



## EXECUTIVE SUMMARY

With an increasing emphasis on youth development and employability in the Middle East, the United Arab Emirates (UAE) has made a substantial effort to re-imagine and reform its public education sector. Local education authorities have implemented many reforms to try to shift education from rote memorization toward a skills-based system that prepares students to thrive in the 21st century. This policy paper explores the history of curriculum development in the UAE, the role of various agencies, ministries, and current initiatives as well as the challenges and possibilities that lie ahead on the road of reform. It concludes with recommendations for policymakers relating to the implementation of sustainable curriculum reforms.

# Curriculum Development in the United Arab Emirates<sup>1</sup>

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## What Do We Mean by Curriculum?

In its broadest sense, the term curriculum encompasses the principles, underlying educational philosophy, goals, content, and concrete functioning of the “instructional program” in the classroom, as well as written and other materials needed to support the educational system (Connecticut State Department of Education, 2006).

According to Van den Akker (2003, 2010), curriculum as a concept can be broken down into three key components: intended curriculum, implemented curriculum, and attained curriculum. The *intended curriculum* typically includes the guiding documents produced by the Ministry of Education (MOE) or other education authorities, which dictate what should be taught in schools. The *implemented curriculum* is what actually happens in the classroom, how effectively teachers present the material, how long they spend on a topic, and what resources they have to teach the content. Finally, the *attained curriculum* is what students actually learn in their classroom, what skills and values they acquire, and what content they absorb and retain.

## History of Curriculum Development in the UAE

Formal education was introduced to the UAE in 1953 when the first Kuwaiti educational mission opened a school in the emirate of Sharjah. Following that, schools were opened across the UAE with funding from Kuwait, Bahrain, Egypt, Qatar, Saudi Arabia, and other countries (Suliman, 2000). Typically, the countries that funded the schools also staffed them and used the same texts and curricula that were used in their home countries. Table 1 shows some of the broad curriculum changes that have taken place over the past seven decades in the UAE.

In 1972, shortly after the creation of the UAE, the MOE was established to function as a central education authority to oversee the provision and development of education in the UAE. However, even after the establishment of the MOE, schools in the UAE continued to follow a wide assortment of different curricula with varying standards, which were mostly borrowed from neighboring countries (Suliman, 2000). It was not until 1979 that the MOE launched its National Curriculum Project to create a single Emirati curriculum, which only came into nationwide use in 1985 (Ridge, 2009).

<sup>1</sup> This policy paper is an updated version of Ridge and Farah's (2009) paper *Challenges to Curriculum Development in the UAE*, Sheikh Saud bin Saqr Al Qasimi Foundation for Policy Research.

Since 1985, the word "curriculum" in the UAE context has largely been used to refer to official textbooks, or intended curriculum, rather than any documentation outlining what skills or standards a student should acquire in a particular grade or subject. This has meant

that teachers have been very restricted in what they can teach, as they are bound to the precise content and activities prescribed by the textbooks in order to ensure that what they teach matches what will be assessed.

