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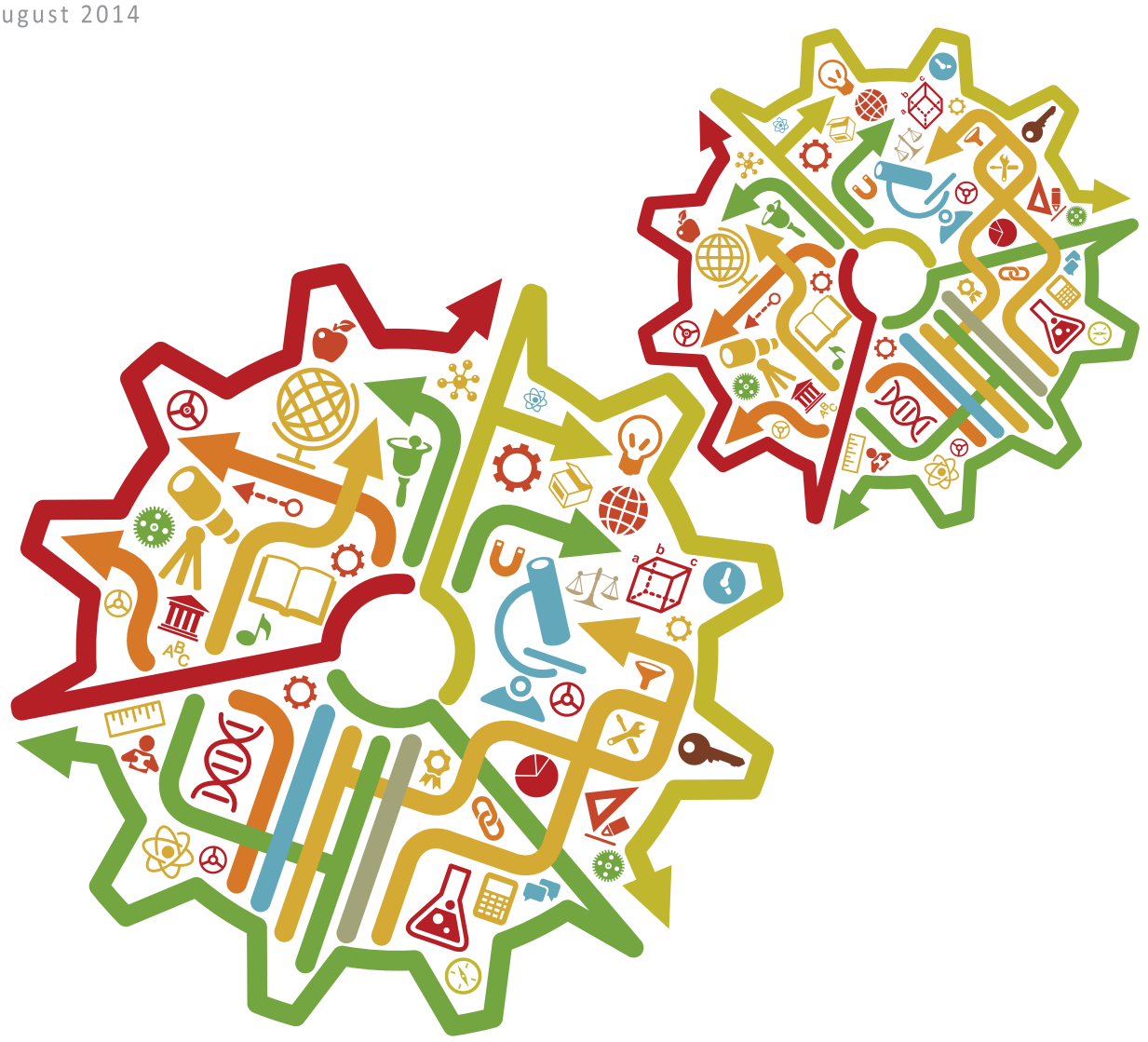
Transforming Secondary Education in Nigeria

Supporting Vocational/Technical Curriculum Rollout

A Study Supported by the Ford Foundation

August 2014



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> The Ford Foundation has made grants in West Africa for over 50 years. In West Africa, with a focus primarily on Nigeria, the Foundation aims to improve governance systems and improve livelihood opportunities for the poor.

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> In Nigeria, Dalberg has worked closely with international and local private sector actors, federal and state governments, multilateral agencies, and non-government organizations in a range of sectors including education, agriculture/ FMCG, and health.

Dalberg Global Development Advisors is a strategy and policy advisory firm exclusively dedicated to global development and innovation. Our mission is to mobilize effective responses to the world's most pressing issues and to raise living standards in developing countries. Our approach combines rigorous business analytics with on-the-ground experience to help governments, foundations, international agencies, NGOs and corporations. Our services include a broad offering including developing innovative strategies, approaches and market mechanisms, reforming internal organizational processes and structures, analyzing trends and developing market-entry strategies, and coordinating and facilitating large, multi-stakeholder initiatives.

Dalberg has a global network of offices, including four in Africa - in Dakar, Lagos, Johannesburg and Nairobi, as well as in Abu Dhabi, Copenhagen, Geneva, London, Mumbai, New Delhi, New York, San Francisco, Singapore, and Washington, D.C. In Africa, we have worked in 45 countries, and carried out over 40 projects in Nigeria, in the past few years. In Nigeria, Dalberg has worked closely with international and local private sector actors, federal and state governments, multilateral agencies, and non-government organizations in a range of sectors including education, agriculture/FMCG, and health. More broadly in education, Dalberg has completed numerous education sector landscape studies globally focusing on identifying key issues, finding investment opportunities, and developing programs and partnerships for a range of actors.

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We would also like to thank the Ford Foundation and Innocent Chukwuma, in particular, for sponsoring this report. We sincerely thank all of our colleagues at the Ford Foundation, Dalberg Global Development Advisors, and The Education Partnership Centre who contributed to the fieldwork and case study development.

This report was written by Nneka Eze, an Associate Partner, and Nguhi Mwaura and Munalula Ngenda, Associate Consultants, at Dalberg Global Development Advisors.

Executive summary

Nigeria has introduced 34 trade subjects as part of the Senior Secondary Education Curriculum reform in order to make secondary school education functional, equipping students for employment and entrepreneurship. This report was commissioned by the Ford Foundation to provide a rigorous understanding of the vocational education landscape in Nigeria, particularly within the formal secondary school space, and with the aim to define the gaps and opportunities in vocational education at the secondary level. Over the course of three months, Dalberg has conducted research and stakeholder interviews to better understand the current state of vocational education in formal secondary schools in Nigeria. The study includes a review of available literature on vocational education at the secondary level, a scan of existing initiatives globally, interviews with private and public sector actors, and visits to four states across Nigeria.

Based on this research and analysis, we have identified a core set of issues affecting the vocational education space beyond those – teacher quality and numbers, education finance / data, outcomes including educational attainment, tertiary / job readiness – affecting the broader education sector. These issues must be addressed for effective rollout of the curriculum at the secondary level in Nigeria. The underlying issue pertains to challenges with policy planning, with resulting effects on implementation in Nigeria's states and Federal Capital Territory (FCT). The issues below stem directly from inadequacies in planning for the inclusion of vocational subjects in Nigerian schools.

- **A disconnect between the subjects taught and labor market needs:** Given the other challenges, there is little employability- or market-driven consideration given to the selection of subjects offered by schools. Schools are selecting subjects based on what they can offer with the teachers and resources they already have access to, without recourse to the needs of the labor market in their localities.

- **Need for quality curriculum development:** While the new senior secondary curriculum has been developed at a high-level, the tools required for implementation of these curricula at school level - lesson plans, detailed teaching guides, etc. - have not been developed. There is a concern about whether the curriculum will match the private sector requirements in the field, e.g., could a secondary school course lead to a certificate?

- **Limited teacher readiness and availability:** Nigeria does not have the right (qualified) teachers for vocational education. Whether due to misaligned financial incentives, lack of "professional" vocational practitioners, or preparedness to conduct teacher training, qualified teachers are lacking. As a stop-gap measure, schools are selecting subjects related to existing curricular offerings to expand the offering without expanding the workforce.

