a school leader exerts among the staff to activate their agency, shape their practice, define their roles and articulate their values within the context of institution's educational goals and vision (Bush 2008, Busher 2006). The influence that leaders have over the practice of teaching guarantees whole school development and educational effectiveness. School leaders are intermediaries between national education goals and their immediate school contexts. They have the responsibility of operationalizing, the national agenda in their institutions by effectively getting buy in from teachers, parents and students. In the context of the UAE school leaders are the drivers of the reform agenda and they have to adapt and align with the policy directions of the National Agenda. Gill (2003) also suggests that the leadership in such a context of reform requires vision and strategy in order to empower, motivate and inspire those who are affected by the change. Implementation of reforms has always been the bane of school principals in the UAE, but it was not until 2002 when the focus shifted toward more accountability that many school leaders actually started to respond positively to implementing the national reforms. This lack of accountability has plagued many Arab education systems. Principals were measured based on their administrative skills, without any accountability for the academic effectiveness of the school (Barber, Mourshed & Whelan 2007).

The UAE sought to break the cycle with the increased investment in education and the setting up of public private partnerships in 2009 that sought to address the quality of school leadership. An initiative called the Professional Standards for Principals became part of the strategic plan for improving education in Abu Dhabi. Similarly, in Dubai the KHDA implemented standard for school leadership as part of its School Inspection program. These new standard of accountability expanded the metrics of evaluation of school principals to include teaching and learning competence, community engagement, and strategic planning.

This increased level of accountability has been implemented with professional development programs and collaboration among schools. Principals have to learn to navigate the cultural and traditional beliefs about education in their communities while at the same time implement the reform agenda that the new curriculum requires. Some have to reconcile the negative sentiments towards Western models of education within their institutions and placate the dissenting voices, which cry out against acculturation and dilution of traditional Arab style education. The success of their schools are riding on their ability to close that gap. Increased monitoring, reporting and inspections have added to the administrative load of school principals but all this is designed to ensure that the UAE breaks the cycle of poor reform implementation that has plagued Arab education for decades.

Perceptions of UAE Education Policies and its Reform Agenda

Having considered both the ideological direction of education policy and the reform process in the UAE to date, it is critical to get a perspective from those working in the education sector. As part of the data gathering for this paper, education leaders involved in strategic planning and policy advice both inside and outside the government, as well as education consultants, researchers, principals and managers at some of the country's leading schools were interviewed.

In general, the respondents expressed support for the path being taken and summarized the objectives of education in terms which aligned with the model of contemporary human capital development. An emphasis is made on the 'contemporary' dimension in that it combined both traditionally progressive notions of developing the inner worth and value of the student alongside the more practical economic considerations of the job market. For example, one respondent stated that the educational purpose of the UAE's schools and universities should be 'To provide the highest possible outcomes for each student so that they can follow their dreams anywhere in the world'. Another said that they should focus on the development of employment and entrepreneurial skills alongside soft skills; 'Globally competitive and locally relevant education' was seen as important.

The paper's authors invited respondents to distinguish between whether reforms sought to cultivate a child/student's inner talents or to prepare them for the world of work explicitly. One respondent proffered that 'The two are indivisible. The world of work for our students cannot be quantified or imagined. Their skills to live in a world which is defined by ambiguity and uncertainty is the secret for success…clearly the aim is to inspire and to enable young people to desire to learn'.

Another respondent shared the same vision, but presented it in more practical terms with the reforms 'Aligning student's aptitudes and innate abilities with the community and national needs for human resources. So, really it does not have to be either/or. Both aspects of developing students' talents – and preparing them [for] real life can and must co-exist in schools/universities.'

When it came to the specific education reforms set out by the UAE government, the respondents who replied acknowledged that the purpose was to prepare students for them to participate in the national and global economy. How this might be realized would be through the use of a suitable curriculum, 'highly qualified teachers', 'feedback and involvement' from industry and the community, internships and 'real life projects'.

The respondents recognized government agencies as the principal means of managing the reforms, especially through the Dubai School Inspections Board (DSIB) and the use of measurable Key Performance Indicators. The concept of earned autonomy whereby schools which had attained 'outstanding' or 'very good' results to be subject to fewer inspections was welcomed by one respondent, although another respondent said that the Board's inspectors needed to understand better concepts like the Middle Years Programme in the International Baccalaureate curriculum. In addition, one respondent suggested that the process of 'accountability' in education was dominated by agencies like the DSIB and KHDA and needed to be opened up; another respondent felt that greater use of community feedback should be used while another said that 'Attention must be paid to implementation details, objective assessments and consistency over the years…' In realizing these goals, standardization was targeted for criticism in at least two responses. One wanted to see 'less standardized testing. This is reducing the instructional time when teachers can inspire their students' while another said that 'The ideals [of the UAE reforms] are noble. However, the outcomes continue to be underpinned by standardized testing which has been proved time and time again in the leading countries (Finland) to have no worth.'

