

### UAE **ECONOMIC BULLETIN**



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# الدمصارات THE EMIRATES



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Read more about OPSWF on page 6.



#### AI-enabled education is set to be the next big thing in the UAE



There is this one statement that we have been hearing repeatedly since the Covid-19 pandemic broke out: "We can't predict the future."

We couldn't have predicted that a pandemic would lead to a worldwide closure of schools this year. What we could have predicted, however, was that, eventually and inevitably, a new reality of education would come to pass, in which students learn remotely from home, or from just about anywhere.

The UAE has been moving forward aggressively to answer key questions around excellence in reshaping human society and the betterment of human life through education.

For instance, the country has been working on digitising education, building the infrastructure and resources to do so ever since the launch of the "Mohammed bin Rashid Smart Learning" programmeme in 2012.

The objectives behind these efforts have always been to create a unique learning experience for students, teachers and parents and to provide access to quality education.

We can confidently predict that the next step moving forward will be to provide a learning experience that is "inclusive", preserves the uniqueness of each student while intensifying their sense of belonging and diminishing any inequalities created by status, gender, ethnicity or geographic location.

Technology and AI will play a big role in the next fifty years of education in the UAE. Ravindranath K / The National

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AI will be the core building block and the corner stone in creating an accessible, quality and inclusive learning experience.

"Artificial intelligence is an engine that holds immense powers in reshaping human society and human life." These words from Chen Baosheng, China's Minister of Education, are especially true in the context of Al's undeniable influence in education systems, which have already witnessed its transformative power in the wake of the Covid-19 pandemic.

The UAE has been leading in this direction by making bold transformations, including, for example, initiating a long-term plan to phase out printed textbooks. There is an even more aggressive plan in place to invest in a world-class Education Media Centre, which will create an abundance of high-quality digital content.

In addition, the personalisation of learning and introduction of accelerators to propel students with unique abilities through dual-credit programmes will bridge primary and secondary schools with institutions of higher education, both locally and internationally. But these accelerators can only work if learning is delivered adaptively.

That could involve the use of machine learning-enabled platforms, which could enhance students' desire to learn through the personalisation of content and providing an abundance of learning resources. They could also increase efficiency and cut costs for education providers

With AI and machine learning capabilities, acceleration could also become the

norm for each student, instead of a special programme for the outliers who find themselves on the tail of the bell curve.

Each student has gifts and talents that we need to discover proactively, and invest in adaptively.

The UAE has been moving tirelessly towards a knowledge-based economy. It has declared 2021 as a year in which to mobilise the entire nation to design a roadmap for the next 50 years that involves big ambitions and seemingly impossible goals, and education is the engine at the heart of this plan. We moved forward with these plans despite the unique circumstances imposed by Covid-19. As a matter of fact, Covid-19 only accelerated and intensified the charge.

Another significant leap we are making in AI-enabled education is the guarantee of seamless access to clean data. This is made possible by the establishment of an "education data centre", which will act as a hub for safeguarding data relevant to education as well as a central brain for analysing it at different levels.

It will help the Ministry of Education, for example, in providing analysis and recommendations to decision-makers, and in designing policies based on concrete evidence. The analysis capabilities will also help schools develop more efficient and effective education management systems and optimise their productivity.

It has been critical to ensure that all stakeholders are part of these efforts to design the future of learning while guaranteeing



transparency throughout the process, facilitating debates around the benefits of AI and the possible risks it might involve and how to overcome them.

It has also been important to make sure that teachers can cope with any changes quite rapidly. Hence, we have been keen on building up the capacity to re-skill teachers in anticipation of AI-enabled education by setting up a world-class facility to train them.

The pandemic offered an early test for our ability to equip teachers for a new education landscape. In the span of just weeks, we managed to train all teachers for the new reality of remote learning. The post-pandemic reality will involve hybrid learning, and we are ensuring teachers are prepared for that, too.

At the same time, we cannot turn a blind eye to the negative effects that digital transformation and AI may have on the well-being of the students, teachers and parents alike.

The UAE has launched an initiative that aims to build a smart security structures in schools, making it the first country in the world to realise the concept of an "e-safe school", in accordance with the EU Standards for Safe Internet, across both public and private schools.

But perhaps the most fundamental question is what impact AI will have on skills.

AI is changing the quality and quantity of jobs available, and so the nature of demand for skills is drastically shifting.

Bearing in mind that skills have to be in sync with both economic growth and individual well-being, it's worth revisiting our initial narrative about AI "reshaping the future of human life".

To thrive in a future knowledge society enabled by AI, three kinds of skills will be necessary: the skills to develop and manage AI, the skills to work with it and the skills to live with it.

