



Mohammed Bin Rashid School Of Government

POLICY BRIEF

Policy Brief No. 44

October 2017

Summary

How can assessment improve educational outcomes in Dubai? International tests like PISA and TIMSS suggest UAE (and Dubai) students' performance is not improving fast enough to realize the UAE's National Agenda goal of a first-rate educational system and prepare them with the skills necessary for the 21st century.

This policy brief counters that assumption by showing that assessment is already working in some schools and their experience should be drawn upon to benefit the wider education system. By reviewing the Dubai School Inspection Board's examination of 'outstanding' and 'weak' private schools, this policy brief summarizes some of the ways that assessment data is collected and being used to improve students' learning.

The policy brief recommends that 'weak' schools and public schools should be financially supported to set up similar mechanisms that exist in 'outstanding' schools, while educators from 'outstanding' schools could be given financial incentives to share their knowledge with peers in 'weak' and public schools. Dubai's Knowledge and Human Development Authority (KHDA) should organize a What Works event on assessment and build an online and accessible portal of best practice assessment material for educators.

Improving Assessment in Dubai's Education System

Guy Burton

Setting the scene

At the end of 2016 the results for the Organization for Economic Cooperation and Development's (OECD) most recent Program for International Student Assessment (PISA) were released. A year earlier 500,000 15 year old students in 72 OECD and non-OECD countries across the world had taken a series of tests in maths, science and reading. The UAE's maths results was 47th among the countries, a rise of one place from the previous test in 2012. In science and reading the UAE had dropped two places to 46 and 48 respectively (Pennington 2016).

A few months later, in March 2017 Andreas Schleicher, the director of the Organisation for Economic Cooperation and Development (OECD), said that using his organisation's test scores, the Program for International Student Assessment (PISA), UAE students were 'way below [...] where you would predict them to be given the wealth of the country and the investment in education...' (Navdar 2016a)

Further analysis of the data revealed that while UAE students' performance in science, maths and reading in 2015 had been below the average as a whole, the performance of private schools was higher; indeed, those in Dubai appear on course to meet the National Agenda goals (Masudi 2016, Navdar 2016b, Westley 2017).



There is therefore a need to improve the state of education in the UAE. Assessment – as demonstrated by the PISA tests – provides a means towards working out whether that aim is being achieved or not. But given the difference between public and private schools in their results, what is it that private schools are doing, especially in relation to assessment, which have contributed to better results? What can their experience offer the wider educational establishment in the UAE? To answer these questions, this policy brief is concerned with the purpose and use of assessment in the UAE and is broken down into several sections. The first considers what assessment is and its purpose in education. It considers two international tests that are often used by governments to evaluate their educational systems: TIMSS and PISA. The second then looks at some of the challenges and limitations associated with TIMSS and PISA. The third section considers the context of the UAE and Dubai especially, where private schools outnumber public schools and in which 37 different curricula are present. In such circumstances a ‘one size fits all’ approach to assessment will not work. Fortunately, there exists a way to examine assessment in Dubai, which is due to the existence of the private sector: the use of schools inspections.

The fourth section expands on this by examining reports for two types of private school in Dubai: those which are ‘outstanding’ and those which are ‘weak’. The weak evaluations offer a proxy for public schools, which are not subject to the same publicly available inspection reports. Fifteen ‘outstanding’ schools and 10 ‘weak’ schools are examined and the themes in each presented. The fifth section then draws together the features of each type of school to see what is similar and different about them. It notes that while assessment exists in both schools, the key distinguishing feature is more integrated approach in ‘outstanding’ schools. The final section then offers suggestions moving forward and based on this analysis. It makes recommendations based on the

experience of assessment in ‘outstanding’ schools which may be applied to public schools and measures governments in Dubai and the UAE can take. Central is the idea of best practice and collaboration, supporting schools and educators to develop their modes of assessment and use them to feed into their teaching and learning strategies.

What is assessment and why do we need it in education?

Policy makers, both globally and in the UAE want to improve the quality of education. The reasons for doing so are common: across the world, economies are becoming more knowledge-based, requiring more flexible and adaptable workers. Graduates need to be literate and comfortable with critical and reflective thinking and be able to make use of latest technologies. These developments put downward pressure on the education systems which are expected to supply such workers. It calls for forms of education which focus less on knowledge acquisition and more on the development of workers’ skills, creativity and individual talents.

