“Knowing how to learn is key in the information age"

by Jack O’Sullivan
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UNESCO’s International Bureau of Education wants to prepare learners for the fourth industrial revolution. Mmantsetsa Marope, leading its global consultation, explains her vision.

How can we ensure that people, even in the poorest countries and neighbourhoods, can participate in – and reap riches from – the new information and technology economy? Experts fear that those who can’t join in the “Fourth Industrial Revolution” will face chronic, deepening inequality and poverty.

The Fourth Industrial Revolution builds on the previous ones, which respectively introduced mechanization, followed by mass production and then automation. Early adopters gained vast wealth while the rest existed on what they could glean from selling raw materials needed by the industrialized countries. This time around, those left behind might not even have much to sell as natural resources run out and sustainable extraction becomes too costly.

How can we change the story for the latest revolution, which involves a fusion of technologies that bring together the physical, digital, and biological spheres? The rate of change associated with this revolution is exponential rather than linear, making it difficult to anticipate the educational needs of populations.

That’s the challenge facing Mmantsetsa Marope. She’s a key influence on how learners can be empowered through education. As Director of UNESCO’s International Bureau of Education (IBE) – a post held for nearly 40 years by Jean Piaget, pioneer in child development – it’s Dr Marope’s job to support governments in the design, development, implementation and assessment of curricula worldwide.

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Development soothsayers anticipate that timely and continuous learning will determine who wins and who loses from the 21st century’s industrial revolution. Getting that learning right requires that education systems stay relevant by anticipating and supporting competencies needed by economic change. “We’re worried that many young learners are being educated for the past instead of the future,” explains Dr Marope at her office in Geneva.
21st century competencies should be reflected in curricula

Her task around curriculum and its delivery used to look simpler. The school model hasn’t changed fundamentally for centuries. Typically, it’s been about the 3 Rs – reading, writing and arithmetic – plus further specialist subjects for older children. The big changes have been more logistical than conceptual – building more schools, training and paying more teachers, creating better learning materials. This model has spread worldwide and is a flagship of development. It hasn’t functioned that differently, in principle, in England than in Egypt – more top hats in Eton; bigger classes, fewer teachers in El Minya.

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But now major reform is needed, says Dr Marope. This month (May 2017), she is convening global thought leaders, at Marbach Castle in Germany, for discussions on future competencies and ways to develop them through curricula. Hosted by the Jacobs Foundation, the discussions are part of extensive consultation with governments and education institutions around the world.

Big changes envisaged

Many countries are already seeking the IBE’s support to re-orient their curricula towards competence-based approaches. But which competencies should be reflected in curricula? How should they be determined? How should the transition be made? These are all issues under discussion.

Change, Dr Marope says, will mainly be fueled by human innovation and ingenuity. “So we must develop people who know how to learn. That’s the most important competency, underpinning a person’s ability and agility to adapt to fast changing contexts of the 21st century.”

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Passing on knowledge from teacher to pupil will no longer be the educator’s chief goal. “Technology is breaking down the preserve of teachers as oracles of knowledge. Now, thanks to technology, learners have multiple sources of information.”

“People don’t necessarily need teachers to acquire information. But they do need teachers to show them how to sift out credible from non-credible information; how to transform credible information into their knowledge systems; how to apply information, skills, values, dispositions and technology to create desirable results. This is precisely what they need in life and at work.”

What does this mean in practice? “We need strategies that build and recognize learners as independent and self-benefiting agents, not waiting to be taught but wanting to be supported so they can go and learn themselves,” responds Dr Marope. “Schools will also require assessment
systems that shift from emphasizing information recall to demonstrating competencies.”

The future face of curricula

In the long run, it’s expected that the “perennials” – numeracy, literacy, learning etc. – will remain as core competencies sitting at the heart of curricula. Then, there will be the “soft competencies” — collaborative problem solving, critical thinking, innovation. Specialist subjects – such as history, physics and biology – will feed into these competencies rather than exist in their own right or as ends in themselves.

“We will always need subject specialist teachers,” explains Dr Marope. “But they will work in teams, rather than in isolation. The subjects will not disappear but will be instruments to help students to acquire competencies. What science can contribute, for example, will differ from what art offers.”

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It’s vital, however, that this set of curriculum changes does not become set in stone, but can be renewed easily and organically to reflect changing contexts while retaining continuity. “Digital technology allows continual updating of curricula underpinned by broad based consultations with strong stakeholder voices, especially from teachers and learners,” says Dr Marope. “With technology we can, in principle, include every teacher and learner within a country.”

Change must not shock education systems

In shifting to competency-based curricula, it’s vital not to shock education systems, she warns and advocates a two-stage process. Initially, traditional subjects should remain in place and the competencies should be mapped to them. Then gradually, curricula should be structured around competencies with traditional subjects as tools for the acquisition and application of those competencies.

Discussions hosted at Marbach Castle in May are preparatory for discussions involving 195 UNESCO member states in the ongoing consultation about proposed transformations. “We have to move quickly,” says Dr Marope. “We must not endanger the wellbeing of millions of learners, who may not otherwise be ready for current and future challenges and opportunities. We must not risk them being failed by obsolete education systems, leaving them dependent and poor.”

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