- **Limited resources:** The resource- and equipment-intensive nature of vocational training requires funds for the running costs of curricular offerings. For example, students need brick making materials to learn block making and brick-laying. In the absence of earmarked funds for these resources, some donor programs have filled the gap, but schools are also teaching subjects without adequate materials. The enormity of the funding gap - nearly double the existing federal budget allocation to education - is unlikely to be filled without concerted effort and innovation in curriculum delivery.

- **Need for sensitization and awareness:** Beyond the curriculum itself, there are concerns about the applicability of the subjects beyond secondary school, the realization of the gap between the number of youth and available jobs, and a lack of awareness or interest in vocational education as a means of economic empowerment. In addition, a range of actors are working in silos on vocational training/education issues, with potential to share learning items and resources.

These issues remained relatively consistent regardless of the state/geographic zone. Stakeholders in the private sector and public sector (state government and public schools) in the states visited and reviewed generally concur on the core set of issues. Underlying each of these challenges or opportunities is the limited funding available for vocational education at the secondary level. While education finance is obscured by politics and decentralized implementation, the funding available is not sufficient for effective rollout.

Based on these challenges, global case studies, and analysis of the key issues and current context, a **number of opportunities for intervention have been identified**:

- **Get buy-in from state governments and private sector actors**;
- **Incentivize private sector inclusion in the curriculum development and roll-out**;
- **Focus on teachers and material resources**;
- **Bring together** the **vast number of stakeholders** on the relevant issues; and
- **Sensitize the public to the possibilities** that vocational training can provide students

Each of these recommendations suggest that the there is a role for a **convener** - bringing together the right set of parties to share knowledge and experiences- and a **catalyst**- providing data or funding to support changes or have scaling effects.

Given the significant funding required for one year of curriculum roll-out - approximately 431.8 billion NGN (US$ 2.7 billion)- the social sector's most effective role is unlikely to be that of a large-scale funder of state-level initiatives, but should rather focus on sustainability of interventions along the following axes: sustainable financing, leadership and accountability, PPPs with industry, economic and social impact.

List of Acronyms

AfDB	African Development Bank
CIA	Central Intelligence Agency
CLIL	Content and Language Integrated Learning
CPS	Chicago Public Schools
CSR	Corporate Social Responsibility
DEEPEN	Developing Effective Private Education Nigeria
DfID	Department for International Development
dRPC	development Research and Projects Centre
EFA	Education For All
ESSPIN	Education Sector Support Programme in Nigeria
EU	European Union
FCT	Federal Capital Territory
FET	Further Education and Training
GDP	Gross Domestic Product
GMAT	Graduate Management Admission Test
GPE	Global Partnership for Education
GTS	General Trade Schools
GV-ESTP	Graduate Vocational Employability Skill Training Program
ICAN	Institute of Chartered Accountants of Nigeria
ICT	Information and communications technology
ITE	Institute of Technical Education
JSS	Junior Secondary School
LASTVEB	Lagos State Technical and Vocational Education Board
MDGs	Millennium Development Goals
MLA	My Learning Academy
MSMEs	Micro Small and Medium Enterprises
NBS	National Bureau of Statistics
NBTE	National Board for Technical Education
NCCE	National Commission for Colleges of Education
NECO	National Examination Council
NEEDS	National Economic Empowerment and Development Strategy
NERDC	Nigerian Educational Research and Development Council
NGO	Non-Governmental Organization
ngREN	Nigerian Research and Education Network
NPE	National Policy on Education
NSDC	National Skill Development Corporation

PPP	Public-Private Partnerships
PSIPSE	Partnership to Strengthen Innovation and Practice in Secondary Education
PTA	Parent Teacher Association
SIFE	Students In Free Enterprise
SL-MATP	School-leaver Modern Apprenticeship Training Program
SMEs	Small and Medium-sized Enterprises
SMS	Short Message Service
SSEC	Senior Secondary Education Curriculum
TDP	Teacher Development Programme
TEPO	Teachers' Establishment and Pension Office
TVE	Technical and Vocational Education
TVET	Technical and Vocational Education and Training
UBE	Universal Basic Education
UBEC	Universal Basic Education Commission
UIS	UNESCO Institute for Statistics
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
WAEC	West African Examination Council
WASSCE	West African Senior School Certificate Examination
WAVE	West African Vocational Education
YEAP	Youth Employment in Agriculture program
ZODML	Zaccheus Onumba Dibiaezue Libraries

Introduction

Context

> In Nigeria, the reported youth unemployment rate has grown from 41 per cent in 2009 to over 50 per cent in 2012-2013 and is growing at a rate of 16 per cent per annum[6].

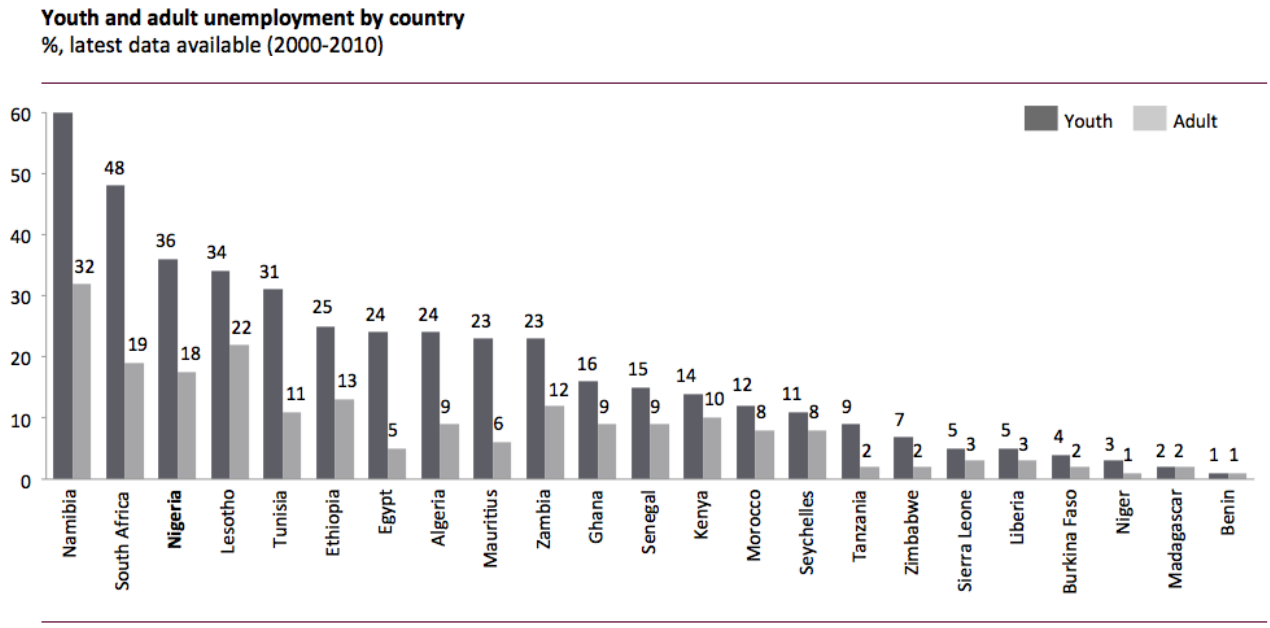
Africa's youth[1] - aged 15-24 - account for over 20 per cent of the population, making Africa the continent with the largest global youth population.[2] Since the 1970s, the African youth population has remained at around 20 per cent of the total population, the youth populations of Latin America and the Caribbean and Asia have remained at around 15 per cent, and those of North America and Europe have declined to approximately 13 per cent of the population. By 2050, however, estimates suggest a continued decline in the youth population with Africa's youth population reducing to 16 per cent, and the other regions' youth populations dropping to approximately 10-12 per cent of their total population.[3]

In Africa, youth make up 38 per cent of the workforce.[4] However, the majority of African youth are highly unemployed, underemployed, or inactive formal contributors to the rising GDP - youth unemployment was reported as 20 per cent in Africa in 2010.[5] The specific unemployment rates vary by country, with a variety of methodologies making cross-country comparison difficult.