Finally, respondents were asked what was helping or preventing the UAE from reaching the educational goals set out in the reforms. One said that 'The ambition of the UAE is admirable and should be followed to their conclusion. The goals are lofty. However, if you don't aim high you are never going to achieve anything.' By contrast, another claimed that several factors were holding the UAE back educationally. They included a 'lack of continuity in educational leadership', 'lack of parental involvement', insufficient spending in the education sector, 'too many profit-oriented schools and universities' and a 'lack of qualified and experienced national faculty continually engaged in educational development. [While] Nationals in top leadership is essential [it's not] sufficient. Grassroots teachers are the ones who actually get it done.'

Locating UAE Education Policy and Possible Future Directions

The previous sections examined the parameters of education ideology globally and regionally. Attention was then given to the 2021 National Agenda in the UAE and the four main dimensions for education. Added to this, were the observations made by educational leaders about the reforms and the purpose of education that were derived from the qualitative data collected for this paper. In this concluding section, the primary dimensions of UAE education reforms are analyzed in relation to educational ideology and a few limitations and challenges associated with them, as well as recommendations for the future are made

Broadly put, it seems evident that the reforms as laid out and perceived by educational leaders in the UAE are in line with the global trend towards greater human capital development. This is evidenced in the UAE Vision 2021, where education and human capital development are given significance as the main driving forces toward a diversified knowledge-based economy and the observations by interview respondents that stress the importance of preparing students to enter the world of work, albeit one which constitutes an uncertain future. This is not an uncommon approach and countries like Finland, Singapore and China have been known to employ this policy guideline to boost their economic competitiveness. In the UAE, strands of both market and conservative forces are at work here. In relation to market-related forces, the most obvious is the substantial increase in private provision of schooling – which was greeted with some skepticism from at least one of the interview respondents. Globally, the private versus public school dichotomy is a well know phenomenon. However, in the UAE this contrast is magnified in terms of number, investment, expenditure and achievement. The reforms and results being experience in the private sector education need to be transferred and replicated in the public sector education system, if the human capital goals for 2021 and the foreseeable future are to be realized. Private interests are also reflected in the growth of higher education institutions in the UAE. Their rise has in turn attracted students, faculty and researchers as well as contributing substantially in financial terms towards the national economy. The facilitation of growth in private education provisions is for very practical reasons, since arguably the public sector cannot provide sufficient coverage. From the 1980's, increasingly the ownership as well as the investment in schools and universities came from the private sector. Privatization redefined the role of the government primarily to a regulatory one and organizations like KHDA and ADEC were developed to serve this function. The education sector was attractive to investors because of the stable and predictable rates of returns caused by the steady growth in the population of the UAE. This new model of privately owned and publicly regulated institutions emerged and proliferated even during the economic crisis of 2008 (Helm 2010). This upward trend in private sector education growth has not however deterred the government from their continued efforts to reform public sector education and over Dhs300 billion will be invested in the sector by 2021.

Arguably, beyond private providers, private or market interests can be seen elsewhere in the National Agenda reforms. This includes the use of international rankings that may serve as indicators to signal the relative achievement of the education system as a whole, as well as individual institutions within it. To this, the reforms directed at improving teacher quality and professionalism is also seen as one way of improving (private) schooling's appeal. Taken in context, there are definite strides toward a more progressive model of education in the recent reforms that have been announced. The ministry of education has been explicit in their desire to move away from traditional rote learning pedagogy to a more holistic and engaging model that will be criterion reference rather than norm reference. Again, the private sector has championed this reform through teacher training that is being provided by organization like, the TELLAL Institute (Teacher Learning and Leadership for All). They are optimizing the apprenticeship model, coupled with the use state of the art, smart learning technologies to retool teachers in how to make the teaching and learning space one that is conducive to learning. One of the principals at the TELLAL Institute proposed, 'TELLAL is a schools-led, schools-situated model of teacher [and] learning which has proven to work very effectively elsewhere. Our conversations with education regulators in the UAE have shown how the apprenticeship model of teacher training has enormous potential for teachers here, especially Emirati teachers.' (Rush, cited in GEM Education.com 2016) Admittedly, this is a venture associated with private education providers, but because that sector makes up the majority of the stakeholder in education, their progressive reforms should be acknowledged as a positive step toward attaining the National Agenda goals.