One way that policy makers can see whether those objectives are being met is through the use of assessment. But the term ‘assessment’ masks a variety of different interpretations. Assessment is a multi-dimensional concept. It can range from the individual to the group, whether a class or cohort within a school, municipality, region or country. It can be done for individuals or by individuals, the latter as a form of self-assessment or peer review. It can be undertaken internally, by a class teacher or school, or externally, through the use of national and international tests and exams. The content of assessment may also vary as well: it may be formal and summative (i.e. where a mark or grade is attached to it) to the formative and informal (i.e. where comments, feedback and guidance are offered on an individual piece, or perhaps as a way of improving future work).

The diversity of assessment presents challenges. How can a teacher be sure that assessment is making a difference to an individual student, an educational institution or the educational system as a whole? Here comparison becomes useful. It provides a means to examine attainment in relation to other students, institutions and systems. If done regularly, it can also show whether there is progress or not.

At a national level there are two forms of assessment which are being used increasingly: the TIMSS and PISA tests. Both are conducted by intergovernmental organisations, the International Association for the Evaluation of Educational Achievement and the OECD respectively. TIMSS (Trends in Mathematics and Science Study) examines fourth- and eight-graders' knowledge of science and maths every four years. PISA (Program for International Student Assessment) is carried out every three years and provides a point of comparison for examining how 15 year olds perform in relation to their knowledge of science, maths, reading, collaborative problem solving and financial literacy.

Used effectively, the TIMSS and PISA tests can inform policy makers, school principals and teachers by benchmarking student performance and attainment and pointing areas for further work. The data generated through these tests which take place every three years can be used to evaluate students' skills and abilities, and compare the experience of students from different backgrounds, whether socio-economic or cultural (MBRSG 2017: 10). Indeed, the OECD's head, Andreas Schleicher, points out that PISA aims to move beyond simply knowledge acquisition and reproduction and towards students' ability to use and adapt such information in different and novel settings. Used in such a way, it can arguably help many of those policy makers in the education sector get closer to their goal of preparing students ready for the contemporary economy.

International acceptance of tests like

TIMSS and PISA are reflected in the UAE's education policies, where it is being used as an international benchmarking as a way of measuring progress. In 2014 the government published the National Agenda 2021 and set a goal for the UAE to be among the 20 highest performing countries using PISA and among the 15 highest performing countries using TIMSS by 2021.

What are the challenges associated with TIMSS and PISA?

While PISA and TIMSS can be useful in testing student performance and offering comparisons across time and space, they only tell part of the story. Perhaps the most notable one is that their publication and use risks being simplified to a ranking system of countries and their students. Used in its most reductive manner, this risks seeing education policy and the tests as no more than a competitive exercise, where countries compete to beat one another and reach the top. The idea of what education is and what it is to be used for may therefore be lost.

A second problem with these international tests is that its reductive nature may not take into account the wider context in which a society and its students live and learn; this may also involve the character of the education system, including the diversity and disparity of schooling options as well as individual students' performance (MBRSG 2017: 10).

A third issue associated with TIMSS and PISA is its aggregate character. The tests only provide an overall average of a country's test scores. Usually, this data is presented as a national figure. While it can – and has been disaggregated along gender, socio-economic and provider lines (i.e. whether schools are public or private) – they provide little in the way of individual performance. Additionally, not all students and their performance are captured in the test results. National authorities only put forward a sample of students towards the tests rather than submitting all students in

the designated age cohort to it. For example, 15,000 students were put forward for the 2015 PISA tests in the UAE (Pennington 2016).

Fourth, the periodic nature of the TIMSS and PISA tests means that they cannot capture all the developments taking place within a country's educational system. The process of changing education systems is slow, like an oil tanker turning. The latest results may not reflect the result of earlier reforms. On the other side, any reforms which take place after the tests' publication is too late for the students who previously took the test or is about to take them.

If TIMSS and PISA aren't the answer, what is?

TIMSS and PISA can be useful, but only by providing a 'high level' perspective into the state of national education. Are there other ways of doing assessment which could complement the TIMSS and PISA tests and which may be more suitable for measuring student attainment and performance here in the UAE? Additionally, are there forms of assessment which are more timely and responsive, which can directly benefit the students taking them rather than the cohort after them?