**Table 1. UAE curriculum changes from 1953 – 2020**

Year(s)	Curriculum Development
1950–1970	<ul style="list-style-type: none"> <li>A variety of curricula brought from the original countries of schools, such as Bahrain, Egypt, Kuwait, Qatar, and Saudi Arabia (Ridge, 2014; Suliman, 2000)</li> </ul>
1971–1990	<ul style="list-style-type: none"> <li>Largely based on the Egyptian model (Findlow, 2001)</li> <li>Two track system: arts and science</li> <li>Arabic was the language of instruction</li> <li>In 1979, the National Curriculum Project started and a national curriculum was implemented nationwide by 1985 (Ridge, 2009)</li> </ul>
1991–2000	<ul style="list-style-type: none"> <li>In the 1990s, the MOE partnered with UAE University to develop a new English language curriculum and extended it across all grade levels (prior to 1991, a foreign-produced English language curriculum was used)</li> <li>In 1994, Model Schools were established (Shaheen, 2010) <ul style="list-style-type: none"> <li>These used English as the language of instruction in scientific subjects and mathematics and also emphasized the use of new technologies</li> </ul> </li> <li>By 1994–95, all secondary schools taught computer science (United Nations Educational, Scientific and Cultural Organization International Bureau of Education [UNESCO-IBE], 2011)</li> </ul>
2001–2010	<ul style="list-style-type: none"> <li>In 2007, the <i>Madares Al Ghad</i> initiative was launched (see Box 1) <ul style="list-style-type: none"> <li>English used as the medium of instruction for science and mathematics, plus additional hours of English (Layman, 2011)</li> </ul> </li> <li>In 2010 in Abu Dhabi<sup>2</sup>, the New School Model was launched <ul style="list-style-type: none"> <li>Bilingual instruction in Arabic and English</li> <li>Reduction in number of subjects, heavy emphasis on science, technology, engineering, and mathematics (STEM) (Pennington, 2016a)</li> <li>Emphasis on developing 21st century skills (Pennington, 2016a)</li> <li>Later renamed the Abu Dhabi School Model (ADSM) (Pennington, 2015)</li> </ul> </li> </ul>
2011–2020	<ul style="list-style-type: none"> <li>In 2012, the Mohammed Bin Rashid Smart Learning Program (MBRSLP) was established (Dubai Government Authority, 2012) <ul style="list-style-type: none"> <li>Emphasis on technology</li> <li>Aim to provide all Grade 6–12 students with tablets and teachers and principals with laptops by 2019</li> </ul> </li> <li><i>Madares Al Ghad</i> program discontinued in 2015 (Jonny, 2015)</li> <li>In 2016, MOE introduced new subjects and created new streams (WAM, 2016) <ul style="list-style-type: none"> <li>History, geography, economics, and social studies were combined</li> <li>New subjects introduced: Innovative Design, Health Sciences, Career Guidance, Life Skills, and Business Management</li> <li>A special 'elite' stream to nurture gifted students introduced<sup>3</sup></li> </ul> </li> </ul>

<sup>2</sup> The MOE is responsible for implementing the national curriculum in Dubai and the Northern Emirates only. Abu Dhabi has an independent curriculum created by the Abu Dhabi Education Council (ADEC). See *Fact Sheet: Education in Ras Al Khaimah and the United Arab Emirates* for additional information on education in the country (Ridge, Kippels, & ElAsad, 2017).

<sup>3</sup> This initiative launched in 2016 is targeting students in Grades 6–12 and has a strong focus on mathematics and science. It plans to have students take the Advanced Placement (AP) examinations (UAE Ministry of Education, College Board, and Cambridge University Press, 2017).

## Curriculum Development Activities in the Ministry of Education

The MOE's Curriculum Department roles include being responsible for reviewing and approving textbook manuscripts (which then become fundamental resources for teachers in the classroom) as well as the preparation and oversight of assessments and examinations. Unlike in the majority of Organization for Economic Cooperation and Development (OECD) countries, there is no overarching curriculum document in the UAE that outlines the curriculum goals, standards, or content in its entirety. Overarching curriculum frameworks typically outline the content and performance levels desired for students in each grade and subject (Department for Education, 2014; Schmidt et al., 2001). The MOE often partners with foreign companies to design curriculum content, such as a seven-year deal signed in 2016 between the MOE and McGraw-Hill Education to develop mathematics and science curricula (Sahoo, 2016). Furthermore, while subject syllabi exist in the UAE, these are often not used by teachers and are not always readily available in schools (see Box 1 for an example).

In addition to developing subject syllabi, the MOE is also responsible for creating and administering examinations and assessments. While this should create a natural synergy, whereby changes in textbooks (intended curriculum) lead to changes in teaching styles (implemented curriculum) and examinations (attained curriculum), this has not been the case. In the UAE, examinations have retained a heavy focus on testing textbook content in which students essentially need to memorize, thus discouraging teachers from embracing new student-centered approaches to teaching. Table 2 shows the current intended, implemented, and attained curriculum in the UAE.

Table 3 shows the prescribed, or intended, curriculum for students in Grade 10 for the 2015–16 academic year. There is a general student stream as well as an advanced student stream. In both streams, each lesson is 45 minutes long and there is approximately six hours of instruction per day. It is worth noting that there is a particularly strong focus on mathematics and English, while there are no arts or music classes. However, the introduction of newer subjects such as business management, health/life skills, and creative design demonstrate the MOE's recent efforts to introduce practical and applied subjects to the curriculum.