While the more 'modern' teaching content, techniques and associated resources inside and outside the classroom are still geared towards preparing today's students for the workplace, there is a lot more active learning, collaboration and quality teaching and learning that is taking place. Some of the respondents to the survey in this study expressed a wish for more practical teaching which accommodated concerns outside the classroom, including in the community. Additionally, the What Works initiative focuses on technical solutions to deliver results but should go further to challenge the prevailing ideology associated with today's education reforms. The progressive dimension of the current reforms associated with improved teacher quality is a critical focal point to achieving the UAE National Agenda. The Agenda goals are certainly not in the frame of earlier efforts from the 1970s-80s which were more concerned with the output. What is now evident is that the process of education is the only way to guarantee the proper outputs. The expenditure on training, human capital development, encouraging agency among teachers and students and physical resources to ensure quality education are commendable progressive strides.

Arguably, there are still bastions of tradition routed in the current paradigm of UAE education policy. As well as the market-oriented approach, conservative elements of education ideology can also be perceived in relation to the reforms. This is to be expected as the UAE seeks to pass on cultural and traditional values to the youth. The tension between traditional values and the new wave of change must be delicately balanced. The most obvious and recent example of the balancing act, is the forthcoming MOE curriculum for moral education alongside the more holistic, critical pedagogy approach. Since morality is a traditional concern, it is expected to serve as a socializing and moderating tool for young people while they are being exposed to a wider array of critical content. Here the tensions present in education are revealed, in which it can be seen in two ways: 'The first relates to maintaining a social stability and the other tends to usher in social change.' (Mathew 2017).

Overseeing the process of reform, there is expected more professional and effective leadership. This is to be achieved through the development of educational leadership that will realize the implementation of these reforms and provide a seamless transition across the different modes of education. The Rulers of the UAE through ADEC and KHDA have tried to model a more participatory and transformational model of leadership in the education sector which is supposed to give voice to all stakeholder in a flattened organizational structure. In principle teachers, students and parents are able to effect meaningful change by exercising their agency.

Beyond the UAE, there is a top down perspective of leadership, that has been prominent within Arab education, and a hierarchical chain of command has contributed to the disconnect between the aspirations of policymakers and the reality of inappropriate or inadequate education to date. Additionally, it has meant that some Arab education systems have echoed Western models, most tellingly in the hierarchical relationship that exists between foreign universities and their branches in the GCC. In the UAE, there is an increasing sense that there is not a more equitable, horizontal relationship present. This is evident both in the literature as well as by the interview respondents, who emphasized the role of government in overseeing the reform agenda. The top-down approach of governance in the UAE education sector offers a macro-level perspective of the challenges facing the education system. It enables a strategic overview to be possible, through which broad objectives can be proposed.

However, successful education systems like Finland have preferred a bottom-up approach that offers different insights. Bottom-up can come from several different sources. One is to approach the education system through the eyes of practitioners like school principals and teachers. Another would be the guardians of those within the education system, such as parents. Another would be the students themselves. The bottom-up approach to education reform fosters sustainable and 'deep' educational change that is driven by a common social vision among key stakeholders. If applied in the UAE, this approach to reform would not necessarily reject much of the National Agenda reforms, but it might address them in slightly different manner. For example, need for more responsive and differentiated learning with teachers engaged and available outside the class would be accepted by both progressive and human capital development advocates, but with a contrasting approach. Rather than training being mandated from the government, teachers would opt to access in service training to fill the professional development gaps they identify upon reflection and collaboration with others. The latter skills of reflective and collaborative practice among practitioners, may well be preparing young people to enter the changing work environment of the national and global economy. The desired outcome of well- trained and highly qualified teachers would be achieved but though a different mechanism of need identification. Whichever path to teacher quality that is taken will have implications. Adopt a 'shallow' progressive approach (e.g. the 'banking' version observed by Freire) and the outcome may not be too dissimilar to today. Conversely, an assertive progressive approach – especially of a 'deep' version – might equip those young people to not only operate within the parameters of today, but to critique, challenge and carve out a place for themselves in a world that we cannot yet imagine. The latter model is a fertile oasis for progressive possibilities in the UAE education sector.

Along with the progressive education agenda that the UAE is pursuing, a pertinent question

to ask for the future is how the reforms align with the United Nations Education goals for the future. The Incheon declaration of 2015 requires governments to 'Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all' (World Education Forum 2015). The global education agenda is part of the 17 UN Sustainable Development Goals that make up the Agenda 2030 for sustainable development. In principle, the UAE through its compulsory education law for up to secondary education has made access to education a reality for all UAE nationals and expatriates. The challenge however arises in terms of inclusivity and equitable quality. UAE public schools, for the most part, remain more populated with Emiratis. Conversely, there is an increasing number of Emiratis attending private schools in a quest for better education. Some private fee paying school have become models of inclusivity and diversity but there still remain institutions that only cater to specific nationalities because of the curriculum offered or the historic association of these school with particular nationalities. The cost of education in the UAE is another compounding factor that could challenge the equitable access to quality education for all. The promotion of lifelong learning opportunities requires a paradigm shift of education being a 'means to an end', being an 'end' in and of itself.