In Nigeria, the reported youth unemployment rate has grown from 41 per cent in 2009 to over 50 per cent in 2012-2013 and is growing at a rate of 16 per cent per annum.[6] While data sources vary greatly depending on the inclusion of technically out of work populations (see figure, below), Nigeria's large population size is a significant multiplier and results in between 5-12 million unemployed youth in Nigeria. In comparison, at the low end of the spectrum, Ghana reports a 10 per cent youth unemployment rate, and at the high end, Namibia reports a 60 per cent youth unemployment rate.[7] Beyond the "global" figures, youth unemployment varies significantly when explored via gender, education, and poverty lenses.[8] The figure below illustrates the comparison across countries.

1 Youth may be defined in terms of the individuals in a specific age range. While this report focuses on secondary education and thus youth between the ages of approximately 15-24, some African countries consider youth as young as 12 and as old as 35 years old.
2 UN Department of Economic and Social Affairs, Regional Overview: Youth in Africa according to 2010 data. In the same year, 70% of the population was under the age of 30; New York Times, "Africa's Daunting Challenge", 5 May 2011.
3 United Nations Secretariat, Department of Economic and Social Affairs, Population Division, World Population Prospects: The 2008 Revision.
4 Working age (15-64) population.
5 International Labour Organisation (ILO).
6 Salami, CGE. "Youth unemployment in Nigeria: A time for creative intervention". July 2013.
7 International Labour Organisation (ILO), Ghana and Namibia country Profiles. Latest available data, 2013 .
8 African Development Bank, Accelerating the AfDB's Response to the Youth Unemployment Crisis in Africa, 2013

Figure 1: Comparison of youth and adult unemployment rates in Africa



Note: For Kenya, comparison is to national unemployment rate

SOURCE: ILO, KILM, latest data available 2000 -2010; Nigeria data from National Bureau of Statistics; Kenya data from KIPPRA, "Kenya Economic Report", 2013, and UNDP "Kenya's Youth Employment Challenge" 2013; Dalberg analysis

Key drivers of these concerning statistics include a weak educational system, which features outdated curricula that do not adequately train youth for the realities of the 21st century labor market. In addition, inefficient labor markets do not operate at equilibrium with appropriate talent matched to open (and enough) opportunities. In addition, youth often do not have the soft skills and technical skills to match the existing demand. In addition, the cost of education and the limited return on investment serve as a vicious circle that leads to up to 80 per cent of students dropping out of secondary school in some countries. Even for those students who stay in the education system, the gap between the supply of and demand for talent means most students are destined to search for employment in the informal sector or to start new businesses as entrepreneurs. The future employees and entrepreneurs whom have been trained in the formal education system often lack the skills needed to earn significant wages or to build financially sustainable businesses.

In West Africa, political and socioeconomic factors - increasing inequality, food insecurity, religious extremism, etc. - suggest that youth development and education are important for the region's economic growth and development. In order to take advantage of the huge demographic dividend, with a larger working-age population fuelling economic and social growth, the youth population needs to be properly equipped with the education and opportunities to do so. Beyond the socioeconomic rationale for addressing youth education and employment, continued youth unemployment will have large and lasting impacts on the region's security.

The challenges of youth unemployment and education are linked, and these are not only national challenges but ones with regional implications and causes. In an effort to address the education-employment challenge, the West African Examination Council (WAEC) launched the Senior Secondary Education Curriculum (SSEC), a new initiative which focuses on skills acquisition and entrepreneurship.

In Nigeria, Africa's economic and demographic powerhouse, the Nigerian Educational Research and Development Council (NERDC) and the federal government developed a curriculum framework for the new SSEC, with design beginning in 2011. These institutions proposed a range of trade subjects which have been rolled out since then at the senior secondary level, with 2014 being the first year that students could be examined on these subjects. Given the financial and human resource requirements for technical and vocational curricula, and the low level of preparedness of schools and state governments to adopt the new subjects, a number of concerns have been raised about the implementation of the new curriculum.

Scope

> While there is a large spectrum of youth-focused activities in Nigeria, the challenge of effective delivery of secondary education–especially vocational/technical training at that level–was selected because of its relative novelty in present-day Nigeria, the immense education-employment gap, and the practicality of covering the full spectrum

With this context, the Ford Foundation's Office for West Africa identified the potential to support the rollout of the new curriculum in Nigeria - or across the region. While there was clear need for a regional focus, one country was chosen as a testing ground and to learn from given the potential for applicability of approach to other countries in the region and given the available funding. Nigeria was chosen as this baseline country based on the size of its youth education-employment challenge, complexities of sub-national operations, and the Ford Foundation's presence and depth of past experience. The initial focus would be to identify potential areas of support for impactful change to transform secondary education level.

The Ford Foundation engaged Dalberg Global Development Advisors to produce a report that lay out the secondary education landscape. The report focuses on investigating the following areas:

- **Understanding the current situation:** identifying the proposed curricula changes compared to the existing curriculum, availability of teachers, and availability of market opportunities for trained graduates; outlining successes and failures from other global initiatives; and identifying Nigeria's overall performance compared to the broader region;
- **Assessing the potential to deliver on the new curriculum:** identifying the gaps between current capacity and proposed delivery; and
- **Designing and validating a program to support effective curriculum roll-out:** developing recommendations in partnership with key government stakeholders, leading to on-going activities within the new initiative.

This report includes six sections and appendices following this Introduction. The first four chapters of the report provide learning from global initiatives in vocational/technical education programs (Chapter I), identify Nigeria in the regional context and assess the performance of states on broader education criteria and highlight the depth and variances of poor educational outcomes at the state level (Chapter II), discuss the history of vocational/technical curricula in Nigeria and the associated challenges (Chapter III), and identify a range of existing interventions in Secondary Education in Nigeria (Chapter IV).

The final chapters of the report identify potential opportunities where interested organizations may support given the state of curriculum roll-out, existing programs and gaps that still remain, and state-level analysis (Chapter V), and recommendations on where to focus based on the analysis and engagement with national stakeholders (Chapter VI).

While there is a large spectrum of youth-focused activities in Nigeria, the challenge of effective delivery of secondary education–especially vocational/technical training at that level–was selected because of its relative novelty in present-day Nigeria, the immense education-employment gap, and the practicality of covering the full spectrum.[8] Given the Ford Foundation's interest in the new rollout of the trade and entrepreneurship subjects curriculum in Nigeria, this report does not focus on primary education, post-secondary education, private vocational/technical training centers, or technical colleges unless directly relevant to existing interventions targeted at secondary-level students in Nigeria.

Methodology

> During the course of the engagement, over 70 interviews were conducted at the state level and federal government level, and with stakeholders with a view across Nigeria, including with donor and private sector organizations.

In gathering the data sources for this report, Dalberg used qualitative and quantitative desk research and primary stakeholder interviews. Primary interviews were particularly important both to gather national and state-level stakeholder insights into the key challenges in secondary education and the new curriculum roll-out in Nigeria, and to serve as a further point of data collection. During the course of the engagement, over 70 interviews were conducted at the state level and federal government level, and with stakeholders with a view across Nigeria, including with donor and private sector organizations. A complete list of stakeholders interviewed is included in the ***Annex D. List of stakeholders interviewed***. Interviewees were selected based on qualitative and desk research, with a focus on representation across the education value chain: policy, curriculum development, delivery, results and outcomes, and depending on ability to connect with individual stakeholders through email, phone, and in-person outreach.

Given the currently limited (online) education data availability, initial assumptions were developed based on quantitative and qualitative research, for example, the appropriate states to visit, the gaps in program interventions, etc., which were then tested in stakeholder interviews. For the state-level analysis in particular, given the age of the available data - five to seven-year-old datasets - including metrics that required stakeholder inputs, "closer to the ground" information collection was required. To further support desk research and interviews, the Dalberg team conducted state-level visits and interviews with a range of stakeholders to better understand state-level preparedness. Using a diagnostic tool, the team was able to map the state's strategies, the level of preparedness and ability to roll-out the new trade subjects in addition to private sector demand for certain types of training.