### Box 1. Curriculum changes and the need for stakeholder buy in: The case of *Madares Al Ghad*

A mandate to provide a "modern curriculum" resulted in the 2007 launch of the *Madares Al Ghad* (Schools of Tomorrow) by the Ministry of Education. In specially selected schools, English medium textbooks for English, science, and mathematics were introduced in order to both improve students' levels of English and change the way in which these subjects are taught and understood.<sup>4</sup> Despite the introduction of more student-centered materials and textbooks, the lack of corresponding reforms in assessment mechanisms meant that *Madares Al Ghad* teachers often relied on more teacher-centered, textbook driven ways of teaching.

There were also challenges relating to recruiting qualified, bilingual teachers and concerns were raised about the shift to using English as a medium of instruction in the *Madares Al Ghad* schools. Parents and members of the Federal National Council (FNC) expressed fears over a decline in children's command of Arabic, and many also felt resentful of a foreign language and a foreign curriculum being imposed upon Emirati children (Habboush, 2009). In 2015, the *Madares Al Ghad* program was discontinued and the schools returned to the regular MOE curriculum (Jonny, 2015).

<sup>4</sup> Previously, math and science were taught in Arabic.

**Table 2. Curriculum within the UAE context**

Type of Curriculum	Description
Intended	<ul style="list-style-type: none"> <li>• Ministry of Education Strategy 2010 –2020</li> <li>• Guiding documents and resources                             <ul style="list-style-type: none"> <li>o Common national examinations</li> <li>o Subject syllabi</li> <li>o School textbooks</li> <li>o Student and teacher workbooks (laying out standards, activities, strategies, expected outcomes and tools for teaching and assessment)</li> </ul> </li> </ul>
Implemented	<ul style="list-style-type: none"> <li>• How teachers teach</li> <li>• What teachers teach                             <ul style="list-style-type: none"> <li>o How content is presented</li> <li>o Materials or pedagogical approaches used</li> </ul> </li> </ul>
Attained	<ul style="list-style-type: none"> <li>• What students have learned, as measured by:                             <ul style="list-style-type: none"> <li>o Three MOE examinations a year<sup>5</sup></li> <li>o End of term student reports, which have weighted numerical subject grades based on teacher assessments and MOE examinations</li> <li>o Common Educational Proficiency Assessment (CEPA) for Grade 12 students only<sup>6</sup></li> <li>o National Assessment Program (NAP) in Grades 3, 5, 7 and 9 to assess for Arabic, English, mathematics, and science (UAE MOE, 2015; UAE MOE, 2017)<sup>7</sup></li> <li>o International assessments: Trends in International and Mathematics and Science Study (TIMSS), Programme for International Student Assessment (PISA), and Progress in International Reading Literacy Study (PIRLS)</li> </ul> </li> </ul>

**Table 3. Grade 10 intended curriculum in the 2015–16 academic year**

Subject	Number of Classes (General)	Number of Classes (Advanced)
Islamic Education	3	3
Arabic	5	5
Social Studies	3	3
English	6	6
Mathematics	7	8
IT	2	2
Science <sup>8</sup>	5 (General Science)	4 (Physics)
		2 (Chemistry)
Business Management	2	0
Physical Education	2	2
Health/Life Skills	2	2
Creative Design	2	2
<b>Total</b>	<b>39</b>	<b>39</b>

<sup>5</sup> This was the case for the 2016–17 academic year.

<sup>6</sup> In 2017, the MOE announced that CEPA will be replaced by the Emirates Standardized Test (EmSAT), a computer based exam (Pennington, 2017). The MOE has plans to administer the EmSAT to public school students in Grades 1, 4, 6, 8, 10, and 12 in the 2017–18 academic year (Pennington, 2017).

<sup>7</sup> Since the 2010–11 academic year, NAP has been administered in the UAE (UAE MOE, 2015). However, it is unclear whether it will continue being used following the implementation of the EmSAT.

<sup>8</sup> Grade 10 students enrolled in the general stream classes take a general science course, while advanced students study physics and chemistry, but not biology.

