One of the most highly touted developments of the last five years was the rise of the Massively Open Online Content (MOOCs).

This ubiquitous source of educational material promised to revolutionize education, mostly in industrialized countries.

**Massively Open Online Content**

The lure of open educational content was irresistible. America’s leading higher education institutions, led by Stanford University, took the plunge. Sending a new revolutionary trends emerge, Harvard University and MIT created edX, a joint effort to provide online courses. The edX consortium now includes 30 leading universities from around the world.

Long before these giants stormed the science, entrepreneurial efforts such as the MIT-led OpenCourseWare (OCW) movement had set the stage for the coming disruption of the educational system. Institutions around the world grappled with how to adapt to the age of abundance, driven in part by the open source rebellion.

These efforts tended to focus largely on revolutionizing education industrialized countries. More recently, the MOOC promise has come under scrutiny as early evidence of its impact started to emerge. The rate of completion of MOOC-based courses was surprising low and their pedagogic contributions became uncertain.

The evaluations, however, have failed to distinguish between the dynamics of early euphoric adopters and long-trends in technological innovation. There is a possibility that the MOOC revolution will follow the pattern of mobile phone adoption, favoring poor countries with outdated educational infrastructure and technology.

Earlier efforts by institutions such as the One Laptop per Child (OLPC) (on whose founding board I served) offer clues of the potential of MOOC for developing countries. OLPC, unlike traditional MOOC, focused on designing hardware that reflected the dynamics of learning.
For OLPC, the availability of MOOC was not the driving force. Learning was the impetus of the design of a new laptop that facilitated interactive learning. The MOOC revolution in emerging nations will be less about access and more about learning. This brings us to the special characteristics of mobile communication in emerging nations, especially in Africa.

**Mobile Revolution**

The rise of mobile communication has demonstrated the potential for technological leapfrogging.

Economic pessimists could hardly see the potential for the continent to become a player in new technological revolutions. They recommended that Africa should instead tie their fate to older vintages of what was called “appropriate technology” in the 1970s.

The phenomenal adoption of mobile phones and the reduction in use of landlines changed everything. Mobile phones defied all the predictions. The original assumption that new technologies were inherently more expensive, complex and inaccessible to the poor was proven false.
Promoters of this static view failed to appreciate the logic of exponential growth in technology, dropping of prices and entrepreneurial capabilities of local innovators. They could have hardly predicated that new global industries such as mobile money transfer and mobile banking could grow out of Africa.

**Paving the Way**

To understand Africa’s future technological promise we have to look in the past.

The continent’s analog revolution in recorded music is a classic example. It emerged in the late 1940s when the US was embroiled in controversies regarding recorded music.

The American Federation of Musicians succeeded in calling for a recording ban in 1942 and 1948. Africa, on the other hand, leapfrogged and adopted recorded music and fostered an analog revolution that featured stars such as Le Grand Kalle, Dr. Nico, Franco, Tabu Ley, Oum Khalthoum, Miriam Makeba and Fela Kuti.

The men and women of the African analog revolution were also leaders in social commentary and entrepreneurs in their own right. Their vocalists were also poets. It was a period of remarkable creativity and genius.

“The pressure to keep the cost of textbooks low forces many countries to settle for a set of standard textbooks that are widely used irrespective of the relevance of their content to diverse cultures.”

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Africa’s educational challenges are markedly different from those of the industrialized countries. Access to educational content is particularly acute because of the high cost of textbooks and the slow rate at which they get updated.

The pressure to keep the cost of textbooks low forces many countries to settle for a set of standard textbooks that are widely used irrespective of the relevance of their content to diverse cultures.

Digital books have two important advantages. First, they allow for updating without having to go through costly reprints associated with hard copies. Second, digital books allow for more regular updating, which is essential in rapidly-changing fields such as the sciences.

Adaptation of textbooks to local conditions would make their content more appealing to students. Children in fishing areas, for example, would not have been bemused by the relevance of cattle to their environments.

Teachers would also feel more empowered and engaged when they can see themselves as producers of educational content. They can start with adapting existing content and graduate to being authors on new textbooks.

This could also help to contribute to the decentralization of approvals for textbooks and give local governments more authority to determine educational content.

The Future

Africa can do for mobile education what it did for mobile communication. Who would have thought a decade ago that Kenya would be the midwife of mobile money transfer using a technology it did not invent?

It took a small number of dedicated people in government and the private sector to turn a putative airtime transfer activity into a billion-industry. This was an act of creative courage that involved a direct challenge not only to the telephone industry but also to the banking sector.

The same kind of valor will need to be deployed in education. When paper was introduced teachers worried considerably about its impact of the place of education in general and slates in particular. That was 200 years ago.

Today slates are back but they are digital.

The courage needed to transform Africa’s education systems will need to come from top leadership. African president and their advisors need to have the vision to see the promise of zero margin education. They must also be able to override the tendency of their ministries of education to stick with the past.
Several important measures will need to be put in place for Africa to benefit from the mobile education revolution.

First, it will need champions who can help rally public support behind basic requirements such as digital books.

Second, African presidents will need to invest political capital in mobile education. This will take focused efforts by heads of state and government to promote mobile education. They have to champion it and bring the full might of the state of educational transformation. Measures such as national service for the mentally-able will be an important part of the transformation of education in emerging nations.

Third, Africa will need to introduce a certain measure of flexibility in its educational systems to allow for more experimentation in curriculum development and pedagogy. The transition from slates to notebook changed educational systems. Emerging educational technologies will change education in even more fundamental ways. The benefits will accrue to the try out new approaches rather than those who stick with the past.

Finally, the rapid rate at which technology is changing demands that leaders get the best available advice. These advances are not only in the technological space but also in the fields of brain science and learning. They challenge traditional views about how humans learn and offer new insights on how to upgrade our learning capabilities.

Little will be gained until leaders take charge of the process of harnessing the power of mobile education. Failure to do so will leave Africa at a standstill. There is no better time for champions of mobile education in Africa than now.
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