Doing this is challenging in the UAE because of the country's sheer diversity in its educational system. While public education predominates in many other countries with a common form of assessment, in the UAE this is not the case. Abu Dhabi and Dubai, the two largest emirates, had 664 schools between them in 2015-16, of which nearly 46% are public. In Dubai 173 of the schools are private compared to 79 public schools that are public (Warner and Burton 2017: 43). The effect of this is that Dubai schools do not follow one curriculum but many; and as a result, many different forms of assessment. Indeed, in 2016 there were 17 different curricula being offered in its schools (El-Sholkamy and Al-Saleh 2017: 6). The variety of schooling options not only makes it hard

to propose and implement a single model of assessment; it would also be inappropriate. Moreover, it makes it hard to compare and contrast the attainment of students in different schools using their specific grading systems.

So, if it is not possible to compare students' grades directly, are there other ways, which evaluate their broader, general skills? The answer to this is yes – and it comes not from international or national tests, but from schools themselves.

In order to maintain standards in the private school sector, the Dubai government established the Dubai School Inspection Board (DSIB) in 2007 and which began conducting annual school inspections from 2009. The inspections are extremely comprehensive. Schools are invited to evaluate themselves prior to the inspection taking place, among which the school's approach to teaching for effective learning and assessment are examined. Private schools have an added incentive to engage with the inspection process: their ability to set tuition fees is contingent on the rating they receive through the inspection.

One of the areas that schools must account for is the role of assessment. Schools are asked how they produce and use it, including any innovative practices they have introduced. This data is available in the individual school inspections on Dubai's Knowledge and Human Development Authority's (KHDA) website: <https://www.khda.gov.ae/en/DSIB/Reports>

For the purpose of this policy brief, a study of the most recent inspection reports for 'outstanding' and 'weak' private schools in Dubai was undertaken. 'Outstanding' private schools are those defined in the school inspection reports where 'Quality of performance substantially exceeds the expectation of the UAE'. The 'weak' private schools in 2016-17 are those whose 'Quality of performance is below the expectation of the UAE' (there is also a classification below 'weak' – 'very weak' – but in 2016-17 no

schools occupied that space) (Dubai School Inspections Bureau, 2015-16, 2016-17). The reason for using reports from both types of schools is to offer both an observation on the challenges presented by 'weak' private schools (and through them a proxy or parallel on the state of assessment in public schools) and as a point of comparison.

What does assessment in 'outstanding' and 'weak' private schools look like in Dubai?

Drawing on the DSIB information in the KHDA's website (the link is cited above), of the 15 'outstanding' private schools in 2015-16 (the date for which the most recent inspection reports are available), several themes emerged which pointed to stronger and more effective use of assessment. These included:

- A close alignment between the curriculum and forms of assessment used in the school.
- Comprehensive collection of data on students' performance, especially in the core subjects of English, maths and science.
- Use of tracking systems to evaluate student's performance against the curriculum's standards and expectations
- Variety of different assessment methods, including observation, written tests and questioning.
- Comparison of internal assessment data with external data from Dubai and other international assessment models and exams (including some beyond PISA and TIMSS)
- Regular monitoring and analysis of individual students and groups of students and their performance against targets
- Use of formative assessment alongside summative assessments, which can be used to provide comprehensive,

constructive and consistent feedback to students.

- Use of self- and peer-assessment and reflection among students.
- Production and use of rubrics for expected outcomes.
- Use of assessment data in lesson and curriculum planning.
- Teachers' knowledge of their students and their respective strengths and weaknesses.

In addition to these common themes, the DSIB inspection reports on the KHDA's website presented several areas of innovation related to the production and use of assessment data:

- Kings' School Dubai uses a bespoke system which provided detailed information on each student and his or her progress.
- Dubai College uses baseline testing for new students and a new system (for 2015-16) which enabled data to be integrated into teaching, learning and assessment. Teachers were made more accountable for students' progress and parents were brought in to the learning process, by sharing the assessment data and identifying action plans for students.
- GEMS Wellington International School also established baseline data against which progress was periodically benchmarked.
- Dubai English Speaking College offers 'podcast' feedback in geography for students.
- GEMS Dubai American Academy makes use of interactive notebooks among students.
- GEMS Royal Dubai School has a data manager who collects assessment information in an online system, which educators can use to examine and analyse performance by students at an individual, group, year or needs level. The school also encouraged students to set themselves

targets and through their own self-evaluation, were able to rate themselves against the curriculum standards. This process was an interesting process of obtaining 'buy-in' from the students.