## Other Influences on Curriculum Development

### Ministry of Higher Education and Scientific Research

Historically, the UAE's Ministry of Higher Education and Scientific Research (MOHESR) served as the governing body responsible for administering and managing the higher education sector in the UAE. While the MOHESR has typically not played a direct role in shaping curriculum policy at the K-12 level, the derivatives of higher education policies have nevertheless exercised influence over the K-12 curriculum.

In 2001, the Common Educational Proficiency Assessment (CEPA) of English was introduced and by 2007 the MOHESR required all Grade 12 public school students to take the assessment (Ismail, 2008; Yousef, 2005). CEPA is an English proficiency exam designed to determine whether students require a foundation year to strengthen their English skills before enrolling in the UAE's major public higher education institutions, all of which conduct instruction in English (Ismail, 2008). The first administration of the CEPA exam saw a number of problems, such as poor preparation of teachers for the exam and a misalignment between the exam content and the textbook content. In order to address these issues, the Grade 12 English syllabus was modified to better reflect the topics covered on the CEPA exam. Likewise, further curricular changes had to be made when the MOHESR subsequently launched two new CEPA assessments, requiring CEPA for mathematics in 2006 and for Arabic in 2009 (Institute of Applied Technology Dubai, n.d.; Ministry of Higher Education [MOHESR], 2010).

With the three largest public universities – Higher Colleges of Technology, UAE University, and Zayed University – using CEPA as an admissions requirement, the importance of preparing students for CEPA in high school has increased. By setting a certain standard for university admissions through requiring the CEPA exam, the MOHESR has had a considerable impact on shaping what students learn in secondary schools. Moreover, following the MOE's 2017 announcement that the Emirates Standardized Test (EmSAT) will replace CEPA (Pennington, 2017), this new examination will likely continue to have a similar influence on what students learn at the secondary level.

In 2016, the UAE underwent a major restructuring of its ministries, resulting in the integration of the

MOHESR with the MOE to create a single MOE under one minister, with two ministers of state reporting to him, one of which is responsible for higher education and one for public schools (Pennington, 2016a). This was done in part to encourage greater cooperation between the two ministries (Pennington, 2016a). Perhaps in the coming years, this new ministerial structure will pave ways for closer alignment between higher education and pre-tertiary school education, in particular with regard to curriculum assessment.

### Abu Dhabi Education Council

Since its establishment in 2005, the Abu Dhabi Educational Council (ADEC) has been at the forefront of curriculum development in the UAE. In June 2009, ADEC introduced the *10-Year Plan* as a long-term reform strategy for K-12 public schools in Abu Dhabi. The short-term focus of the plan seeks to improve the capacity of principals and teachers, student achievement, discipline and attendance, and assessment techniques, while the long-term focus is to boost the overall quality of the education system (ADEC, n.d.). The Abu Dhabi School Model (ADSM), formerly known as the New School Model, is one of the major reforms that falls under the 10-Year Plan (Pennington, 2015). The curriculum reorganization was broken down into three implementation cycles, and started at the primary level in the 2010-11 school year and reached secondary students in the 2016-17 school year (ADEC, 2012; ADEC, 2016).

Launched in 2010, the ADSM emphasizes both Arabic and English in its curriculum. When appropriate, Arabic Medium Teachers (AMTs) and English Medium Teachers (EMTs) are encouraged to plan lessons together to promote cross-disciplinary and cross-linguistic learning (ADEC, 2014). The ADSM course subjects and the respective language of instruction are shown in Table 4.

The English medium curriculum in Abu Dhabi was initially developed for mathematics, English, and science. As with the *Madares Al Ghad* system, a focus of the ADSM curriculum is to improve the English language skills of the students so that they avoid a time-consuming foundation year upon entry into university.<sup>9</sup> However, the ADSM is more comprehensive as it involves a new standards-based curriculum, which is taught by a large number of native English-speaking teachers. The ADSM curriculum is an important move as it places more emphasis on critical thinking and problem solving skills rather than on rote memorization.

<sup>9</sup> Foundation years and remedial programs can take up to one third of federal universities' budgets (Salem & Swan, 2014). Reducing the number of students who attend such programs would result in significant budget savings. The foundation year is scheduled to be discontinued in federal universities by the 2017-18 academic year (Pennington, 2015).