The first, to develop and manage AI, will require a well-stocked pool of individuals with solid computer science backgrounds. The second, working with AI, requires people to be able to problem-solve, adapt, be creative and innovate. And the third, living with AI, will mean having a good sense of AI's capabilities and limitations, even if you are not a good coder or have no computer science background.

Aligned with these core skills, we have introduced a framework integrating computer science, creative design and technology, incorporating soft skills and hard skills alike.

We have heavily invested in creating an extra-curricular activities framework that functions in parallel to regular schoolwork, with focus on creating, applying, transferring and using knowledge.

For instance, we have launched series of national competitions for AI and Robotics in line with the UAE Vision 2021 and the UAE strategy for Artificial Intelligence 2031, along with a National Science, Technology and Innovation Fes-

tival that focuses on building students' research and Innovation skills.

Beyond K-12, UAE has established the Mohammed Bin Zayed University of Artificial Intelligence to support the advancement of scientific research, development, transfer and use of artificial intelligence through MSc and PhD programmes.

Altogether, we need to embrace the concept of lifelong learning, since the demand spectrum of skills will always be shifting, changing and evolving. I was privileged to recently accept the invitation of Mr Chen, the Education Minister in China, to attend the International Forum on Artificial Intelligence and the Future of Education, which his country is co-organising with Unesco. There is a need for global dialogue and partnerships with ministers of education from all over the world, in which we can share our practices and initiatives with the world.

It's crucial for us to bring the outcome of this dialogue to our community to inspire and shed some light on how education will evolve and ensure ethical, inclusive and equitable learning opportunities for all in the age of AI.

https://www.thenationalnews.com/opinion/comment/ai-enabled-education-is-set-to-be-the-next-big-thing-in-the-uae-1.1126357#11

## ARTIFICIAL INTELLIGENCE IN THE UAE OUTLOOK FOR 2020 AND AHEAD



#### ARTIFICIAL INTELLIGENCE IN UAE BUSINESSES



UAE companies have top-down involvement in Al at the C-suite level.

The percentage is very high as compared to the employee level and is the highest regionally.



UAE companies report AI is at a released stage and is being used in selective processes. The percentage is marginally high as

compared to 20%

regionally.

UAE companies report AI as the biggest and most important digital priority. The percentage is slightly high as compared to regional trends.

18%

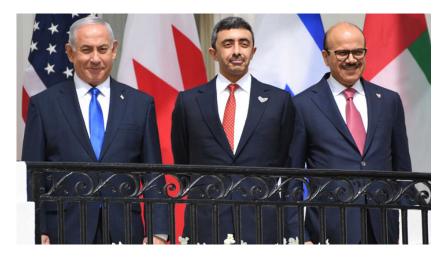


UAE companies report that they are advanced in their AI maturity and are using it for advanced tasks.

The percentage is almost the same as compared to 7% regional trends.



#### Emirati, Israeli officials upbeat about Biden Administration



Leading Emirati and Israeli officials said during an Al-Monitor event Wednesday that they think the incoming Biden administration will continue to support normalization between Israel and Arab states.

The director general of Israel's Foreign Ministry, Alon Ushpiz, said that while US President Donald Trump's support for Arab-Israeli normalization was "breathtaking," he thinks President-elect Joe Biden shares a similar commitment to Israel's security and prosperity.

"Biden is an old friend of Israel," said Ushpiz. "I'm 100% sure that this commitment will continue also during the Biden administration."

Ushpiz and the United Arab Emirates' assistant minister for culture and public diplomacy, Omar Ghobash, spoke at Al-Monitor's virtual event "The UAE, Israel, and Normalization: Looking Ahead." The discussion was moderated by Al-Monitor President Andrew Parasiliti and Al-Monitor contributor and "On Israel" podcast host Ben Caspit.

Israel and the UAE signed the Trump administration-brokered Abraham Accords at the White House in September. The historic deal established full diplomatic relations between the UAE and Israel. Bahrain also agreed to normalize ties with Israel at the time. The UAE and Bahrain were only the third and fourth Arab states to recognize Israel after Egypt and Jordan.

Since the accords, Israel and the UAE have signed a plethora of additional agreements on enhancing economic cooperation between the two countries.

The relationship has also created hope throughout the region that Arabs and Israelis, long divided over the Israeli-Palestinian conflict, can have normal interactions.

Ushpiz and Ghobash addressed a variety of issues relating to the Middle East at the event, including the incoming Biden administration in the United States and its approach to Iran. Biden has made it clear he will attempt to reenter the Iran nuclear deal, if Iran is in compliance, and will engage US partners in the region in doing so.

Ghobash said that the UAE's position on Iran will not change and its relationship with Washington will remain strong when Biden takes office in January.