- Lycée Français International Georges Pompidou Primary Oud Metha also enabled students to be part of their own assessment by making use of pictures to represent curriculum competences.
- Repton School Dubai uses Pupil Progress Meetings between students and teachers where short and long term targets are set and performance evaluated.

The most recent inspection reports for 'weak' private schools come from the 2016-17 academic year on the KHDA website. Ten were found to occupy this category and shared the following features in relation to assessment:

- Forms of assessment are not sufficiently aligned with the school's curriculum standards (although in one instance it was but internal assessments were not sufficiently rigorous)
- Assessment is focused on knowledge acquisition rather than skill development
- Limited numbers of students entered into external tests
- Inconsistent and limited use of assessment data to analyse trends and inform teaching and lesson planning and adaptations to curriculum standards
- Little systematic use of baseline and external benchmarking data
- Limited use of assessment to personalize the learning experience for students
- Unreliable and invalid data collection from assessment (which limits its value for data analysis)
- Limited feedback from teachers to students
- Lack of link between provided feedback and

ways for students to develop and improve (especially against curriculum standards)

- Teachers' knowledge of individual students and their strengths and weaknesses is low.
- Infrequent interaction and engagement between teachers and students regarding ways to improve
- Little or no student involvement in self- and peer-evaluation
- Few or no targets, rubrics or standards set for student learning

What distinguishes 'outstanding' and 'weak' private schools in relation to assessment in Dubai?

The previous section showed what assessment looks like in 'outstanding' and 'weak' private schools in Dubai. But are there any themes or characteristics that are similar across them? Comparing the 25 private schools there appear to be four dimensions associated with assessment:

- Design (assessment methods, alignment with curriculum standards)
- Data Collection (progress and attainment information on individual students and groups of students)
- Analysis (internally at the individual and group level, externally through benchmarks with similar students, schools, curriculum providers)
- Application (lesson and course planning, setting curriculum standards, tailored individual learning)

Although all 25 schools make use of these different dimensions, how they relate to each other differs. In 'outstanding' schools the four elements of assessments constitute more of a process that is integrated: the design of assessment criteria and methods are then used to collect information about student performance and attainment. The data

collected is then used by educators within the school for several purposes. The most immediate is to examine whether a student is meeting the expectations associated with the learning experience or not. Beyond the individual level, analysis can be applied to groups of students, at different grade levels and against the performance of other students' cohorts. This data analysis is then used to develop intervention strategies in learning and teaching to make the experience more effective. The evidence derived from analysis of assessment data is used in planning classes and courses and even the overall curriculum and methods used to collect the data in the first place. In this sense then, the production and use of assessment in 'outstanding' schools has much in common with feedback loops (Figure 1).

By contrast, in 'weak' schools the process of assessment is more likely to be largely separate and disconnected. While there may be effort to connect these together – namely through the overarching theme of 'assessment' – there are a range of factors which may constrain that from happening and resulting in these aspects working in relative isolation from each other. Curriculum standards and methods of assessment to capture information may be established (i.e. design), but its association with other aspects of assessment may be weak: there may be minimal assessment data collected, or, where there is data collected, it may not be valid and reliable. Because of this, analysis of the data is likely to be partial and limited in value. Moreover, because of its limitations, it is unlikely to be useful as a means to inform how students are performing and what measures might be taken to improve learning opportunities.