By drawing on a variety of sources, including statistics from local governments and international organizations where available, previous Dalberg engagements, specialized databases and targeted interviews with public, social and private sector experts, the report provides insights into the readiness to implement the new curricula particularly around financial resources, teacher capacity and development and curriculum development, and where opportunities exist to support the roll-out.

8 Beyond these initial reasons, desk research and interviews have suggested a limited number of focused initiatives targeting secondary education in Nigeria (or vocational training at that level), for example as compared to initiatives focused on primary education. In addition, there is a sense that challenges with providing the right basis for skills at the secondary level is leading to significant employment challenges further down the line.

Chapter I

Technical and vocational education: A global perspective

Given global demographic and economic trends- with both population shares and unemployment figures on the rise for youth in a large part of the world- a renewed focus on better preparing young people to secure opportunities in employment and entrepreneurship has become necessary. In several countries, e.g., United States of America, Singapore, Colombia, etc., the potential of technical and vocational training is being examined for this purpose. (Case studies are included below) There has been a push by several governments to re-evaluate secondary school curricula in the recognition that there is a gap between what is being taught and what skills students will eventually need to enter the job market. In Nigeria, a trade subject curriculum (vocational/technical subjects) is being introduced across the country at the senior secondary level. Likewise, another African country, Zambia has also recently begun to roll out a new secondary school curricula, piloting a dual track for upper secondary school which offers either general education or vocational training. The first phase of Zambia's curriculum rollout will take place in the 2014 school-year.

While the Zambia roll-out may be too recent to gather significant learning points for Nigeria, an overview of programs in the global education landscape provides a number of trends to keep in mind while analyzing the situation in Nigeria.[9]

Formulating a clear bridge from school to work is crucial to changing the youth unemployment landscape. While millions of young people are leaving school and are unable to find work, conversely business are facing a shortage of talent with appropriate skills levels. It is estimated that by 2020 there will be around 45 million jobs for workers with secondary school education globally that will go unfilled.[10] In many regions, this skills mismatch represents a drag on economic growth, but offers a significant opportunity for youth employment. There are different ways to make this link, including apprenticeships and formal on-the-job training.

These models have been particularly successful in Ghana, where there are attempts to make the traditional apprenticeship role more formalized. Master craftsmen are paid by an apprentice's family to teach the skills required for the trade. This model has traditionally been applied in artisanal occupations (carpentry, masonry, etc.). Although there have been issues about the adaptability of this way of teaching- e.g., the master craftsmen would only be able to teach those methods they have had exposure to given limited continuing education and training, whereas with technological advances there may be more newer, more efficient methods- it does ensure that there is a steady stream of new artisans joining the labor market. The apprenticeship approach allows youth to overcome the "experience trap" that can be a barrier to getting their first job and ensures that systems of education and labor market intersect rather than operate in parallel.

Alternatively in 2009, the Government of India established the National Skill Development Corporation (NSDC) as a public private partnership to "facilitate the development and upgrading of the skills of the growing Indian workforce through skill training programs." NSDC makes financial investments in for-profit companies, such as IL&FS, that are focused on providing vocational training. India also has a government scheme that pays certified vocational service providers a fixed fee for any students who undergo their program, receive a job placement, ***and*** are retained in their jobs for at least three months. This job placement and retention requirement has ensured that the subjects and curriculum reflect labor-market needs.

9 Case study reviews and broader takeaways are drawn from a review of publicly available scholarly articles, press, and program evaluations or impact assessments as well as Dalberg's past experience working with a range of organizations globally.

10 World Economic Forum "Education and skills 2.0: New targets and approaches". January 2014.

Further, financial infusions have enabled service providers to make upfront investments in teacher readiness and the purchase of resources, which earn a return through the government payment scheme. Finally, the for-profit providers are naturally incentivized to increase their customer base through sensitization and awareness. This approach very clearly involves all players and gives each a stake in ensuring that the partnerships are successful.

The focus of education authorities is increasingly moving towards equipping students with skills that will lead to clear paths of employment. In the United States, while emphasis had been placed on four-year college degree attainment, there are now approximately 450,000 vacancies in the trade, utilities and transportation industries, which do not require these degrees, despite the country's current job deficit[11]. In order to fill the gap, where there are available jobs, but not available skills, a number of programs have been launched across the country. In Chicago, there has been a push towards vocational education which led to the launch of Career and Training schools in a seven-year roll-out meant to end in 2017 (see case studies, below). In Singapore, the country has developed a low-skilled work force in line with multinational corporation entry. Skills development training centers - typically located in the center of business and manufacturing parks - trained students to the specifications the multinationals would require in their production lines. In addition, special funds were set aside for local companies that wanted to upgrade the skills of their workforce. Both the American and Singaporean programs push for acquisition of specific skills rather than just the attainment of general 'milestone' qualifications such as a secondary school completion certificate.

The definition between secondary and vocational education is blurring. The traditional model, in which students complete secondary education and then progress into vocational/technical or tertiary education is being challenged. The evolving thinking is that there is some level of primary education ideal for all learners, after which learning skills for employability and livelihood returns are increasingly important, rather than gaining a general education degree.

In economies where there are a limited number of jobs available to absorb highly-skilled labor, balancing the pipeline of academically and vocationally oriented labor pool entrants is increasingly important, and diversification occurs earlier in the education system.

However, society perceives vocational/technical training as inferior to "formal, academic education" or that it must be pursued to the exclusion of the more desired academic curriculum. As a result people are often discouraged from looking into vocational training as a viable entry way into a career. Changing this perception, particularly of parents, plays a crucial role in attracting the appropriate type of talent and allowing vocational training to thrive.

In cases where state funding may be insufficient to support sequential secondary and vocational training programs, there is an additional pressure and argument for combining the two programs. In South Africa, for instance, 100 students will enter ninth grade, but only 13 students will pass twelfth grade exams, and only four of those students will pass with a grade required to enter university. The other 96 students will need other options beyond tertiary education to enable them to join the labor market. In the context of budget constraints, and the dire situation of the education system, vocational training is one potential solution. Vocational training programs are being put in place that start at the tenth grade level. For example, in South Africa, Further Education and Training (FET) colleges do not require any schooling beyond ninth grade for enrolment.

While there is increased focus on training students for employment and to be economically active citizens, globally, the approaches vary significantly. Based on a review of past programs, a few models stand out: post-secondary technical institutions, parallel-path academic and vocational curricula in formal secondary school settings, informal schools for out-of-school youth, whether through private, social sector, or government channels. These models are reviewed below.

11 Statistic quoted by Mike Rowe to the US Senate Committee on Commerce, Science and Transportation on June 8, 2011.

Chicago Career and Training Schools:
Formal Secondary Program with Parallel-Path Academic and Vocational Training

Location:
United States of America

Scale:
25,000 students

Time period: 2010-2017

Overview

A revamped vocational training program in seven Chicago schools was rolled out in 2010. The program is expected to provide 25,000 students the skills they need to land well-paying jobs after graduating from secondary school

Lessons for vocational/technical program design

- *Budget constraints.* Teaming up to share resources can help address budgetary and infrastructure constraints, e.g., with students travelling between centers to take specific classes
- *Student choice.* Giving students a choice in which path they take and not pigeon-holing them according to standardized test scores was found to be a big driver of students' later success
- *Market driven approaches.* Having a market-driven curriculum – looking at where the jobs are and tailoring the curriculum to provide the skills necessary- support strong employment outcomes. Going beyond "traditional" vocational training into more high-tech areas such as medical and electrical fields allowed student to go into "middle- skill" careers- as electricians, auto mechanics, medical technicians or licensed practical nurses- following graduation

Institute of Technical Education:
Post-Secondary Vocational Training

Location:
Singapore

Scale:
25,800 full-time students and 20,000 part time students per annum

Time period:
Launched in 1992

Overview

Institute of Technical Education (ITE) is a top-tier post-secondary, government-funded and run institution. The Institution provides career-based education to full-time students and working adults through part-time programs. They have also managed to change mind-sets about vocational training as an option only for those with less academic prowess

Lessons for vocational/technical program design

- *Student (and parent) choice.* Helping parents and students understand the full spectrum of available options including vocational training is important to program success
- *Government support.* Having buy-in and commitment of the program from the government, e.g., a clear understanding of the impact that a successful vocational training program can have on the labor market, supports sustainability (financial support, etc.)
- *Perceptions of vocational education.* Changing perceptions on technical and polytechnic education may support uptake. For example, in Singapore this type of education is not only a terminal, industry-ready exit qualification but is also seen as a viable alternative to a junior college education for progression to university

Subsidizing Vocational Training for Disadvantaged Youth in Colombia – Informal School for Out-of-School (or post-school) Youth

Location:
Colombia

Scale:
80,000 students with a budget of US$ 60 million

Time period:
2002-2005

Overview

Jóvenes en Acción (Youth in Action), an NGO, provides three months of in-classroom training and three months of on-the-job training to youth (aged 18-25) in the two lowest socio-economic strata in Colombia. This program, funded by International Youth Foundation, includes practical and hands-on training to ensure knowledge is applicable directly to workplaces of its students.

