onebillion is a non-profit software publisher of educational content that aims to transform literacy and numeracy skills of children. With the needs of the child at the centre of the innovation, the intervention is delivered as apps on mobile devices and tablets in a classroom setting. It seeks to tackle some fundamental problems such as high drop-out rates (75% drop-out after Grade 1 in Malawi) and low teacher-student ratios (111 children per classroom). The quality of education is very low in spite of high enrolment rates (no Grade 2 student can count beyond 100).

onebillion spun out of a commercial company, Eurotalk, a leader in language learning software. The algorithm senses a child’s competence and speed, and provides an individualised learning experience. The content covers the entire curriculum and is presented in the cultural contexts and languages native to the child. Most importantly, it builds in mechanisms of positive reinforcement that encourage the child to move forward. The solution is delivered in classrooms, independent centres, URLs on tablets, etc. It is platform-agnostic (i.e. can be run on all operating systems) and device-neutral (phones, tablets, iPads, etc.). Solar power is used to charge the devices, thereby keeping carbon footprint to a minimum.

onebillion currently works in 68 schools in Malawi and has directly impacted over 15,000 children of Grades 1-2. Together with implementation partner VSO, oneclass centres are set up in school premises that host batches of 26-30 students with a one-to-one tutor. By the end of 2016, onebillion plans to expand to 120 schools in Malawi. The organisation has also conducted pilots in Uganda and Tanzania and is actively considering a host of other African nations. onebillion also partners with Airtel, one of the largest telecom operators in sub-Saharan Africa, to provide its URL free of cost over data networks. Airtel also funded 25 phones preloaded with onebillion dashboards for ministers and school leaders to keep track of progress.

In 2013, the UK University of Nottingham conducted a study of 318 children of Grades 1-3 at Biwi Primary School in Malawi. They were randomly assigned to three groups – one that received a onebillion maths intervention for 30 minutes per day for 8 weeks, one that received a non-maths control tablet intervention, and one that received only face-to-face classroom teaching. The study reported significant gains across all grades, especially for Grade 3 students (28% for treatment; 18% for control). Treatment students in Grades 2 and 3 were found to have attained conventional Grade 4 levels. The treatment group also performed better on paper-pencil tests, showing that the skills acquired were transferrable to other media. 78% of low achievers among treatment students achieved grade-level competence, compared to only 17% of low achievers in the control group.

Another study conducted on primary school students in Nottingham, UK also showed impressive results (learning gains equivalent to 18 months of conventional teaching) after a 6-week intervention of onebillion products.

onebillion’s content development activities are funded by philanthropic donations from high-net worth individuals. Funding is also sought from the likes of Global Innovation Fund and Omidyar Network. Implementation partners, such as VSO, raise their own funds for their parts of the work. Recently, $8 million were raised for scaling up operations in Malawi and other countries.

onebillion solutions are endorsed by the Government of Malawi, and other African governments have expressed positive interest in adopting this technology. Among other stakeholders are local experts who help adapt content to native contexts, and other distribution channels such as telecom operators. Finally, onebillion is aware of the plethora of similar developers in the global market. At the ongoing Global Learning XPrize competition (a cumulative award of $15 million for teams that develop learning software), 198 teams from across the world registered, including established companies such as Pearson.

1 http://journal.frontiersin.org/article/10.3389/fpsyg.2015.00485/full

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