Conclusion

As the UAE balances its aspiration for a more progressive education system with the market driven need for human capital development, the country is writing a new narrative in education reform for the GCC. Added to this, is the global agenda for a sustainable model of education that offers equity for all. The literature related to progressive education has not definitively declared a mutual exclusivity between education reforms that embrace progressive ideals and developing the human capital resources within a country. The UAE's model of progressive reforms is perhaps the testing ground for such symbiosis. Some critics would argue that it is the same brand of market driven economic at play in the education sector, but given the UAE's ability to chart new territory in many areas, it is safe to say that the results of these reforms are already being evidenced. Fewer schools and universities adhere to traditional education models and the majority of institutions, private and public, are facilitating the education of well rounded, teachable, socially well adjusted, culturally and environmentally aware students who will function in a knowledge based economy to make the UAE economically competitive on an international scale. In negotiation terms, this would be seen as a win/win situation for the government and the other stakeholder in the education sector. Human capital development will take place at the desired rate, education stakeholders will be satisfied and the UAE will attain its National Agenda goals for education.

A cautionary note must however be struck, as the assurance of quality and achievement of outcomes, should be verified at frequent intervals. Inspection and regulatory frameworks used to measure education in the UAE require alignment with the reforms and should be an eclectic mechanism that does not preference one curricula over the other. UAE's participation in international benchmarking schemes for the education sector is a good starting point, but must be supported with locally derived evaluation framework as well. Ultimately, a confidence in the success of the education sector in meeting the goals of the UAE society should become the litmus test for success. Attempting to mimic or import other models from successful countries' could lead to derailment of the reform process. Creating contextually relevant indices against which to check the veracity of the education sector in meeting the national agenda goals is an urgent requirement. Finally, the UAE government must facilitate open dialogue between the stakeholders in the education sector and industry to ensure that graduates at all levels are meeting the expectation of the next level of their exposure in the system whether from primary to secondary, secondary to higher education or higher education to industry. This role cannot be divested to the private sector, as inevitably good governance in any society requires active participation and meaningful engagement from governmental entities.

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Appendix
UAE Education Timeline

The Abu Dhabi Education Council (ADEC), the Knowledge and Human Development Authority (KHDA) and the UAE Ministry of Education are the primary entities that address education reform in the UAE. The mandate of these public sector entities has always been grounded in the various federal strategies announced by the government. In an attempt to chronicle the development of the education sector, a document analysis was conducted to create this chronological list that captures as many information points as possible to reflect the development of the education sector in the UAE. While this timeline is not exhaustive, it seems to reflect that the agencies entrusted with the education of the UAE have been on a constant quest to hone the strategies in order to meet to goals. The following diagram captures the various entities that play a key role in governance of education at the federal and state level
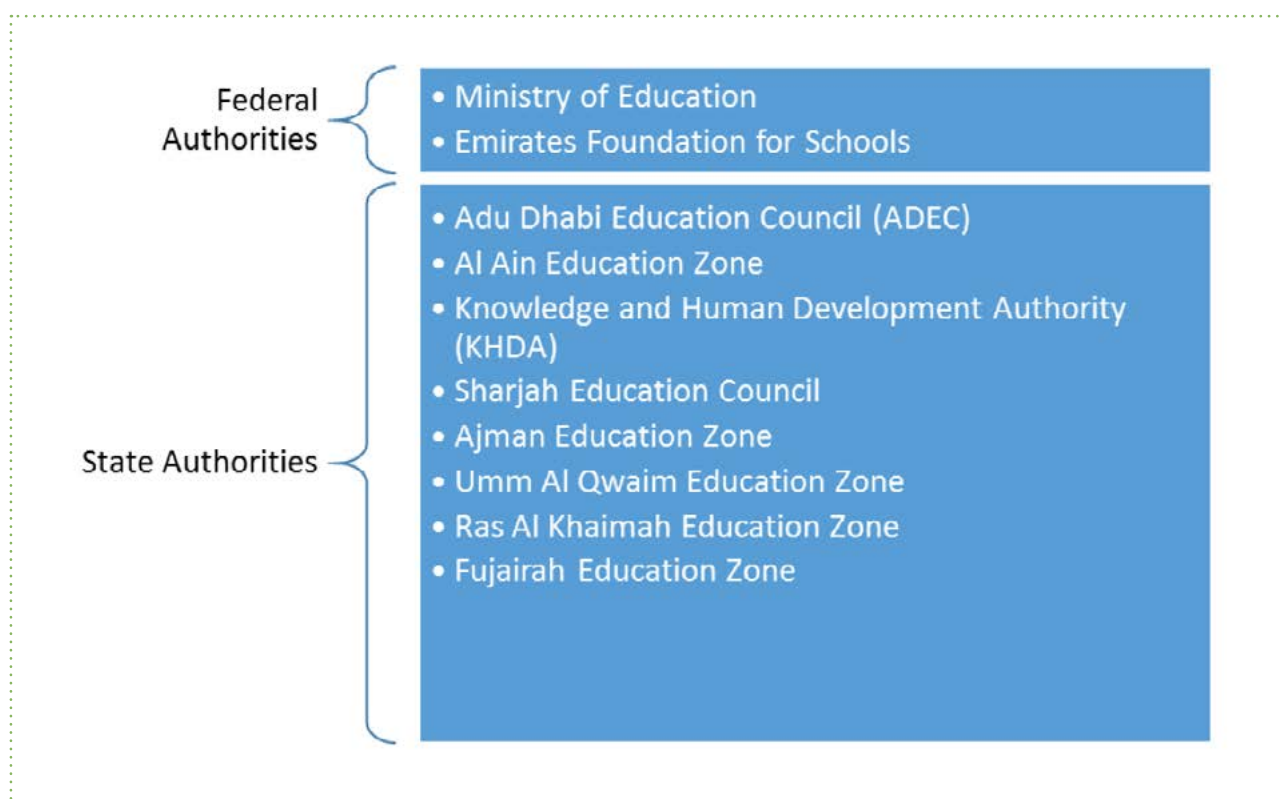