**Table 4. Abu Dhabi School Model subjects by language of instruction**

	Arabic Instruction	English Instruction
Kindergarten (KG1–KG2)	All subjects co-taught by English Medium Teachers (EMTs) and Arabic Medium Teachers (AMTs)	
Primary – Secondary (Cycles 1–3)	Arabic Language Islamic Education Social Studies/Civics/ Integrated Social Studies Art Music Health/Physical Education	English Language Mathematics Science

Source: ADEC, 2014

Since 2010, the ADEC has been steadily implementing reforms, and in the 2016–17 academic year it launched a new pilot program for arts and music, redesigning the two subjects from kindergarten to Grade 9 (Pennington, 2016b). That same year, for Grades 10–12, ADEC implemented reforms to offer even more creative subjects, including photography and interior design (Pennington, 2016b). Additionally, students in Grades 10–12 started to receive career guidance as a core subject to help them make informed decisions about their future and select their elective courses (ADEC, 2016). If successful, the ADSM curriculum could support change in government schools across the country.

## Challenges and Recommendations

While the development of the ADSM in Abu Dhabi and the creation of the *Ministry of Education Strategy 2010–2020* have been important steps forward in improving the curriculum in the UAE, there are still many issues to be addressed. The main challenges that lie ahead include transforming the attitudes and approaches of teachers, expanding the scope of the curriculum content, and designing appropriate assessment strategies. Furthermore, local capacity must be expanded in order to ensure sustainability and suitability of curriculum reforms.

## Transforming Teaching

To ensure a successful implementation of a new curriculum, there needs to be better training and a shift in teachers' attitude towards teaching and their role in the transmission of knowledge. Moving away from a textbook-centered curriculum to a student-centered curriculum<sup>10</sup> will require the MOE to provide teachers with rigorous training on the fundamentals of teaching, the scope of which must extend beyond typical pedagogical topics to enable teachers to independently develop instructional materials. This will require more intensive training and better follow-up than the current system in place, particularly in boys' schools.<sup>11</sup>

In the past, the MOE's structure incorporated supervisors for every subject whose role it was to visit assigned teachers regularly to observe their lessons, assess the quality of teaching, and give feedback to both the teacher and the principal of the school. However, classroom observations are no longer carried out in the UAE educational system on a regular basis (communication with UAE MOE Official, 2016). If the role of the supervisor was strengthened and improved, this would likely have a positive impact on student learning. In their study of Cuba's education system, Carnoy, Gove, and Marshal (2007) found that supervision and mentoring played a critical role in ensuring quality of teaching, if used effectively, and the UAE should be no different. Unfortunately, many teachers are unlikely to substantially change their

<sup>10</sup> According to Nanney (2004), "Student-centered learning environments have a heightened advantage over the traditional teacher-centered, subject-centered environment in that they provide complimentary activities, interactive in nature, enabling individuals to address their own learning interests and needs and move forward into increasingly complex levels of content to further their understanding and appreciate subject matter (p.1)."

<sup>11</sup> Consistent with trends across the GCC, girls in the UAE consistently outperform boys across all school subjects (Ridge, 2014).

behavior unless they are provided with appropriate incentives to do so. The current system does not yet reward student-centered teaching, and this is unlikely to change unless there is an insistence upon a change in teaching styles and in national assessments.

## Expanding Curriculum Content

The curriculum continues to be a barrier to further reform as it has been narrowing over the past few years and it contains few practical subjects. In particular, physical education (PE), arts, and music remain neglected. With regard to PE, research has found that it is associated with numerous benefits, such as higher self-esteem, better attitudes towards school, greater social skills, and even improved academic and cognitive development (Bailey, 2006). In 2009, the MOE announced modifications to its PE curriculum to provide more instructional hours and better facilities (Lewis, 2009; Sankar, 2010). While this was a step in the right direction for improving PE, significant challenges remain, which are described in more detail in Box 2.

In addition to PE, greater emphasis also needs to be given to art and music. This is not only to encourage and engage the more creative students, but also to benefit the entire student body. Research on the theories of cognition suggests that taking art classes (including visual arts, music, theater, and dance) develops capabilities or motivations that help to foster non-artistic skillsets (Catterall, 2002; Ellen & Stéphan, 2013). While art and music are offered at the primary and preparatory school level, the UAE does not include any art or music classes at the secondary level (communication with UAE educator, 2017). In comparison, on average in OECD countries 7% of compulsory instruction time is dedicated to arts at the secondary level (OECD, 2016a).