Lessons for vocational / technical program design

- *Budget per student.* Spending for an impactful program costs between $750-$1000 per trainee
- *Impact.* Training increases wage and salaried earnings and probability of having paid employment. Salaried earnings increased by 12% for all individuals (and by 18% for women)
- *Market-driven approaches.* Large number of courses were offered in administrative work such as sales, secretarial work, marketing, warehouse and inventory work, and archival work and lead to increase chances of finding work in the formal sector

Lifelong Learning Project:
Post-Secondary Vocational Training

Location:
Across 25 European Union (EU) countries

Scale:
approximately 4 million students with budget of 7 billion Euro

Time period:
2007-2013

Overview

Lifelong Learning Project was designed to enable people, at any stage of their life, to take part in stimulating learning experiences, as well as developing education and training across Europe. The program is run by the EU Commission.

Lessons for vocational/technical program design

- *Tailor-made programs.* Given the diversity of populations and needs across the EU states, a number of programs were designed under the umbrella of the lifelong learning project. As an example, the Leonardo da Vinci program focused on vocational training and work placement opportunities generally, while the Pathways to Work program targeted young immigrants. Tailoring the programs to specific groups was key for success and uptake
- *Inputs from specialists and stakeholders.* In the Pathway to Work program the Commission used Technical and Vocational Education and Training (TVET) specialists, universities, immigrant advocacy groups and universities to come up with relevant interventions. Using a variety of stakeholder inputs in the design of the interventions and curriculum support successful implementation

Identifying the appropriate set of solutions for Nigeria, must take into account the successes and challenges found in other programs globally. In particular, this report will aim to answer some of the following questions in the context of these past programs:

- What are the current secondary educational outcomes in Nigeria?
- What is being implemented in vocational and technical education in seven focus states in Nigeria?
- Where are there gaps or opportunities in transforming secondary education in Nigeria through a vocational education curriculum (based on the current situation and programs, global experiences, etc.)?

Chapter II

Understanding Nigeria's educational outcomes

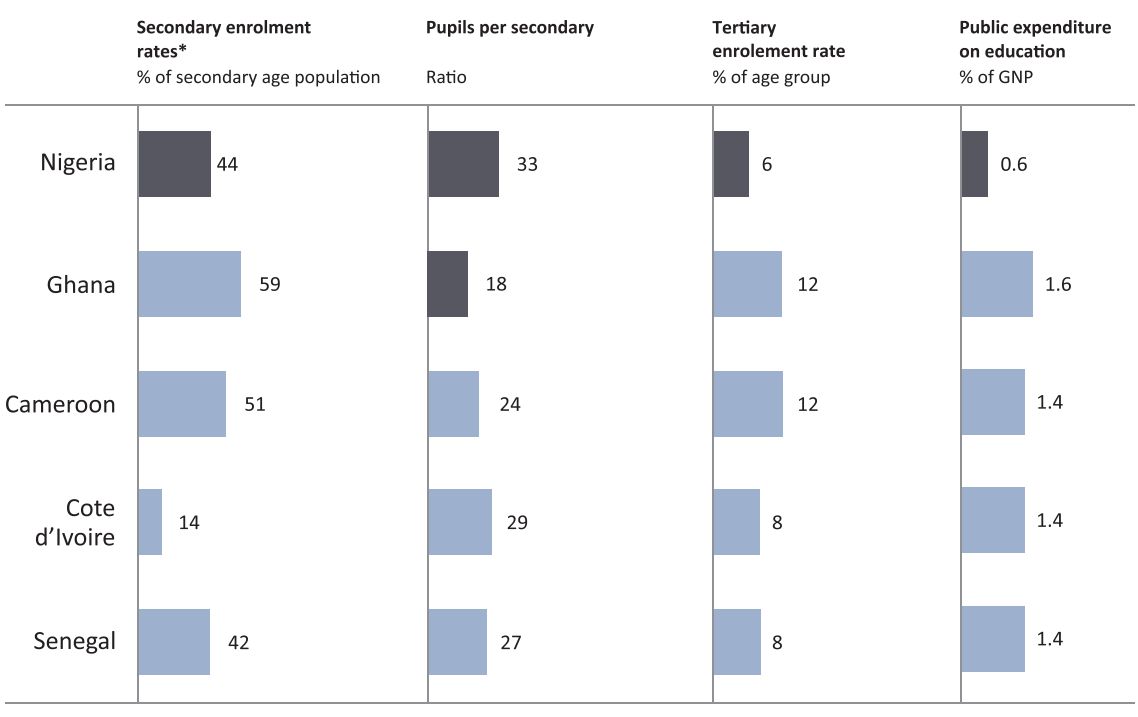
Before focusing on the history and current rollout of vocational and trade curriculum at the secondary level in Nigeria, it is helpful to understand current educational outcomes. First, vocational education will be delivered in the context of existing educational infrastructure. Second, some of the challenges secondary education faces are likely to affect the delivery of vocational curriculum at the same level. Finally, given the socioeconomic and geographic diversity in Nigeria, a sub-national analysis will allow a better understanding of any regional differences. (Further, the methodology to focus on one state per region supported a state-level understanding of the rollout challenges, education outcomes and performance.)

Regional context

Nigeria is the economic giant of West Africa, dwarfing its neighbors in both population size and economic strength being Africa's most populous nation and largest economy. Given this demographic and economic power, there is a reasonable expectation that Nigeria would lead the region in educational investment and output. However, this expectation is not the reality.

Of the major West African regional economies–including Cameroon, Cote d'Ivoire, Ghana, Nigeria, and Senegal–Ghana's education system reports the strongest results, with Nigeria mostly on par or lagging behind the others, as shown in ***Figure 2***.

Figure 2: Selected education metrics - Nigeria compared to major regional economies



Source: Education for All Global Monitoring Report, 2013. Much of data from 2011. Where data is missing, latest available data, from 2009, is used; CIA World FactBook; African Economic Outlook, Nigeria country profile; Dalberg analysis

Nigeria's performance on the education metrics - lower than its neighbors - is concerning in the context of its otherwise regional dominance. Nigeria is not sending enough students to secondary school compared to its neighbors, there are not enough secondary school teachers to accommodate the students that do attend school, and the few teachers that are currently teaching do not seem qualified to do so.

While the secondary enrolment rate in Nigeria (44 per cent) is on par with the region, given how much larger the population is, that number is more alarming in absolute terms. In Nigeria, 1 out of every 5 children is out of school, which results in roughly 10.5 million out-of-school children at the secondary level, one of the highest rates in the world.[12] This statistic is attributed to historically low enrolment rates and challenges accessing funding for education.[13]

Nigeria's pupil-to-teacher ratio is the highest in the region, with 33 pupils for every one teacher. This high ratio is of concern as a high pupil-to-teacher ratio directly affects the quality of the learning environment and the quality of the learning that is able to take place.

A lack of adequately trained teachers is another major challenge. Currently there are 274,000 secondary school teachers with another 65,000 teachers needed in order to realize the Universal Basic Education standards satisfactorily. Out of the available teachers only 66% of those can be considered trained. Apart from the low teacher numbers, the lack of teacher expertise, difficult classroom environments, lack of support and continuous assessment for teachers and resource shortages are a strong determinant of low student achievement.