Figure 5: Entities Responsible for Education

1952: Few formal schools in the country.

1960s and 1970s: A school building program expanded the education system.

1970: No Higher Education institution in the UAE

1970: Four tier system of education was established covering 14 years of education.

Kindergarten: Age level from: 4 to 5 years old

Primary: Length of program in years: 6; Age level from: 6 to 12 years old

Preparatory: Length of program in years: 3; Age level from: 12 to 15 years old

Secondary: Length of program in years: 3; Age level from: 15 to 18 years old

Certificate/diploma awarded: Secondary School Leaving Certificate

Technical Secondary School: Length of program in years: 6: Age level from: 12 to 18 years old

Certificate/diploma awarded: Technical Secondary Diploma

1971: Ministry of Education is established. Late president and Founder of UAE, HH Sheikh Zayed Bin Sultan Al Nahyan made education a key national priority

1976: Ministry of Higher Education and Scientific Research (MOHESR) is established. It houses NAPO (the National Admissions and Placement Office) which provides admissions and placement services for the federal institutions of higher education, as well as the CEPA (Common Educational Proficiency Assessment) which assesses the English and Math skills of MOHESR applicants to higher education.

1976: The first tertiary institution, UAE University, was founded in Al Ain.

1988: Higher colleges of Technology was founded by Federal Decree .The system of the Higher Colleges of Technology is a community of approximately 20,000 students and 2,000 staff based on 17 campuses throughout the United Arab Emirates (UAE) – the largest higher education institution in the UAE

1996: Centre of Excellence for Applied Research and Training (CERT), the commercial arm of the HCT was founded. The Centre. It offers courses in a variety of fields and provides professional development and lifelong learning opportunities for the UAE, the Gulf region.

1998: Zayed University was founded. The colleges were modelled on the US community college system and grew over the years to an institution that comprises 17 colleges across the country, with more than 20,000 students between them

2000: The Commission for Academic Accreditation (CAA) is established as the Federal Government's Quality Assurance Agency with responsibility for promoting educational excellence in higher education institutions in the UAE. CAA offers licensure of universities and accreditation of individual programs, consistent with international standards.

2001: Cabinet decision made to exclude expatriate students from government schools

2001: The CAA developed its first Standards for Licensure and Accreditation. These have subsequently been revised, with the fifth edition published in 2011.

2000: Sheikh Mohammed bin Rashid IT Education Project (ITEP) was launched. The UAE has placed a high priority on IT education across all levels of education. ITEP provides technology enhanced courses in high schools in Dubai and Abu Dhabi.

2000: Ministry of Education and Youth launches Vision 2020, a series of five-year plans designed to introduce advanced education techniques and improve innovative skills and the self-learning abilities of students. Up to the year 2020. Education 2020 Strategy

2000: A Planning, Development and Evaluation Office is established to implement Vision 2020 in schools. The National Centre for the Development of Curriculum and Methodology reviews curricula and developments in educational methodology. All developments take place within the Strategy's framework.

2001: Emiratization rate in education sector is 41 percent. The goal is to 90 per cent by 2020, in order to ensure that the Islamic principles and traditions of the UAE are maintained.

2001: The Ministry of Education and Youth's updates Vision 2020 project with nine new proposals

2001: The Ministry of Education and Youth introduces major Cabinet approved changes in the educational system in public schools to extend compulsory education from nine years to completion of elementary education.

2002: Ministry of Education and Youth (MoE) indicates a switch from instruction-oriented education to self-education, along with a comprehensive programme for student care, covering their social, psychological and career needs.