In the UAE, art and music face similar challenges to PE as there is a shortage of qualified teachers and classes are not given high priority (Hanif, 2016; Zaman, 2013). The current situation relating to art and music in schools is in sharp contrast to the mid 1970s, when visitors to schools in the emirate of Ras Al Khaimah were "welcomed by the school orchestra. The choir sang, an accordion and drum fanfare was played, and one the children conducted... [and] [t]he buildings were almost all decorated by the pupils, with bright

strong colors, with giant murals... (Deakin, 1976, p. 95 & 100)." While art and music are generally a low priority in the curriculum today, there have been some positive steps forward such as the MOE's introduction of creative design to the secondary school curriculum and ADEC's introduction of photography and interior design (Pennington, 2016b; UAE MOE, 2016).

Finally, the overemphasis in terms of time spent on more academic subjects, such as mathematics, has not led to improvement in student performance in these subjects. In a cross-country comparison of the subjects and respective instruction time offered at the secondary school level, the UAE places a greater emphasis on mathematics than many OECD countries, including Finland, one of the top scoring countries on the Programme for International Student Assessment (PISA<sup>12</sup>) (see Figure 1). Benavot (2006) argues that this trend has been prevalent in most countries across the Middle East, Africa, and South Asia, whereas the OECD countries allocate relatively more time to physical education and the arts. Despite a considerable time allocation to mathematics (17% of all instruction time) and English (15% of all instruction time) in the UAE, students remain weak in both subjects (see the UAE's results in the 2015 TIMSS and PIRLS), indicating that simply having more or the same number hours in a subject is not enough to yield higher test scores. It is therefore important to consider how time is utilized and how teachers deliver content.

Overall, the UAE public school curriculum remains relatively narrow, meaning that UAE schools do not provide students with a range of subjects to match interests to abilities. The UAE could benefit from diversifying its secondary level curricular offerings to engage those students who may have different interests.

## Assessments

Assessment frequency, style, and grade inflation are also barriers to curriculum reform. The *Ministry of Education Strategy 2010–2020* notes the need to "standardize assessment of students and ensure that performance is measured at a national level," and to do this the MOE administers three examinations every year to students at all grade levels (communication with UAE educator, 2017; UAE Ministry of Education, n.d., p.22). However, this has resulted in students being

<sup>12</sup> PISA is one of two global exams that assess different features of student learning. TIMSS (Trends in Mathematics and Sciences Study) examines "what students know," while PISA aims to assess "what students can do with their knowledge (European Commission, 2011)."

## Box 2. Physical education in the UAE

One of the key issues relating to a lack of emphasis on physical education (PE), according to Swan (2015), is that there is no PE department in the UAE's MOE. Thus, there is no entity tasked with specifically monitoring the subject. This is indicative of how PE is typically perceived across the Middle East as being unimportant. An education official in the region described the status of PE, stating, "some school heads are not so keen in sports and don't pay attention to it as a proper subject (UNESCO, 2014, p. 23)." A few of the challenges related to the low status of the subject, which are examined in detail below, include frequent class cancellations, inadequate facilities, and difficulty finding qualified teachers.

*Class cancellations:* The frequent cancellation of PE classes across schools in the UAE reflects the low status of the subject. According to a UNESCO report on PE in the Middle East, an estimated 65% of PE classes were cancelled in 2013 (UNESCO, 2014). There are typically a variety of reasons given for the cancellations, including greater priority given to academic classes, PE space being used for other activities, and poor weather conditions. At one public boys school in the UAE, students reported that their participation in PE was optional, and 50% of the students surveyed opted out.<sup>13</sup>

*Insufficient facilities:* A lack of adequate PE equipment and facilities is another issue across the Middle East, with one PE supervisor in the region noting a "lack of school playgrounds; no indoor sports halls (UNESCO, 2014, p. 57)." The UAE is no exception. Despite the extreme summer heat, in 2011 one public school teacher estimated that more than 90% of the public schools in the UAE did not have an indoor gym (Ahmed, 2011). There is also a shortage of grassy areas and equipment to allow students to play a variety of sports activities (Ahmed, 2011). To cope with this shortage of facilities, some schools partner with local sports centers to allow students to enjoy activities on their premises; however, there are not enough sports centers for all schools to partner with (Ahmed, 2011).