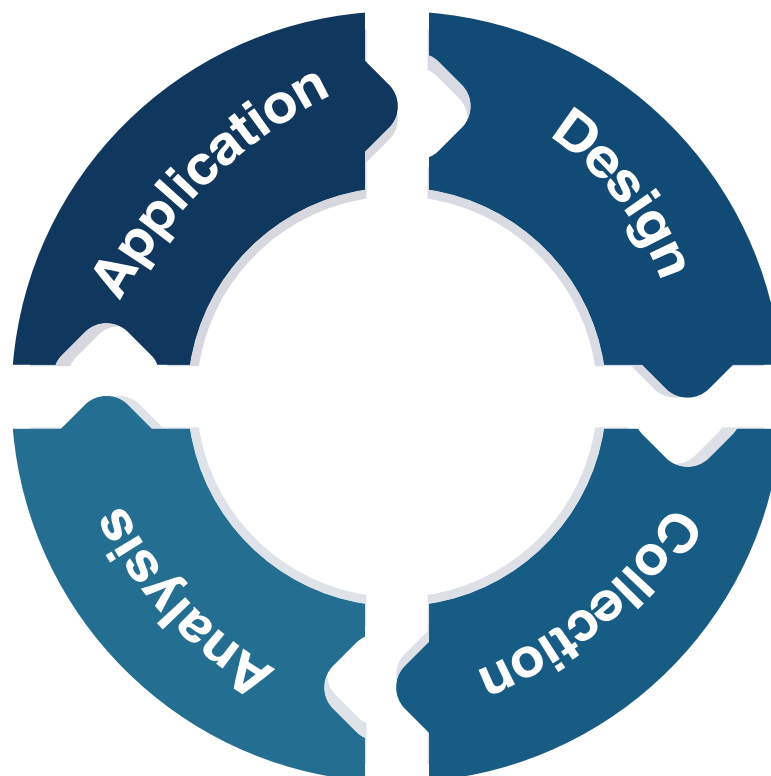


Figure 1: Assessment in 'outstanding' schools

Where do we go from here?

Educational performance in the UAE is not yet meeting the expectation in all sectors. Assessment through international tests like TIMSS and PISA have helped illustrate this. While useful, they are not sufficient tools of attainment and performance measurement in themselves. Limitations have been pointed out in relation to international tests, including a reductionist approach that treats them as a league table along with its aggregate nature and limited population.

This does not mean assessment has no value. There is a need for it, especially at an individual level, so as to assist learning and help advance student knowledge and understanding. Globally there is a preference for more 'holistic' and 'local' forms of assessment. In the case of the UAE there is already ways this can be done. The case of Dubai is especially useful in this regard. As the examples from 'outstanding' schools show, the former make good use of data collection and analysis in designing their programs and teaching at both class and individual level. The contrast in these schools' experience with those in 'weak' ones show that there are some common features associated with different types of schools, especially in the gaps between data collection, analysis and usage.

At the same time though, although there are some common themes associated with these different types of schools, and the experience of 'outstanding' schools could be used to inform reforms in 'weak' schools, it is important to realise that there is no single model or solution present. Each school and its student body have unique circumstances and contexts, so the role of assessment and the way it is used will vary, whether it is scaled upwards, to the educational system as a whole, or downwards, to individual schools.

Given these observations, the recommendations made in this policy brief are broadly two:

- First, the KHDA and Ministry of Education could move beyond the scope of this policy brief to compile and provide guidelines on best practice for assessment by curriculum. Within these guidelines, several aspects should be covered:
 - Identify and recommend appropriate external tests for benchmarking within schools by curriculum;
 - Case studies of successfully reorganized assessment systems, highlighting the obstacles and challenges which had to be overcome to implement it;
 - More systematic collection and analysis of data from assessments across all schools, to aid the development of internal improvements within schools' programmes and teaching;
 - Practical examples of written feedback and recommendations to students for future improvement.
- Second, establish a government-sponsored partnership to encourage educators from 'outstanding' schools to meet with educators in public schools and 'weak' private schools to share knowledge on assessment. Among the activities a partnership would undertake would include:
 - A What Works event on assessment. Since 2015 KHDA has organized regular What Works

events for educators on themes ranging from well-being, early years education, learning Arabic, teaching science and maths and future teaching and learning;

- Financially accountable support to educators from ‘outstanding’ schools to work with educators in public and ‘weak’ private schools to review, redesign and monitor their forms of assessment;
- Financially accountable support to ‘weak’ private schools to set up and establish systematic models of data collection and analysis (which may be accessed as part of a collaborative with educators from ‘outstanding’ schools);
- Creation of an online portal dealing with assessment matters on the KHDA website which provides access to materials, guidance and contacts for educators.

