

THEME 03

# Can E-learning bridge Africa's education gap?

E-LEARNING

AFRICA

TECHNOLOGY

E-Learning is once again gaining momentum as a solution to various problems in the African education system. Being delivered in various mediums through mobile phones, laptops, and tablets, it is a rapidly growing industry worth over \$500 million in 2017. Whilst previous attempts to implement technology solutions to education problems have been unsuccessful, the question is whether new circumstances will help bridge the gap between Africa and the rest of the world.

## Our observations

- On average, the majority of African countries are among the lowest performers in [education](#) globally, with low rates of literacy, numeracy, years in education, and quality of education with drastic change needed to close the [100-year gap](#) between them and the rest of the world.
- Two [major obstacles](#) to improving the level of education in many African countries are a lack of access and low quality teachers, resources, and training. This is affected by lack of curriculum, lack of planning and coordination and rampant teacher absenteeism.
- E-learning is [gaining momentum](#) as a solution to a number of these problems. Africa as a whole has successfully benefited from a number of cases of 'leapfrogging' technology such as the introduction of mobile phones over landline connections, access to mobile banking through services such as M-Pesa in Kenya and Tanzania. However, [critics argue](#) that a parallel of technology in education is unfeasible.
- [Various players](#) have been involved in a drive to implement technology-based solutions into education systems in Africa. Telecom companies such as Vodacom in South Africa offer an e-school data package, and startups such as Eneza Education, and Kio Kit in Kenya offer software and hardware solutions. Working with these initiatives, governments have also attempted to intervene. Liberia outsourced its entire education system to private education firms. Working closely with school organizations such as Bridge International Academies has played a significant role.
- The obstacles specific to technology-based solutions to education are that in many countries such as Niger, Chad, and Congo, less than 25% of the population have [access to electricity](#), and that despite rapid growth, mobile-phone penetration remains below 50% in most countries.



## Connecting the dots

In the West, E-learning is often misunderstood as referring to online-only, virtual classrooms. However, in its essence, it simply refers to the incorporation of digital technology into a learning environment. Since the [Millennium development goal](#) of 2000 to ensure universal primary education, various E-learning-based solutions such as [‘One Laptop Per Child’](#) have been tried, and have largely failed to improve education in sub-Saharan Africa where of 128 million school-aged children, 17 million will never attend school, and 37 million will receive such a low-quality education that they will remain at a similar level. However, in recent years, E-learning has gained new momentum with the introduction of a wide range of [local startups](#) originating in Africa’s booming tech-hubs with both international and local government backing. K. Boateng, the Ghanaian minister for Science, argues that [“the poverty gap is a technology gap”](#) with E-learning both solving the lack of basic education, as well as ensuring a computer-literate population for an increasingly tech-oriented world. One example of a government-backed program can be found in Uganda, where [Bridge International Academies](#) provides teachers with tablets. These tablets have access to lesson plans, digital aids, and a wide variety of resources such as attendance records, which keep track of students, but also tackle one of the most rampant problems in African education, which is teacher absence. Research has indicated that students in these classrooms learn at double the rate of their peers without tablets in the

classroom. However, this is only one player in a wider trend. Other solutions, such as those offered by [Eneza Education](#) in Kenya which, with 4 million users, puts technology in the hands of students, giving them the ability to complete practice exercises, take mock exams, and receive feedback from any teacher via SMS on basic mobile phones. This allows students to easily follow the national curriculum and was effective in improving test scores by 5% compared to a control group.

Significant connectivity improvements since the 1990s also make tech solutions more feasible, with increased access to internet, mobiles and electricity being important. Kenya, for example, has increased [access to electricity](#) from 3% to 56% of its population since 1990 (and [95% in schools](#) by 2016). Such improvements have already been taken advantage of with the introduction of mobile phones, and then mobile banking through M-Pesa, allowing countries to skip massive infrastructural costs. The rapid proliferation of mobiles has been significant, with telecom providers such as Vodacom supporting startups such as Eneza, and offering free data packages such as its [E-school](#) in South Africa. This makes it increasingly possible for technology to improve learning, bypassing the need for traditional investments such as printed materials, lesson design and administrative systems, as well as preparing children for a digital future. However, E-learning should be seen as an extension to improve learning, not a replacement of good infrastructure and physical classrooms.

## Implications

- A number of platforms have already proven successful such as the Bridge Academy and Eneza. However, with the enormous range of unproven E-learning tools in a profit driven industry, governments risk gambling precious resources with little return. This can be avoided by waiting for them to prove their effectiveness in the free market.
- There is a possibility of monopolies developing, with telecoms provider Vodacom already involved in the many of the larger operations, and a number of companies rapidly spreading across borders. Whilst this provides economies of scale, such extensive control of education by a private company could worry governments.
- As an industry, mobile E-learning is [expanding rapidly](#), increasing by an estimated 39% in 2016-17 to a value of \$530million representing enormous potential for economic growth in the existing [tech-hubs](#) in Cape Town, Nairobi, and Lagos amongst others, providing a sorely needed computer-literate workforce.