*Shortage of teachers:* While expatriate PE teachers are difficult to find, it is even more challenging to find qualified Emirati instructors, in part due to the fact that only one UAE university offers a physical education-related degree program (Ahmed, 2012; Swan, 2015). In 2015, UAE University reinstated its PE program after closing it 15 years earlier due to low demand (Swan, 2015). The 2015 incoming cohort consisted of 25–35 people, only some of whom planned to go into teaching (Swan, 2015). There had been plans to implement a sports management degree at the Higher Colleges of Technology; but, that degree offering has been indefinitely postponed (Swan, 2015).

According to a study in 2012, over half of public school PE teachers in the UAE were overweight (Ahmed, 2012), and there have also been reported instances of them engaging in unhealthy activities, like smoking, with students (communication with PE specialist, 2016). These teachers are not setting the best example for their students in a country where lifestyle diseases, like hypertension, diabetes, and obesity, are increasingly common (Masudi, 2013). It is estimated that 40% of UAE youth aged 11 to 16 are obese, predominately due to a poor diet and a lack of exercise (Geranpayeh, 2015). Ultimately, the lack of a strong PE curriculum and shortage of qualified teachers in schools has a detrimental effect on the health and wellbeing of students.

over-tested. Class time that should be dedicated to learning new material and skills is often designated for preparing for and taking assessments.

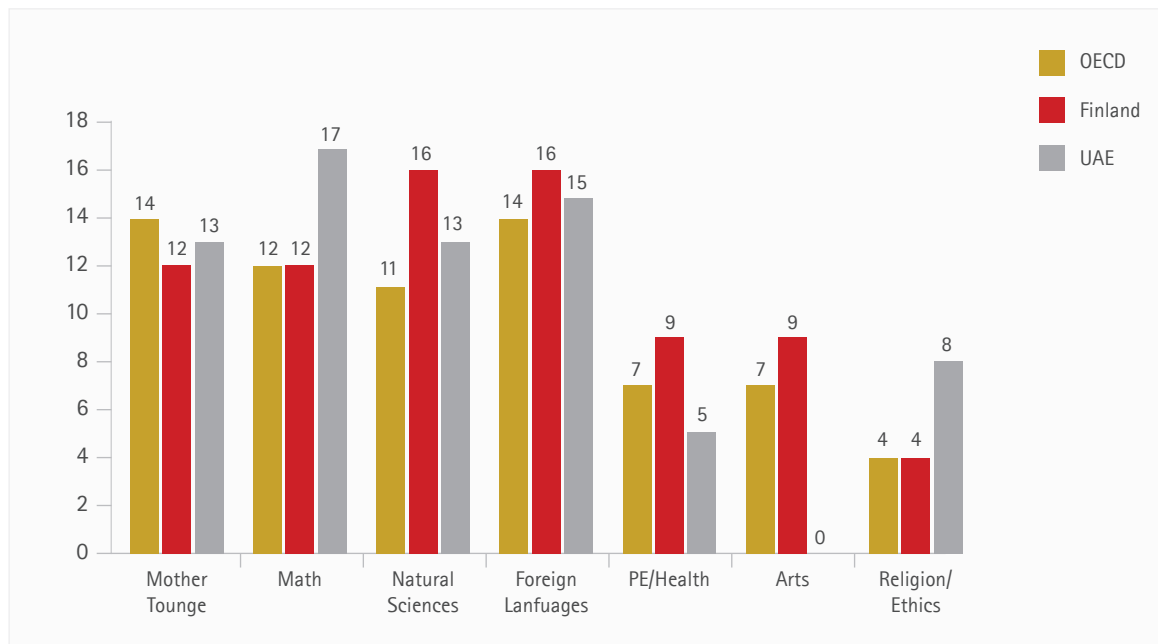
In theory, assessments should serve as a tool to assist the MOE in determining which schools are performing well and which are not while also enabling individual schools to track student progress. However, the reality is that students who are falling behind on assessments do not always receive the support they require. The

exams in the UAE require students to provide only limited responses, which do not clearly reveal students' specific weaknesses and therefore do not allow room for constructive feedback (Dubai School Inspection Bureau, 2009). This aspect of the examination process remains unchanged since the 1980s, despite the introduction and development of new textbooks and student-friendly curriculum content. The examinations also do not adequately assess how students apply skills learnt to new situations using critical thinking and

<sup>13</sup> This information was obtained from a survey conducted by the Al Qasimi Foundation in 2016.