2002: As part of the Vision 2020 strategy an enhanced curriculum for mathematics and integrated science was introduced at first grade level for the 2003/2004 academic year in all government schools.

2003: Dubai Knowledge Village, the first education freezone is established in Dubai. DKV has been a very successful initiative, providing expats with many tertiary level study opportunities. Before DKV was launched, university level education was very limited and most expats (and nationals) sent their children to colleges overseas after finishing secondary school.

2005: The Abu Dhabi Education Council (ADEC) was established . ADEC is the educational authority for the emirate of Abu Dhabi which includes the city of Al Ain, and towns in the Western Region (or Al Gharbiya).

2005: Dubai Education Council (DEC) was established by the UAE President HH Sheikh Khalifa bin Zayed Al-Nahyan in accordance with Law No. (24)

2006: Dubai International Academic City (DIAC) was established to expand on success of the Dubai Knowledge Village and to provide more space for addition campuses. The intention was for Academic City to be a base for schools, colleges and universities, while Knowledge Village will house training institutes and educational service organisations.

2006: As part of its overall plans to improve the quality of the public education sector in Abu Dhabi Emirate, ADEC launched a Public Private Partnership (PPP) with the participation of 30 kindergartens and primary schools from the public sector in 2006.

2006: ADEC piloted Library Upgrade Project is to develop and transform traditional school libraries into 21st century Learning Resource Centers (LRCs).

2006: Abu Dhabi established the Masdar Institute of Science and Technology – an independent, graduate level, research driven institute in collaboration with MIT

2006: Cabinet rescinds decision to exclude expatriates from attending public schools. Commencing in the academic year 2006/07, admission for expatriate students will be based on merit and fees will be levied.

2006: Nationalization of Education plan is announced. The goal is to 90 per cent by 2020, in order to ensure that the Islamic principles and traditions of the UAE are maintained.

2006: KHDA was founded; by decree of HH Sheikh Mohammed bin Rashid Al Maktoum (Vice President and Prime Minister of the UAE, and the Ruler of Dubai

2007: Madares Al Ghad is launched to provide a modern curriculum with textbooks for English, Math and Science which have English as the medium of instruction

2007: Abu Dhabi Vocational Education and Training Institute (ADVETI) was established and has seven (7) entities: Al Jazirah Institute of Science and Technology in Abu Dhabi, Al Jaheli Institute of Science and Technology in Al Ain, Baynounah Institute of Science and Technology in Western Region, Al Reef Institute of Logistics and Applied Technology in Al Shahama, Sharjah Institute of Science & Technology in Sharjah, Secondary Technical School (STS) and Vocational Education Development Center (VEDC).

2007: Dubai Schools Inspection Bureau (DSIB) was founded

2006-2007: approximately 650,000 students were enrolled at 1,256 public and private schools. About 60 percent of all students attend public schools.

2008: First round of school inspection by Dubai School Inspection Bureau

2008: The University Quality Assurance International Board (UQAIB, not UQAB) was established by the Knowledge and Human Development Authority Dubai (KHDA) to assess and license universities operating in the education free zones in Dubai.

2008: ADEC became the supervising body of the Abu Dhabi Educational Zone (ADEZ), taking over the role from the UAE Ministry of Education.

2008: ADEC develops Abu Dhabi Educational Policy Agenda.

2008: Ministry of Education established the Department of Special Education to promote the rights of students with special needs and ensures that they have access to the same educational opportunities as students in regular education.

2008: ADEC launched the future schools project.

2009: The Ministry of Education in collaboration with the Centre for British Teachers Education Trust (CfBT) developed an accreditation process to bring public and private schools in the UAE up to international standards. The aim is to have all school accredited by 2017.

 2009: ADEC in partnership with Musanada (Abu Dhabi General Services Company) announces the Abu Dhabi Future Schools project as part of the ADEC 10 year Strategic Plan to improve education infrastructure in the emirate.

2009: The UAE first participated in PISA through Dubai's involvement.

2010: His Highness Sheikh Mohammed bin Rashid Al Maktoum, Vice President and Prime Minister of the UAE and Ruler of Dubai, launched the 'UAE Vision 2021.'

2010: the New School Model of education was introduced in all KG and Grade 1-3 classes in government schools in Abu Dhabi. This model is based on a student-centered learning approach, where students learn in a resource and technology-rich environment, within modern teaching facilities.

2010: Abu Dhabi Education Council (ADEC) unveiled the Abu Dhabi Higher Education Strategic Plan that will raise Abu Dhabi's higher education system to international standards and develop an innovation-based, knowledge producing society.

2010: The CAA has licensed a total of 66 institutions and has accredited 479 Programs.

2001: Emiratization rate in education sector is 41 percent.