It is unsurprising, given this context, that the results of the West African Senior School Certificate Examination (WASSCE) each year are abysmal. In 2014, only 31.8% of the 1.6 million candidates who wrote the examination gained minimum credits for tertiary education consideration.

Even with the poor performance data, the national level picture of education in Nigeria is difficult to reconcile. Indicators suggest that enrolment figures are improving: there is increasing demand for education with primary and secondary enrolment figures increasing significantly in recent years–secondary enrolment went from 6.2 million students in 2003 to 9 million in 2010, a 5% per year compound growth rate, and the number of university places is increasing, with one third of all university students in sub-Saharan Africa attend university in Nigeria.[14,15] In addition, while indicators suggest that government funding for the sector is low- the share of education in the budget fell from 12.2% in 1985 to 8.5% in 2013, 17.5 percentage points lower than the UNESCO-recommended share, with only 18% of the education budget allocated to capital expenditure in 2012 - billions of Nigerian Naira of untapped consolidated revenue funding at federal level are available to the sector (at primary and junior secondary levels), but several states still find it difficult to access this funding.[16,17]

The next section of this report focuses on analyzing existing state-level data to select states for further focus.

12 Premium Times, "Nigeria holds world record in number of children out of school", 11 June 2013. http://www.premiumtimesng.com/news/138442-shocking-nigeria-holds-world-record-in-number-of-children-out-of-school.html.
13 When looking at the education metrics within Nigeria, sociocultural factors that come into play as well with the North-East and North West skewing education outcome figures as they have historically been low across the board.
14 WENR, "An Overview of Education in Nigeria," http://wenr.wes.org/2013/07/an-overview-of-education-in-nigeria/.
15 Higher Education in sub-Saharan Africa, Student Survey Project.
16 African Economic Outlook, Country Report.
17 Stakeholder interviews on the UBEC challenge fund, and other sources of Federal funding.

National education metrics: Comparative performance of states

Breaking down national education statistics to the regional and state level highlights a distinct non-uniformity of outcomes across Nigeria, and reveals the extent of the disparity between regions. To go deeper than the much-discussed and historical North-South divide, the 36 states and Federal Capital Territory are grouped into six regions (East, Central and West in both North and South parts of the country) for comparison.[18]

Quantitative factors were used as a primary screen to identify high and low performing states from each region. Of note, quantitative metrics were taken from ***Open data for Africa*** and the ***Education for All*** data sets. However finding up-to-date data especially at state level across the same metrics was particularly challenging–older data sets where data is available across the metrics for all states is used as a proxy instead. While state performance is certain to have changed over the time period, usefulness of the cross-state comparison comes from using similar data sources. Next, qualitative factors were used to both understand the current political context and commitment as a proxy for potential interest to have senior level conversations at the state level. Finally, states were selected for further research and analysis, balancing geography, political will, and level of performance.

The criteria discussed below and the actual assessment was conducted ***solely*** to select one state per region for interviews and state visits. The selection of these states does not reflect a recommendation for or against partnering with the states.

Quantitative factors

Three categories and six criteria were selected to allow this data-based assessment, in part for screening and selection to focus on certain states for further interviews and state visits:

Potential for program impact through scale. While there is potential to select smaller states or states with smaller secondary student populations, with all criteria being equal, the potential for scale by starting with larger states presents a greater opportunity for impact. As such, two criteria are included to measure the state-level scale of secondary education. **Number of secondary-level students** measures the number of students enrolled in secondary schools in the state. **Number of public secondary schools** helps to measure the spread of resources required to support curriculum (or program) roll-out. For example, the amount of infrastructure, materials and training varies directly with the number of schools in a state, e.g., more students means a larger absolute budget required for roll-out, in general.

Potential for program impact through socioeconomic development. Given the importance of the Ford Foundation's focus on reducing poverty and injustice and advancing human achievement, socioeconomic factors must play a role in assessing state-level performance. Excluding this area might suggest "better off" states, from a size and outcomes perspective, should be selected rather than states that have weaker performance on these areas. Instead, the potential for socioeconomic development entails a particular interest or weight to be given to those states that have higher incidences of poverty or inequality. **State-level unemployment** (available from 2008) measures overall access to economic opportunities, which is important to driving vocational and technical education reforms. **Youth literacy rate** (available from 2010) measures the level of literacy at the youth level, a proxy for potential of learners to be active economic earners.

Effectiveness of education delivery. How well a state delivers secondary education suggests that students are attending school and based on that attendance, they are learning the subjects being taught. **Secondary school attendance** (available from 2007) measures the effectiveness of state efforts to deliver education to the entirety of the school age population. In particular, low attendance may suggest a delivery challenge, for example, linked to locations of the schools, public perceptions of educational attainment, economic returns on education, etc. **Tertiary-level pass rate** (National Examination Council figures used, from 2008) is a proxy for the quality of teaching in the state school systems, whether students are learning the right topics and subjects to pass the current level of schooling or move on to the next level of schooling. Of note, national results on both metrics are moderate to low, with better results in the southern-most parts of the country, and lowest in the northern regions.

That states are listed in the tables below by region and in order of relative performance – weighted across the six criteria. (All data was obtained from Open Data for Africa datasets covering education in Nigeria. Where latest secondary enrolment figures were not used, an asterisk (*) indicates 2008 data.)

18 Considering the current security situation (June 2014) in Northern Nigeria, some states were excluded from the primary research portion of the study, with phone interviews and meetings in Abuja and Lagos rather than in-state visits.

Table 1: Selected education metrics - North-Central region

State	Public Secondary Enrolment	Public Secondary Schools	Net Secondary Attendance Rate	NECO 5-credit Pass rate	Youth Literacy Rate	State Unemployment Rate
Kogi	38,356	163	73.7%	63.47%	89.6%	9.5%
Kwara	66,003	544	70.1%	41.32%	85.8%	2.7%
Benue	66,060	749	56.2%	65.06%	82.8%	6%
Nassarawa	75,944	483	57%	62.37%	78.1%	3.4%
Plateau	62,526	1143	46.2%	38.80%	82.7%	10.4%
Niger	113,228	513	56.3%	47.72%	65.4%	11.7%
Abuja FCT	39,111	85	67.3%	42.93%	81.2%	11.8%

Table 2: Selected education metrics - North-East region

State	Public Secondary Enrolment	Public Secondary Schools	Net Secondary Attendance Rate	NECO 5-credit Pass rate	Youth Literacy Rate	State Unemployment Rate
Gombe	63,459	171	16%	63.62%	79.2%	27.2%
Borno	61,390*	206	8.3%	64.67%	53%	26.7%
Adamawa	70,931	296	10.5%	50.52%	72.6%	24.6%
Bauchi	49,152	288	4.6%	51.36%	48.9%	27%
Yobe	46,836*	289	6.8%	39.81%	52.1%	26.2%
Taraba	51,415	91	6.4%	31.20%	76.8%	24.7%

Table 3: Selected education metrics - North-West region

State	Public Secondary Enrolment	Public Secondary Schools	Net Secondary Attendance Rate	NECO 5-credit Pass rate	Youth Literacy Rate	State Unemployment Rate
Kano	147, 596	683	27.5%	53.63%	73.5%	14.7%
Katsina	60,634	774	16.7%	60.56%	50.3%	11%
Jigawa	35,990	781	23.1%	41.24%	58.6%	14.3%
Kaduna	115,535	235*	48.8%	56.27%	65%	12.4%
Kebbi	44,819	329	20.9%	32.63%	65.1%	10.7%
Zamfara	46,352	254	18.4%	21.38%	72.2%	14.5%
Sokoto	14,598	535	14.8%	58.10%	49.2%	15.9%