"I don't think that the new administration means we change our position in any way. We have a good relationship with the Democrats and the Republicans in the US," he said. "Our relationship is with the United States — not with any particular individual, group or party."

On Iran, Ghobash criticized Iran's regional policies in Syria, Lebanon, Iraq and Yemen, but also said the Emirates wants to live in peace with Iran. The UAE's focus is on forging economic ties with all countries in the region, Ghobash said.

"Our concern in the Emirates is to focus on economic development and taking our people forward," he said. "Ideally, we'd like to do that with the rest of the region participating."

Ushpiz said it is important for Israel to voice its long-standing concerns about Iran's alleged pursuit of a nuclear weapon

no matter who is in the White House. He said the goal on Iran should be "indefinitely blocking all paths of the Iranians to a bomb."

The two diplomats were less forthcoming on the possibility of Saudi Arabia following the UAE and Bahrain in establishing ties with Israel, while noting that they don't speak on behalf of the kingdom. Saudi Arabia has grown closer to Israel over concerns about Iran in recent years, but has refrained from openly acknowledging this relationship. Yet whatever progress had been made recently may have been hindered by leaked reports of a secret meeting between Israeli Prime Minister Benjamin Netanyahu, Saudi Crown Prince Mohammed bin Salman and US Secretary of State Mike Pompeo on Nov. 22 in the Saudi city of Neom.

Ghobash said the UAE cannot tell Saudi Arabia how to conduct its policy in this regard.

"We in the Emirates can only demonstrate the benefits of peace. We can't instruct anybody," he said. "These are very sensitive internal matters for states like Saudi Arabia."

Ushpiz said that Saudi Arabia views the UAE-Israel normalization in a "positive" way and said air travel to the UAE and Bahrain from Israel could not have happened without Saudi cooperation.

"I flew to Bahrain over Saudi land twice. I flew to Abu Dhabi over Saudi land. And there is no way this could have happened unless the Saudis would have permitted it."

The discussion also touched on the issue of Israel's negotiations with the Palestinian Authority (PA). In September, Palestinian President Mahmoud Abbas proposed an international peace conference for the Israeli-Palestinian conflict to be held in 2021. "We're not against any process that puts peace back on the table," said Ghobash on the conference. "We'd welcome it and support it." Ushpiz said Israel still seeks to talk directly with the Palestinians at any time.

"There is no substitute for direct, bilateral, without preconditions negotiations," he said.

Ghobash also praised the PA for resuming its security and civil cooperation with Is-

rael, which followed vocal criticism from Palestinian officials toward the UAE's and Bahrain's relations with Israel. The Abraham Accords provide an opportunity for the Palestinians to better engage with Israel and the region, Ghobash said.

"There seems to have been a knee-jerk reaction of anti-Emirati sentiment from the Palestinians," said Ghobash. "Perhaps now they will see the opportunity has opened up."

Ushpiz also discussed relations between Israel and Turkey. Ties have worsened in recent years under Turkish President Recep Tayyip Erdogan, who supports a variety of Islamic causes in the region, including the Palestinian cause.

Ushpiz criticized Ankara's actions in the eastern Mediterranean, where Turkey is

conducting energy exploration in what Greece, Cyprus and the European Union say is Greek and Cypriot maritime territory.

"There are activities in the eastern Mediterranean that are a source of concern for us, that are a source of concern for our partners in the region, including member states of the European Union," he said.

The UAE is also supportive of Greece and Cyprus on the issue. Ushpiz also criticized the presence of the Palestinian group Hamas in Turkey.

"I would remind all of us there is an active Hamas office in Istanbul," he said. "That's a serious source of concern for my country."

Also Wednesday, Al-Monitor's Amberin Zaman broke the story that Turkey has named an ambassador to Israel in a bid to normalize relations again.

The participants also expressed hope that the Abraham Accords could help end bigotry between Arabs and Jews in the Middle East. Caspit noted how he did not need to hide being Israeli during his recent trip to Dubai. Both participants expected normalization to erode preujdice and anti-semitism in the region. Ghobash also expressed hope that the fans of the Beitar Jerusalem soccer team, known for their anti-Arab and right-wing beliefs, may begin to have a more positive view of Arabs now that the club has an Emirati co-owner.

https://www.al-monitor.com/pulse/ originals/2020/12/israel-uae-almonitor-event-ushpiz-ghobash-iran-palestine.html

#### Mubadala Joins One Planet Sovereign Wealth Funds to Drive Positive Change on Climate Issues

Mubadala Investment Company (Mubadala), the Abu Dhabi-based sovereign investor, announced that it has officially become a member of the One Planet Sovereign Wealth Funds (OPSWF) initiative, an international coalition of SWFs established to integrate climate change considerations into their decision making and support global climate action

Through the new membership, Mubadala will leverage its scale and global presence to drive positive change through the endorsement of the OPSWF Framework to reduce greenhouse gas emissions, mitigate the effects of climate change and create sustainable market outcomes.