2010: Ministry of Education outlines its new 10 x 10 x 10 strategy to address current challenges and prepare Education in the UAE for the future.

 2010: Abu Dhabi Education Council (ADEC) launched the Schools Master Plan project as part of the Educational Policy Agenda to ensure that all school-aged children have access to high quality education in the Emirate of Abu Dhabi. The Master Plan concerns a ten year period, from 2011 to 2020, and integrates both the private and the public schools sectors in the Emirate of Abu Dhabi.

2010: ADEC launched Kafa'ah to make ADEC the best we can be, so that education in Abu Dhabi is the best it can be. It embodies a desire to look far beyond conventional good operational and financial management.

2011: New accreditation policy for private schools (non-government schools) in Abu Dhabi is announced. Requirements will include: established leadership, and effective Board of Trustees ensuring implementation of administration best practices. Minimum grade of 'good' attained in overall performance, and minimum 'satisfactory' grade in all assessment categories.

2011: UAE Vision 2012 is launched to establish a knowledge-based economy that is diversified. The government commits to investing heavily in education and focusing on mutually beneficial partnerships.

2011: The New School Model was expanded to include Grade 4.

2012: New School Model extended to include Grade 5. The NSM will be rolled out to additional grades in future years.

2012: MOE and the Telecommunications Regulatory Authority in collaboration with the Office of the Prime Minister established an integrated e-learning platform in order to shape a new learning environment in government schools.

2012: Mohammed bin Rashid Smart Learning Program is established, as an essential part of government strategy to enhance the education ecosystem. The Dh1 billion programme was introduced in four stages over five years, covering all government schools. The objective is to provide every student with a smart tablet and access to high-speed 4 G networks by 2017.

2012: There are 102 higher education institutions in the UAE.

2012: The Higher Education iPad Initiative was officially launched by His Highness Shaikh Mohammad Bin Rashid Al Maktoum, Vice-President and Prime Minister of the UAE and Ruler of Dubai. The initiative, which saw 14,800 iPads distributed in 17 campuses belonging to the three UAE Federal Higher Education institutions.

2012: Abu Dhabi Education Reform: The Road to 2030 is launched. With education on top agenda, the government, in alliance with the private sector and the corporate world, has pledged an unwavering resolve to transform the region into a knowledge-based society and has charted down progressive, sustainable plans to carry this out by way of the Abu Dhabi Economic Vision 2030.

2012: The Abu Dhabi Education Council (ADEC) initiated privatization of the education sector, which continues to be a lucrative revenue stream that contributes significantly to the GDP growth.

2012: ADEC launched Irtiqa'a, a program to monitor and benchmark performance quality in Abu Dhabi schools.

2012: KHDA launched What Works, a unique initiative to help transform Dubai's private education sector through collaboration. With the support of private schools in Dubai and local community partners.

2013: As a collaborative initiative among MOE, SEHA Ambulatory Health Services, Du and the United Nations Children's Fund (UNICEF) the school health education projects launched in public school. The project aimed to increase awareness of the benefits of a healthy lifestyle in UAE students.

2013: Enterprise student Information system (eSIS) is launched in all Abu Dhabi school

2013: ADEC launched license application system online

2013: ADEC initiates the Schools master plans to identify the demand and supply gaps in public and private schools in the emirate of Abu Dhabi. It represents a 10 year students forecast in line with the UAE national and expatriate population growth across different regions in the emirate.

2014: Ministry of Higher Education and Scientific Research's launched a new strategic plan for higher education. The strategy is designed to help achieve the ministry's vision of developing a knowledge-based society and to improve higher education and scientific research.

2014: Ministry of Education (MOE) developed Education 2020 to implement government policy. Education2020 is a series of ambitious five-year plans designed to bring significant qualitative improvement in the education system, especially in the way teachers teach and students learn.

2014: A teachers' charter sets out the principles of conduct in the classroom as well as outlining the moral and ethical role of teachers.

2014: Tamkeen is launched under the umbrella of the KHDA to provide training and vocational rehabilitation for people with visual impairments, and to develop their skills and expertise to enable effective integration into various work environments.

2014: H.H. Sheikh Mohammed Bin Rashid Al Maktoum, Vice President and Prime Minister of the UAE and Ruler of Dubai, launched the UAE National Agenda as an extension to achieve the UAE Vision 2021. The United Arab Emirates Vision 2021 has education as its foundation, both explicitly and implicitly.

2015: In line with UAE Vision 2021, highest federal budget allocation to of 21 per cent, or Dh9.8 billion, of the 2014 federal budget. Dh6 billion of this is allocated to improving general education and Dh3.8 billion on academic excellence programs in local universities.

