PSIPSE Regional Themes and Challenges:
The Use of Technology as an Educational Tool in Nigeria

Prepared by The Education Partnership Centre
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The **Partnership to Strengthen Innovation and Practice in Secondary Education (PSIPSE)** aims to accelerate innovation in secondary education programming, research, and development. It is led by a group of private donors and donor advisors, including Central Square Foundation, ELMA Philanthropies, Human Dignity Foundation, Intel Foundation, the John D. and Catherine T. MacArthur Foundation, Marshall Family Foundation, MasterCard Foundation, and an anonymous donor. Project durations are one to three years, and are located across East Africa (encompassing Kenya, Tanzania, and Uganda), India, and Nigeria. Results for Development has been selected as learning partner, and will work with three local learning partners to monitor the funded projects, draw out and share important learnings from the efforts, and use these learnings to inform future programming.

The **Education Partnership Centre (TEP Centre)** is Nigeria's pioneer education partnership consultancy, specialising in research, design, implementation, support and evaluation of education programmes, projects and initiatives across the public, private, and non-profit sectors. TEP Centre's vision is to establish radically enhanced education systems by leveraging the strengths of stakeholders for effective and sustainable partnerships. Their mission is to improve the overall design implementation, and evaluation of education initiatives through effective, enduring, and scalable partnerships. TEP Centre serves as the Nigeria local learning partner for PSIPSE.

Background

Enabled by the expansion of mobile telephony, Nigeria is experiencing a rapid uptake of internet-based digital technologies. The country is home to a population of 162 million, and as of 2013, it is estimated that over 100 million mobile lines are active, serving an estimated 118 million subscribers.[1] Of the 56 million Nigerians that have access to the internet, 48 million to do so via mobile networks alone, with this figure set to rise rapidly as smart phones become more affordable.[2] In the 12 years since mobile (GSM) telecommunications were first introduced to the mass market, several sectors of the economy (including the informal sector) have come to rely almost exclusively on mobile telephony to meet their communication and business needs. This growth is not peculiar to Nigeria; 70 out of every 100 people in Africa have access to some form of mobile connectivity, underscoring the importance of the service.[3]

As with several other spheres of the Nigerian economy, the formal education sector is experiencing a subtle but certain paradigm shift in the utilization of digital technologies. Internet connectivity through mobile telecommunications is providing new ways through which access to education can be expanded, and quality of provision improved. Such innovative models include the development of learning applications, online access to remedial tutoring, provision of free or low cost tablet computers and mobile phones, and training programs dedicated to ICT skills acquisition. A number of these initiatives are targeted at underserved demographics including girls and out-of-school youth. A scan of the operating environment reveals that whilst the state is a notable driver of change through ICT, the non-state sector is leading the pack with respect to the diversity of education innovation models.

Mobile Learning Models

Examples of innovative technology projects that are disrupting traditional learning models include **Passnownow.com** and **gidiBrains**. Passnownow.com is a social interaction website that supports learning by providing curriculum-based test preparation materials to users at no charge. This service, targeted at senior secondary students, provides access to a large repertoire of past examination question papers. The website also incorporates a social networking dimension where learners are encouraged to interact with peers and to keep abreast of local and international news whilst learning. gidiBrains is a downloadable learning and lifestyle app which also provides rich content based on the Nigerian education

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1.Source: Nigeria Communications Commission. http://ncc.gov.ng/index.php?option=com_content&view=article&id=125:art-statistics-subscriber-data&catid=65:cat-web-statistics&Itemid=73. Accessed December 5 2013

2. Source: Punch Nigeria Online. http://www.punchng.com/business/business-economy/48-3-million-nigerians-browse-internet-on-mobile-phones/ Accessed December 5 2013

3. Source: *Afrobarometer* report titled, "The Partnership of Free Speech and Good Governance in Africa" which surveyed 51,605 people in 34 countries regarding mobile phone usage. http://www.oafrica.com/mobile/survey-of-51000-africans-in-34-countries-finds-internet-use-around-18-mobile-84/ Accessed December 8 2013

curriculum, to learners. As with Passnownow.com, past examination questions and study guides are provided to users free of charge. Through the use of a cutting edge server, digitized learning content can be scaled instantly to any user who has a mobile phone of any type.

A grantee supported by the Partnership to Strengthen Innovation and Practice in Secondary Education (PSIPSE), Co-reation Hub (Cc-Hub), is also disrupting the education space with its novel software, *Efiko*. Cc-Hub is a social enterprise that aims to solve social problems through technology; the quality of learning outcomes, as evidenced by poor examination results, is one such problem. Leveraging the opportunity provided by the rapid diffusion of mobile internet, Cc-Hub through a collaborative (or co-creative) process spearheaded the development of Efiko, a social testing software. This innovative app is designed as a study aid which when downloaded, enables users to test their proficiency in academic subjects. Users are encouraged to beat their previous time records and compete with other users for monthly prizes. One of the most interesting effects of using this app is that users learn without necessarily realizing that they are doing so. The backend of the software has been designed to capture data for refining and improving the service. For example, the average time spent on tests can be used to ascertain and alter difficulty levels of subjects. User preferences are also captured to enable the development of more tailored services. To mitigate the challenges posed by poor mobile network quality and heavy data outlays, the app is designed to be functional in locations with reduced connectivity, which means that learners can access and use the app on the go.

A digital innovation such as Efiko provides opportunities for organizational peer learning: Another PSIPSE grantee, development Research and Projects Center (dRPC), is implementing a program designed to strengthen the implementation of the newly revised curriculum for senior secondary school, thus improving learning outcomes for learners in in Kano and Jigawa states, particularly girls. This organization is already exploring opportunities through which female learners in their two target states can access the mobile app. Providing girls with access to this app will serve the dual purpose of supporting academic learning and developing technology skills. Given that Northern Nigeria currently reports some of the lowest learning levels in the country, this innovation provides tangible opportunities through which real learning can be fast tracked.

There are also opportunities for Efiko to deploy blended learning approaches. One method considered viable involves training teachers on how to use mobile phones as instructional aides. Teachers would be encouraged to gradually incorporate Efiko into their teaching practice via assignments submitted through the platform, and monitoring of student progress through an administrative interface. Teachers would also be encouraged to introduce 10 minutes of in-class 'mobile lab time' during the day to test and reinforce learning.

Conclusion

The success of disruptive education technologies like Efiko, Passnownow.com and gidiBrains depends to a large extent on the collective efforts of all stakeholders. Partnerships with state ministries of education and education districts could stimulate acceptance and participation at public school level. The collaboration of teachers in rollout is also clearly important. Linkages with the national curriculum development agency (NERDC) and textbook publishers

would also facilitate access to curriculum-based content. Dedicated seed funding for startup technology ventures needs to be prioritised both in the public and non-state sectors, as such funds would stimulate innovation. All of these efforts would contribute to strengthening the potential of digital technologies to enhance the learning experience in classrooms and to improve learning outcomes of students.