**Figure 1. Comparison of instructional time by subject at the secondary level (as a percentage of total compulsory instruction time)**



Source: OECD, 2016

problem-solving skills, and, due to the high frequency of exams and in-class tests, are reducing class learning time. Another challenge linked to student assessments is the prevalence of grade inflation. Students want high marks, and teachers may feel pressure to give good grades as their teaching is often appraised on how their students do. Grade inflation is widespread and gives students an unrealistic measure of their own competence. Incentives to increase grades should be removed to ensure grades remain meaningful and to allow students to learn from their mistakes.

In general, the assessment system needs to continue to be refined and reviewed in order to shift the curriculum's focus from rote memorization to the application of knowledge (Pennington & Hanif, 2016). Future major curriculum reforms carried out at the national level also need to ensure comprehensive and rigorous assessment, while making sure that material required for testing does not overshadow or take time away from the rest of the curriculum. With growing pressure to do well on both national and international assessments, many students and teachers in the UAE have no choice but to put a stronger emphasis on tests and passive learning than on new skills and active learning. Education policymakers should work to alleviate this pressure and focus on how to help students and teachers maintain a balance between learning and assessments.

## Creating Sustainable and Suitable Curriculum Reform Processes

The final challenge for the UAE is one that holds larger political and economic consequences for the country. It is the challenge of creating a national body that is able to develop and revise the national curriculum. This body could be comprised of local and international curriculum experts who are able to produce and review proposed curriculum changes. The MOE and the ADEC have both relied heavily on foreign expertise to spearhead their curriculum development initiatives. Though it is easy to import consultants who tend to be more experienced in the field in the short term, such an arrangement is unsustainable in the long term, as it excludes Emirati nationals and experts from the process and, consequently, leaves them without the necessary skills to develop curricula. By decreasing its reliance on external expertise and providing better education and training for its nationals and home grown experts, the UAE would have an opportunity to build local capacity for more nuanced and contextualized curriculum development.

This process needs to begin with the UAE being more cautious when "borrowing" curricula reforms from abroad. To date, the UAE has depended heavily on expertise from the United States, England, and Australia, from which it imports the majority of its curriculum. However, all three countries are relatively

weak performers on the TIMSS and PISA assessments. In fact, in 2015, US students ranked below many other countries on PISA, coming in 38th in mathematics and 24th in science out of 71 participants (Desilver, 2017). Therefore, in the pursuit of a better, more encompassing curriculum, the UAE may need to explore the possibility of learning from the experiences of countries that have shown large gains on PISA (OECD, 2016b). Additionally, the UAE should also consider learning from in-country comparisons of high performing schools that use different curriculums, such as British curriculum schools (OECD, 2016b).

Concerns about loss of national identity are also an important reason why the UAE requires its own strong curriculum authority. Nowhere is national identity more clearly defined than through a country's public school curriculum. External consultants cannot grasp the needs of the UAE, its vision, its goals, and its moral foundations better than locals. If there was more local involvement in curriculum development in the future, many of these concerns could be diminished or mitigated in the future.

## Conclusion

It is undeniable that providing the appropriate curriculum in public schools is essential to creating a generation of pioneering and skilled citizens. To that end, the curriculum must be conceptualized in holistic terms as more than just what should be taught, but also as how it should be taught and assessed. Without a comprehensive approach, curriculum development will continue to be understood solely in terms of textbook development. This paper suggested the following initiatives to address such fundamental issues surrounding curriculum in the UAE: offering more constructive teacher training, expanding the scope of curriculum content, implementing effective evaluation strategies, and investing in long-term local capacity to develop curriculum. If a wider view of curriculum is embraced in the public education sector, such initiatives would undoubtedly bring lasting and meaningful change to the UAE educational system.

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