Mubadala's membership was announced during the virtual 3rd OPSWF CEO Summit, which was attended by SWF members in the presence of French President Emmanuel Macron.

Mubadala has also become a full member of the International Forum of Sovereign Wealth Funds (IFSWF). The IFSWF is a voluntary organization of global sovereign wealth funds committed to working together to strengthen the sovereign wealth fund community through defining best



practices, dialogue, research, and self-assessment.

IFSWF represents a group of almost 40 members from around the world with a variety of mandates. The IFSWF encourages all members to adhere to and uphold the Santiago Principles\*, which consist of 24 generally accepted principles and practices designed to promote a more open dialogue and deeper understanding of SWF activities.

Ahmed Saeed Al Calily, Chief Strategy and Risk Officer, Mubadala Investment Company, said: "As a responsible investor managing a global portfolio, our membership with both the OPSWF and the IFSWF demonstrates our commitment to integrating environmental, social and governance (ESG) considerations when making investment decisions and as

part of the overall management of our portfolio. It is also an opportunity for us to collaborate and align with other sovereign wealth funds and reinforce our commitment to climate change, good governance, accountability and transparency."

Mubadala, along with asset companies such as Masdar, continues to invest in sustainable energy. Today, Masdar has active investments in over 30 countries and US \$19.9 billion deployed in global projects including wind and solar.

https://www.mubadala.com/en/news/mubadala-joins-one-planet-sovereign-wealth-funds

#### Desert heat will help keep the lights on in Dubai after sundown

Sweden's Azelio AB to supply technologies to Mohammed Bin Rashid Al Maktoum Solar Complex



The main power contractor at one of the world's biggest solar parks tapped Sweden's Azelio AB to supply technologies that can be used to turn stored desert heat into electricity after sundown. Azelio sold storage and a Stirling engine to the Mohammed Bin Rashid Al Maktoum Solar Complex in Dubai, according to a statement on Wednesday. Solar power generated from the 950-megawatt field will be used to heat a block of recycled aluminium to 600 degrees Celsius (1,112 Fahrenheit) during the daytime. A Stirling engine can

then be used to exchange the heat into power over the night.

"Our long-duration energy storage can make solar power available around the clock in an affordable way," Jonas Eklind, chief executive officer of Azelio said in the statement. The Gotenburg, Sweden, based company did not disclose the size of the unit or the value of the order. The technology is available in units with as much as 100 megawatts of capacity. ALEC Energy, which is developing the MBR solar complex, placed the order. The Dubai project is jointly owned by Dubai Electricity & Water Authority (DEWA), ACWA Power and Silk Road Fund. They plan is to expand the capacity of the park to 5,000 megawatts by 2030.

https://www.arabianbusiness.com/ energy/455717-desert-heat-will-helpkeep-the-lights-on-in-dubai-after-sundown

#### UAE, Israel start talks on energy cooperation as ties normalise

Countries discussed ways to develop bilateral relations and cooperation in energy, petroleum and natural gas

Israel and the United Arab Emirates held talks to discuss cooperation in the oil and gas sector, months after the two nations agreed to normalize ties.

OPEC's third-largest oil producer and Israel held their first natural gas and petroleum working group meeting, UAE's state-run WAM news agency reported on Thursday.

The countries discussed ways to develop bilateral relations and cooperation in energy, petroleum and natural gas, WAM said. The meeting included representatives from the countries' energy ministries as well as from the Abu Dhabi National Oil Company (ADNOC).

Since signing the peace agreement earlier this year, UAE and Israel have



discussed establishing embassies, starting direct flights and business deals. The countries have also started talks over an oil pipeline linking the Red Sea with the Mediterranean, whose operations Israeli officials treat as top secret.

https://www.arabianbusiness.com/energy/455773-uae-israel-start-talks-on-energy-cooperation-as-ties-normalise





Diversification and FDI key to Gulf recovery from coronavirus pandemic, says IMF Economies of the GCC have been hit by the 'double impact' of coronavirus and lower oil prices, according to a new report from the International Monetary Fund...  $\theta$  arabianbusiness.com

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report from the @IMFNews

8:28 AM · Dec 11, 2020 · Zoho Social

7:19 PM - Dec 5, 2020 - Twitter for Android

Diversification of government revenues and a push to attract FDI will be key for the states of the GCC as they

recover from the double impact of the Covid-19

pandemic and lower oil prices, according to a new



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@ENEC\_UAE says first #Barakah #nuclear plant hits full

power and will start commercial operations in early







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