

# Reverse Engineering, Youth Entrepreneurship Driving Education

## Project Information Document (PID)

<b>Case #</b>	C
<b>Project Name</b>	Reverse Engineering, Youth Entrepreneurship Driving Education
<b>Project Theme</b>	Youth Education
<b>Region</b>	Sub-Saharan Africa
<b>Country</b>	Unspecified

### 1. Project Context

Education is the cornerstone of economic growth and social development and a principal means of improving the welfare of individuals and societies. Primary education is its foundation. The central purpose of primary education is twofold: to produce literate and numerate population and to lay the groundwork for future education. As economies worldwide are transformed by technological advances and the new production methods that depend on a well-trained and intellectually flexible labor force, education becomes even more significant. Most countries recognize the importance of having a literate and numerate population. They acknowledge that a weak educational foundation will seriously impair a nation’s development prospect. Effective primary education is a rock-bottom necessity for development. In the last two decades, governments and educators all around the world have recognized or are coming to recognize that technology can be the catalyst fostering teaching and learning in primary schools.

### 2. The Objectives

The Project Development Objective (PDO) is to provide targeted disadvantaged youth with access to quality primary education material through leading-edge technology solution. The project should achieve the PDO through a focus on:

1. Leveraging technology to bring open educational resources (OER) to even the most rural areas by way of a cloud based application,
2. Employing highly intuitive visually oriented and intelligible courses by way of serious games, and
3. Enabling individuals to personalize their own education and select peer identified and reviewed solutions by way of applied crowd-learning.

### 3. Key Results

Progress towards achieving the project’s development objective should be measured by:

1. Increase in the number of students enrolled in primary OER
2. Number of students graduating from the primary OER and advancing to secondary education.
3. Exams to measure basic subject proficiency, to ensure students are provided with a quality education

### 4. The Problem

Basic educational opportunities are either absent or poorly delivered in many parts of the world. According to UNESCO there are 200 million young people in need of a second chance to acquire the basic literacy and numeracy skills essential to learning further skills for work. Coupled with another 800 million adults without reading and writing

skills, there are close to 1 billion people in need of basic educational solutions. In Sub-Saharan Africa, 11.07 million children leave school before completing their primary education. In South and West Asia, that number reaches 13.54 million. In many developing countries less than 60 percent of primary school pupils who enroll in first grade reach the last grade of schooling. Additionally, pupil teacher ratios in some countries are in excess of 40:1 and many primary teachers lack adequate qualifications. Recent learning assessment initiatives in Africa, Latin America, and the Caribbean show there is a large learning gap between industrial and developing countries. Within countries, low as well as middle-income, learning gaps are observed between rich and poor students as well as male and female students.

These realities uncover at least two problems:

Problem A: There are simply not enough educational opportunities. The joint UNESCO and Broadband Commission report states that about 2 million new teachers are required to address the educational woes of young people alone.

Problem B: Existing opportunities are largely dated and thereby marginally effective for today's pupils.

The current educational model is largely based on supply economics – regardless of whether the pupils need or want specific curricula they are being offered a long-established set of courses and course load. Additionally, the educational models are largely inflexible and do not take into consideration the evolution of modern pupils accustomed to digital, flexible, and interactive environments. The legacy systems deliver them in a paper format for a predetermined amount of time while including a rewards structure that was appropriate a few generations ago. The curricula are linear and focus on accumulation of knowledge over the application of knowledge. In an era of rapid technological innovations and advancements these approaches lag in effectiveness and efficiency. Modernization of the educational system in ways that makes the learning process relevant to specific goals and links the course work with overall clear and relevant objectives and rewards may better suit and connect with the evolution of the students. The top-down “trust me, this is good for you” educational approach may have outlived its time.

## **5. The Opportunity**

Primary education is the largest sub-sector of any education systems and offers the unique opportunity to contribute to the transformation of societies through education of the young. In order for young people to adjust to and compete in the rapidly changing environment of the high-tech world they need to have a set of life skills which includes among other, communication, analytical and problem-solving skills for creativity, flexibility, mobility, and entrepreneurship.

Many of the open educational resources are already enabling global citizenship without commitment to full educational curricula. Generating and revamping skills have become a lot easier with solutions such as Khan Academy, Coursera, Udacity, and others. Yet, the online education and curricula are ways from turning into mainstream solutions. Many of them are complex to be used by illiterate or tech novices; others are heavy with content or require large bandwidth. As you look for an idea for your startup, look beyond today and well into tomorrow's solutions that take into account behavioral evolutions, forecast future demands, and consider things that could turn into trends, applications that people don't yet look at as possible solutions. The solutions should address the following issues:

1. What opportunities are provided by technology for teaching and learning in or for primary schools?
2. What are the limitation of technology and associated concerns in primary schools?
3. What are necessary and sufficient condition to support the technology-enhanced teaching and learning practices in or for primary schools?