

Open Forum: Education and Innovation

Open Forum sessions are sessions on selected topics open to the general public of Dubai, co-organized by the World Economic Forum, the United Arab Emirates and the Government of Dubai.

- How can the Middle East develop a skill and talent pool that ensures long-term growth?
- How can the education system be restructured to develop systems thinking and multidisciplinary problem-solving for a robust global culture of innovation?
- How can education support a globally mobile workforce?

Key Points

- The region has a “unique opportunity” to ensure that science is placed at the centre of education and innovation policies. It is time to re-think how science is taught and how to encourage a “science culture”.
- All young people, especially excluded students, should have access to a quality curriculum that is project based and interdisciplinary and that encourages creativity and entrepreneurship.
- Young people must be taught how to think critically, which requires a mix of hard and soft skills. People with social knowledge provide the “glue” for innovation.
- Students must be able to compete globally because innovation increasingly takes place within international, multidisciplinary teams.
- Education must be aligned with the job market. No one country in the world has managed to get this right, which is why there are huge skills shortages worldwide.

Synopsis

The world is experiencing a science renaissance. The region has a rich history of scientific innovation. However, if the Middle East wants to participate and benefit from this renaissance, it needs to “reboot” science education and grow a science culture. In today’s complex, interconnected world, science is – and will continue to be – the cornerstone of all innovation across all sectors, including health, energy, agriculture and water management. Critical thinking should be taught through a science lens, which enables students to use their imaginations to solve problems and make connections.

Innovation cannot be taught in a classroom. However, design thinking parallels critical thinking. It is a process for practical, creative resolution of problems and can spark innovation. Design thinking combines empathy, creativity and rationality, which are the drivers of business success.

Leadership in the region has raised the bar and created challenges for young people. For example, the Crown Prince of Abu Dhabi wants to create one of the best countries in the world. This aspiration brings with it “complex and messy” challenges. Meeting these challenges will require young people equipped with academic knowledge who are able to collaborate and work in multidisciplinary teams, which is where innovation takes place.

The best way to prepare students for the future is to prepare them to invent the future. Today’s professors should not be preparing students for a job that exists; they should be preparing them to create jobs. Engaging students in problem solving is key, particularly through case-method teaching.

Case method teaching, typically used in law or business schools, should be extended to the social

sciences. Students are presented with a “case” that describes a real-life situation, giving information but not analysis. Teaching with cases facilitates a discussion in which students develop analyses of the situation through collaborative work and role playing as well as intensive discussion, debate and dialogue. Clear writing reflects clear thinking and is one of the most important skills to acquire.

There is an abundance of natural resources across the region, which is also rich in research and development initiatives and culture. The hunger for entrepreneurship is palpable, just as it was in Silicon Valley in the early 1990s. However, it is necessary to invest in arts and music education and to create a bridge between science and art. The region also needs to invest in its universities to create centres of excellence that will become incubators for innovation as well as social development. This would create an opportunity for synergies and partnerships with the private sector.

The labour market demands a combination of hard and soft skills. The world is changing rapidly and becoming more complex, which means educational institutions will always be some steps behind the labour market. This means maintaining relevance in the labour force is increasingly an individual responsibility, which is why students need to understand that education does not stop upon graduation.

Lifelong learning occurs throughout an individual's life, and includes formal and informal training, from experience. Lifelong learning enhances personal development, competitiveness and employability, but also fosters social inclusion and active citizenship.

Participants

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Disclosures

This summary was written by Dianna Rienstra. The views expressed are those of certain participants in the discussion and do not necessarily reflect the views of all participants or of the World Economic Forum.

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