

**Big changes are coming to education, and some developed nations could get left behind**

- Developing nations may drive many of the upcoming changes to global education
- Lifelong learning will likely play an important role in the future, experts say

For centuries, innovation in education has been led by powerful and influential countries. That could be set to change, however, with today's developing nations primed to lead the charge. "It is likely that we could see the transformation of education systems occurring first in developing countries," said William Altman, tech industry analyst at CB Insights. Speaking with CNBC, Altman explained that incumbent educational institutions in the developed world were better equipped to survive the first waves of change.

"In many cases, these institutions have the cash, brand power, and are systematically entrenched enough to remain relevant," Altman said. "However, in developing countries, less-entrenched institutions are not as likely to survive technological disruption from online courses." Another possible boon for developing nations' innovation lies in population structure, as many of those countries also face the prospect of having to educate a large youth population.

According to the 2015 version of the United Nations' World Population Prospects, African countries such as Niger, Uganda and Chad accounted for all top 10 positions in the world's youngest populations. In Asia, China and India alone have a combined population of more than 600 million children aged zero to 14 years old.

As a result, "countries that must deal with very large numbers of people entering into, or already part of the first through 12th grade foundational education system will be forced to do interesting things — even if they are not 'rich' countries in terms of GDP levels and economic development," said Steven Miller, Vice-Provost at Singapore Management University.

He pointed to places like India, the Philippines, Bangladesh, Indonesia and many of the African countries. A glimpse into the classroom of the future As technology dominates many aspects of life, the education space has not been spared.

"Educational institutions are already adopting the (Internet of Things) and digital tools to further the in-class experience as well as broaden the distribution and reach of their curricula," said Altman. Looking ahead, he added that education may follow the same trend as today's internet usage: increasingly taking place on mobile phones.

The biggest change, however, would be distribution – the opening up of once closed settings to a worldwide audience in a profitable way, Altman said. Echoing this sentiment, Vincent Chin, Global Leader of public sector practice at Boston Consulting Group said that "the bottleneck" remains teacher quality, so there's much focus on how to "extend the reach of the high quality teacher."

With the wealth of opportunity available, it is perhaps of little surprise that many have jumped on the bandwagon. This has resulted in the development of alternative education pedagogies such as the adaptive learning method provided by companies such as Knewton. Recent years have also seen an increase in activity in the education technology space, with China producing its first such unicorn in the form of online tutor Yuanfudao.

Chin suggested that part of the reason for the increase in alternative education models is due to significant shifts across multiple facets of daily life, including changing workforce needs and easier access to now-digitized information. He added that the current education system was designed for the industrial era — with any form of modernization being largely incremental in nature.

"Students must learn new competencies (e.g. to conduct complex analytics) and develop character qualities (e.g. to collaborate effectively with others) to thrive in this changing world," Chin said. "Without modernizing as the world changes, individual welfare will suffer, economic needs will go unmet, and urgent, complex social problems will go unsolved," he added. "What is needed is redefinition of education, to equip students for the modern world."

Against this backdrop of change, traditional higher education institutions risk obsolescence unless they continue evolving with the times. Incumbent educational institutions in developed countries are facing an existential crisis as the cost vs. return ratio of a traditional college or even master's level education gets worse over time," Altman said.

Perhaps part of the answer to survival for these institutions can be found in the developed world, where some countries with aging populations have already adopted the concept of lifelong learning to encourage citizens to undergo periodic retraining to ensure skill sets remain relevant. For example, Singapore's Council for Skills, Innovation and Productivity was founded in 2016 to provide education, training and career progression for all citizens.

Chin said the trend was likely to catch up across the world, where "education will become more of a lifelong journey where you alternate between developing a skill (at work) and getting the certification for it (in school)."

At the same time, he acknowledged that "the boundaries between education and work will get more blurred" as lifelong learning proliferates.

Others believe that good old-fashioned higher education offers offline experiences that will simply be challenging to replicate in the digital space."Organized educational settings and programs give us a social environment within which we educate ourselves, and this social context has phenomenally great importance," Miller said.

Miller said strong universities played a multiplicity of roles within a nation's ecosystem, while some even go on to play significant global roles. This was, in his opinion, something that online courses were unlikely to erode or displace."That is why universities have endured over the past 1,000 years, and will continue to endure for the next 1,000 in one form or another," Miller said, acknowledging that "there will be a lot of change, and there will be a changing competitive landscape and dynamics."