2015: Creation of the Emirates Foundation for Schools to manage all public schools in the UAE

2015: The UAE Cabinet adopted a range of new measures to:

I. remove the foundation year at university and develop subjects at secondary school level to match university requirements;

II. make teaching a more attractive option, with career progression and incentives;

III. establish a licensing system, similar to that in western countries, for those who want

to become teachers;

IV. iv. establish a new system for evaluating and ranking universities;

V. v. introduce assessment of education performance at nurseries;

VI. vi. remove the requirement for students to choose between science and arts streams early in secondary school.

2015: KHDA released the first unified UAE School Inspection Framework. The framework has been designed to support the inspection of the full range of schools in the UAE that provide education to students from the early years to the end of secondary education.

2015: KHDA given regulatory jurisdiction to license training institutions in Dubai.

2015: KHDA introduced the UAE National Agenda Parameter, which requires all schools to participate in international and external benchmarking assessments on an annual basis other than TIMSS and PISA, and use them to monitor their progress in meeting their individual UAE National Agenda targets.

2015: Abu Dhabi Education Council's new Arabic and Islamic studies requirements 'My Identity' programme, which seeks to strengthen the feeling of national identity among Emirati students. The Teachers' Charter involves the same concepts and it will be signed by faculty staff in schools and universities.

2015: UAE Teachers charter is announced. The aim of the charter is to instil these ethical values in the education system and to ensure curricula does not contain any insinuation or indication of discrimination, violence or hate.

2015: 1.1 million students enrolled in education institutions in the UAE from early childhood to tertiary level.

2015: Total of 283 schools were transformed to smart schools, this includes 1,760 classes, 6,349 teachers and 34,513 students.

2015: Dubai Knowledge Village renamed Knowledge Park.

2015: KHDA launches Parent- School contract to ensure that both schools and parents are aware of their duties and responsibilities towards each other and towards their children based on agreed terms and conditions laid out in the contract.

2015-2016: 694 schools in Dubai and Abu Dhabi.

In Abu Dhabi 255, schools are public and 187 are private.

In Dubai 79 schools are public and 173 are private.

2015-2016: Schools in Dubai were evaluated on how well they were promoting innovation during the DSIB inspection cycle.

2016: On the directives of President His Highness Sheikh Khalifa bin Zayed Al Nahyan, the UAE Cabinet has approved the declaration of 2016 as the UAE Reading Year. The Cabinet issued directives to start preparing an integrated national literacy strategy and a framework to produce a reading generation and establish the UAE as the capital of cultural and knowledge content.

2016: National Reading Law is enacted as part of the National Policy for Reading in the UAE . Key elements of the initiatives under the Policy include changes in the educational system,

curricula and the evaluation of schools and institutions of higher education to address the imbalance in the decline in reading rates.

2016: The ministries of Education and Higher Education were merged. One minister will be supported by two ministers of state. The Ministry of Education will now supervise all levels of learning, from nurseries to higher education. A higher council of education and human resources was created.

2016: Emirates Foundation for Schools was announced as the governing body to manage public schools and give it the authority and independence to run all public schools, Emirates Foundation for Schools will be run by an independent board of directors and will be accountable to the government for achieving national targets in education.

2016: The Ministry of Education have designed a brand new Physical and Health Education curriculum to meet the individual needs of each student and will be implemented in all government schools from January 2017. The objective is to empower young Emirati students to take ownership of their physical education, health and wellbeing to ensure a future generation of healthy, motivated, highly educated Emiratis.

2016: A new Moral education initiative was introduced to school curriculums as part of a directive from Sheikh Mohammed bin Zayed, Crown Prince of Abu Dhabi. The initiative aims to instill ethical values among UAE school students and to promote such concepts as tolerance, respect and community participation.

2016: New textbooks to support revised curriculum distributed in public schools in UAE.

2016: Dubai private schools achieve PISA international average in Science and Reading.

2016: There are 511 private schools in the UAE. This is country with the highest number of English-medium international schools in the world. (Research data from The International Schools Consultancy (ISC).

2016: Out of the 149 schools inspected, there are currently 16 outstanding and 13 very good schools.

2016: New KHDA initiative announced to allow Dubai schools with an 'Outstanding' or 'Very Good' rating to opt out of the annual DSIB inspections if they choose a 'differentiated inspection' based on self-evaluation and sharing excellence with other schools.

2017: MOE outline new strategic plan to develop an innovative Education System for a knowledge and global competitive society,that includes all age groups to meet future labor market demand, by ensuring quality of the ministry of education outputs, and provision of best services for internal and external customers.

Sources

Information for this timeline of education reforms in the UAE, specifically Abu Dhabi & Dubai, was retrieved from the following sources:

- Abu Dhabi Education Council, Abu Dhabi Statistic Centre, Dubai Statistical Centre, Gulf News

- Knowledge and Human Development Authority, Ministry of Education (UAE), The International Schools Consultancy, The National Newspaper, UAE cabinet, UAE Interact