The recommendations above do not provide a definitive solution to the question of assessment and its purpose in the UAE. Like the TIMSS and PISA tests themselves, these recommendations will not be sufficient to transform the process of teaching and learning in themselves. Rather, they offer a guide towards evaluating whether such changes and reforms are having an effect. Moreover, they may themselves be subject to similar kinds of change. That is why it is important that the process, experience and practice of assessment is kept under a watching brief so as to ensure that the best and most effective examples are identified and disseminated on a regular basis.

Ultimately though, if assessment is to achieve the desired result, it will only do so if its substance is taken up, alongside its form. In short, for assessment to be effective and make a contribution towards the state of education in the UAE, then it must find support beyond those in the policymaking sphere; it needs to be embraced wholeheartedly by educators, parents/guardians and students alike. For that reason, it will require cooperation and partnership within the educational sector, from national government down to the class teacher and his or her student.

References

Dubai School Inspections Bureau. 2015-16. Various reports.

Dubai School Inspections Bureau. 2016-17. Various reports.

El-Sholkamy, Mona and Yasser Al-Saleh. 2017. Paying for Education in Dubai: Is It Really Worth It? Dubai: Mohammed Bin Rashid School of Government.

<http://www.mbrsg.ae/getattachment/a555f9cc-d250-404e-8cec-2bbd39b395ff/Paying-for-Education-in-Dubai-Is-it-really-worth> [accessed 4 October 2017]

MBRSG [Mohammed Bin Rashid School of Government]. 2017. UAE Public Policy Forum – Proceeding Report. <http://www.mbrsg.ae/getattachment/d97a7193-858a-4fa4-92c9-a7942f882db1/UAE-Public-Policy-Forum-2017-Proceeding-Report> [accessed 4 October 2017]

Masudi, Faisal. 2016. Dubai private schools aligned with National Agenda. Gulf News, 16 January. <http://gulfnews.com/news/uae/education/dubai-private-schools-aligned-with-national-agenda-1.1962908> [accessed 15 June 2017]

Navdar, Parinaaz. 2016a. UAE's PISA scores "way below" expectations says OECD head. Education Journal, 17 March. http://www.educationjournalme.com/news/uae%27s-pisa-scores-%22way-below%22-expectations-says-oecd-head_420 [accessed 15 June 2017]

Navdar, Parinaaz. 2016b. Dubai's private schools improve PISA scores, while UAE averages fall. Education Journal, 7 December. http://www.educationjournalme.com/news/dubai%27s-private-schools-improve-pisa-scores%2C-while-uae-averages-fall_111389 [accessed 15 June 2017]

Pennington, Roberta. 2016. UAE scores in school survey drops in science, reading and maths. The National, 6 December. <http://www.thenational.ae/uae/education/uae-scores-in-school-survey-drops-in-science-reading-and-maths> [accessed 15 June 2017]

Warner, Racquel and Guy Burton. 2017. A Fertile Oasis: The Current State of Education in the UAE. Dubai: Mohammed Bin Rashid School of Government. <http://www.mbrsg.ae/getattachment/658fdafb-673d-4864-9ce1-881aaccd08e2/A-Fertile-OASIS-The-current-state-of-Education-in> [accessed 4 October 2017]

Westley, Jon. 2017. Using PISA to benchmark UAE schools – Why, & Why Not... SchoolsCompared.com, 17 January. <https://schoolscompared.com/guides/using-pisa-benchmark-uae-schools-not/> [accessed 15 June 2017]

Author

Dr. Guy Burton

Assistant Professor

Guy Burton has been Assistant Professor at the Mohammed bin Rashid School of Government since September 2016.

Guy's book publications include co-authorship and authorship of *Presidential Leadership in the Americas since Independence* (Lexington Books, 2016) and *Policy-making and education reform in the development of Latin American social democracy* (Edwin Mellen, 2011) respectively. He has also published peer-reviewed articles in highly regarded journals such as *Third World Quarterly*, *Conflict Security & Development*, *Middle East Critique*, *International Review of Education* and *Latin American Perspectives*.



كلية محمد بن راشد
للإدارة الحكومية
MOHAMMED BIN RASHID
SCHOOL OF GOVERNMENT

Mohammed Bin Rashid School of Government
Convention Tower, Level 13, P.O. Box 72229, Dubai, UAE
Tel: +971 4 329 3290 - Fax: +971 4 329 3291
www.mbrsg.ae - info@mbrsg.ae