Table 4: Selected education metrics - South-East region

State	Public Secondary Enrolment	Public Secondary Schools	Net Secondary Attendance Rate	NECO 5-credit Pass rate	Youth Literacy Rate	State Unemployment Rate
Abia	42,259	653	79.3%	57.49%	96.5%	22.8%
Anambra	56,228	504	71.6%	61.61%	95.7%	10.8%
Imo	208,127	380	73.6%	57.40%	99.2%	28.1%
Ebonyi	53,912	103	56%	63.07%	94.7%	25.1%
Enugu	75,643	498	70.3%	61.46%	92.7%	28%

Table 5: Selected education metrics - South-South region

State	Public Secondary Enrolment	Public Secondary Schools	Net Secondary Attendance Rate	NECO 5-credit Pass rate	Youth Literacy Rate	State Unemployment Rate
Delta	80,076	1066	75.4%	72.67%	94.7%	27.9%
Edo	56,363	918	69.6%	76.88%	98.4%	27.9%
Rivers	74,095*	800	75%	65.02%	94.7%	27.8%
Bayelsa	34,333	297	74.2%	76.31%	86.9%	27.4%
Cross River	37,068	487	71%	68.48%	92.9%	27.9%
Akwa-Ibom	110,003	608	69.5%	63.09%	91.2%	27.7%

Table 6: Selected education metrics - South-West region

State	Public Secondary Enrolment	Public Secondary Schools	Net Secondary Attendance Rate	NECO 5-credit Pass rate	Youth Literacy Rate	State Unemployment Rate
Lagos	256,972	569	85.3%	57.57%	99%	27.6%
Osun	132,170	690	77.1%	57.04%	97.1%	27.6%
Ekiti	34,284	210	84.8%	67.06%	96.2%	28%
Ogun	151,478	332	75.1%	69.61%	91.1%	27.8%
Ondo	117,292	844	76.1%	49.26%	97%	28%
Oyo	116,641	902	70.6%	52.87%	88.4%	27.7%

Across a weighted average of these metrics, the top-performing states from each region are **Delta, Kogi, Lagos, Abia, Kano, and Gombe.**[19] The poorest performing are: **Taraba, Sokoto, FCT, Oyo, Enugu, and Akwa Ibom.**

Qualitative factors

Beyond the three focus areas and six quantitative criteria discussed above, a final focus area must be included to select states for in-person visits: ***Political will and interest.*** While difficult to measure quantitatively, this focus area suggests selecting governments that are more invested in or focused on education and thus potentially more open to collaboration with and support from external actors.

19 States were assigned a rank order from 1-n (where n is number of states in the region) according to relative performance for each of the six selected metrics; enrolment; number of schools; attendance; pass, literacy and enrolment rates. A simple average of these ranks was then taken, where secondary enrolment, as the primary measure of impact, was assigned a weight equal to the other five metrics combined.

Likelihood of continuity or (re)election is used as a proxy for continued government engagement following the gubernatorial elections being held in 2014 and 2015 across Nigeria. This consideration was given due to the timeline of the study (May-August 2014) and the upcoming elections. Given the state governments' engagement in education, parsing out the campaign-related investments compared to normal operations would have been difficult. As such, while states that are not scheduled for gubernatorial elections in 2014 and 2015 are given slight preference to ensure relevance of findings and near-term continuity of policies, this would not be a binding or strongly weighted qualitative factor. Desk research and interviews have been the key data sources for the "Likelihood of continuity" factor.

Beyond gubernatorial or party longevity, the state's **commitment to education outcomes** criteria measures political will and senior-level interest in and commitment to improving education outcomes at the state level. State-level interventions are more impactful where state governments enthusiastically drive adoption, given the focus on individuals and limited actual influence of the federal government to affect change. This metric is particularly difficult to calculate in a rigorous quantitative way. Instead, this qualitative metric was tested in interviews with private, public, and social sector actors, through desk research on education news in the states. These data sources have suggested 19 states as having demonstrated this commitment:

- North-East: Bauchi, Borno, Jigawa
- North-West: Kaduna, Katsina, Kano, Zamfara
- North-Central: Abuja FCT
- South-East: Anambra, Enugu
- South-South: Akwa Ibom, Cross River, Edo, Rivers
- South-West: Lagos, Ekiti, Ogun, Ondo, Osun

Of note, the above listing of 19 states is does not suggest that the rest of the 18 states in the Federation are not committed to education. In fact, there are certainly states that have been excluded from this list given the dearth of compilation, promotion, or sharing of state-level initiatives and investments in education. For example, comparing the state budgets for education to actual expenditure, state education commissioner execution and achievement of strategic plans, etc. cannot be gathered easily at the state level or in a central location. These constraints limit the strength or weight assigned to this qualitative commitment metric.

One final metric to measure political will could be the level of access by states of the "free funding" from the Universal Basic Education Commission (UBEC) challenge fund, which matches Naira for Naira state contributions to education (from basic through to junior secondary level). However, there is limited data on why some states perceived to be active have had difficulties accessing the funding in the past – only 11 states have pulled down the full 1bn NGN (approximately US$ 6.1 million) available.

Finally, amongst the states, Lagos is pre-selected given its importance as a social and economic hub of the country. The five remaining states for further review and primary research are selected from poorer performing states, in order to set a lower bound baseline, and investigate deficiencies in delivery, and capacity to adopt the new SSEC curriculum, but with a bias towards selecting large-enrolment states with strong political will and interest. Finally, given the size of the country and interest in understanding regional nuances, only one state was selected per region, with the exception of North West given the size of youth population. Niger State or Plateau State would have been selected from the North Central region, but the region is excluded given political will has not been demonstrated. Abuja FCT has thus been selected.

Based on desk research and interviews, the proposed list of states for further review includes: **Abuja FCT, Akwa Ibom, Anambra, Borno, Jigawa, Lagos and Kano.**

Chapter III

Technical and vocational education in Nigeria

History and rationale[20]

Vocational subjects were first introduced into the Nigerian context in colonial times. The subjects on offer were wood and metal work, domestic science and agriculture. These subjects were continued after the country's independence.

In the 1960s, the General Trade Schools (GTS), formal public secondary institutions which focused on vocational education, were rolled out across the country. These schools focused on metal and wood working and other in-demand vocations. Vocational education was seen as a viable avenue, leading to employment, and the schools ran in parallel to purely "academic" institutions. In the 1970s, over thousands of Nigerians were sent to Italy and a number of other European countries to learn technical skills, in order to disseminate this information on their return. By around 1977, even in light of a new national policy on technical/vocational education, it was realized that this training program was a failed exercise since those who went to study generally did not return to teach. There were more attractive opportunities–employment and facilities–abroad and in Nigeria but outside of the teaching trade.

In the 1980s, the Nigerian government rolled out a vocational and technical curriculum that included the creation of tertiary-level vocational/technical schools and roll-out at formal "academic" secondary schools. The 1980s has been the focal point of comparison given that it is the most recent attempt at the roll-out of a vocational/technical curriculum.

Rationale of the 1980s rollout and policy reforms

The reform was in response to the findings of various educational commissions and experts that the old system of education was overly academic and theoretical, and failed to provide a suitable foundation for the socioeconomic development of Nigeria. This ethos drove the implementation of technical subjects in schools. For what was referred to as the terminal objective, new policies were added to the National Policy on Education (NPE) in 1981 to provide practical skills for students to be able to function economically and socially. The curriculum roll-out included significant investments in materials and infrastructure in an attempt to restructure the education system and better prepare youth for the labor market. The NPE of 1981 was Nigeria's first step in acknowledging that education was linked to employment and set the stage for later reforms in 1991 and 2004.

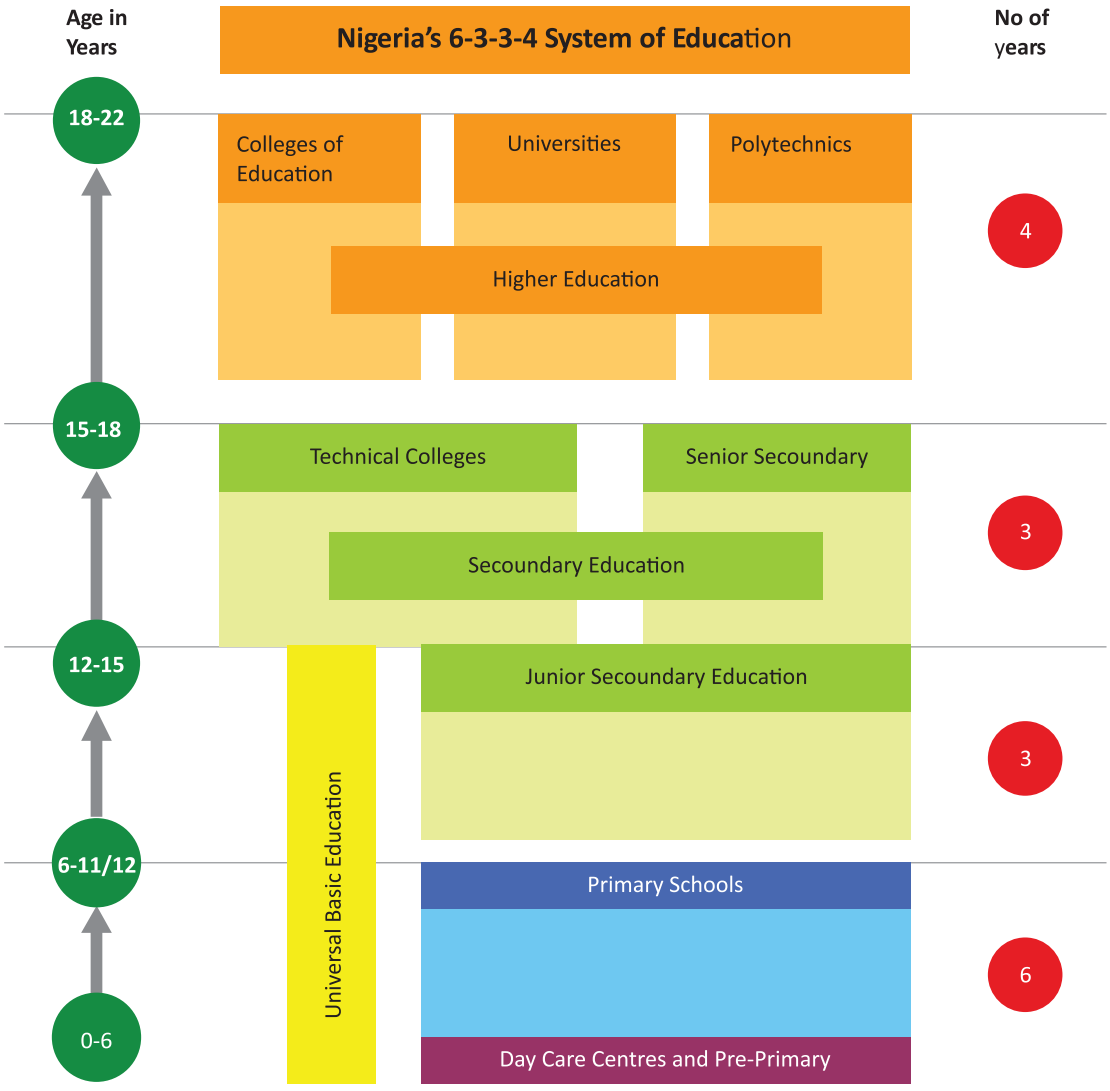
However, there were several challenges, and among them the poor supply of technical teachers posed the greatest barrier to implementation. There were staff shortages as there were not enough qualified teachers for vocational subjects at the secondary and tertiary levels. Schools also suffered from a lack of resources and poor planning; many schools were not adequately equipped with workshops or materials for practical subjects, schools failed to provide career guidance to students, and even assessments of student performance were problematic as there was a lack of standardization in testing methods, scoring and materials across schools and regions. Even those students who were successfully trained were unable to find jobs because the system was disconnected from employers and industries. In most schools, resources and infrastructure sat idle for over a decade. In the end, the changes to the education system were ineffectual because of poor implementation of policies, largely due to poor planning and resource allocation.

20 There is limited written information available on the history and evolution of technical and vocational education in Nigeria. The history and rationale in this report is drawn primarily from stakeholder interviews.

The 6-3-3-4 system

The Universal Basic Education (UBE) program was introduced in Nigeria in 1999 and passed into law by the Federal Government in 2004 to ensure unfettered access to quality and functional education. It is characterized by 9 years of continuous education with certificate examinations first written at the end of Grade 9 (JSS3). It was to be followed by senior secondary education, with a clear path to a technical education or a more "academic" education. Structurally, the 6-3-3-4 education system in Nigeria consists of six years primary education, three years of junior secondary schooling, three years of senior secondary or technical college, and at least four years of tertiary education (See Figure 3). However, technical colleges at the secondary level have never fully taken off in Nigeria.

Figure 3: The 6-3-3-4 system of education in Nigeria



Source: Federal Ministry of Education, 2000

The recent focus has been first on increasing enrolment in basic education, in part to meet Nigeria's Millennium Development Goals (MDGs) of access to basic education for all, and second on transition into formal, academic secondary schools. In line with regional and global standards, technical and vocational curriculum was developed to ensure a clear link between secondary education and employment, to meet Nigeria's MDGs around poverty alleviation, and to address the lack of technical skills in the country and to meet the growing demand for the skills.[21]

21 Nigerian Educational Research and Development Council (NERDC), Sunday Orji, "The New Senior Secondary Education Curricula: Trade / Entrepreneurship" Presentation, April 2013.

Rolling out the Senior Secondary Trade and Entrepreneurship Subjects

Over the past few years due to the introduction of trade and entrepreneurship subjects into examinations by the West Africa Examinations Council (WAEC), as well as pressure to close the gap between education and unemployment, a range of new subjects are being introduced across senior secondary schools in Nigeria.

Rationale

The gains of the Universal Basic Education program are to be further consolidated through a new Senior Secondary Education Curriculum (SSEC) developed by NERDC and launched in 2011. The SSEC, which has been approved by the National Council on Education (NCE), is intended to meet national and global goals such as NEEDS, EFA and MDGs, and to bridge the gaps in the content and delivery processes of the extant curriculum. The first examinations on the new curriculum were conducted in May and June 2014.

The philosophy of the new curriculum is to ensure that every senior secondary education graduate is well-prepared for higher education and has acquired relevant functional trade and entrepreneurship skills needed for poverty eradication, job creation and wealth generation.

Overview of the new curriculum

The new curriculum features:

- A group of five compulsory, core cross-cutting subjects (English Language, General Mathematics, Computer Studies/ ICT, Civic Education, Trade & Entrepreneurship);
- Four distinct fields of study (Science/Mathematics, Humanities, Technology and Business Studies), and elective subjects; and
- A group of 34 trade and entrepreneurship subjects (included in the table below).

Table 7: New Senior Secondary education curricula - List of 34 trade and entrepreneurship subjects

1	Auto Body repair and spray painting	18	Textile Trade
2	Auto Electrical work	19	Dying and Bleaching
3	Auto Mechanical work	20	Printing Craft Practice
4	Auto Parts merchandising	21	Cosmetology
5	Air Conditioning Refrigerator	22	Leather Goods Manufacturing and Repair
6	Welding and fabrication Engineering Craft Practice	23	Keyboarding
7	Electrical Installation and Maintenance Work	24	Data Processing
8	Radio, TV and electrical work	25	Store Keeping
9	Block laying, Brick Laying and Concrete Work	26	Book Keeping
10	Painting and Decoration	27	GSM maintenance
11	Plumbing and pipe fitting	28	Photography
12	Machine woodworking	29	Tourism
13	Carpentry and Joinery	30	Mining
14	Furniture Making	31	Animal Husbandry
15	Upholstery	32	Fisheries
16	Catering and Craft Practice	33	Marketing
17	Garment Making	34	Salesmanship

Overview of the process

NERDC aims to review the curricula in Nigeria every five years. Unfortunately, **given the limited funding–NERDC has conducted only one field research study in the past 10 years–much of the research to identify the subjects and define the offering was based on desk research and a survey of the states**. The process of curriculum development involved consultations with a small number of lecturers, and limited private sector stakeholder involvement. In addition, the curricula was not fully aligned to the existing trade standards, for example, the National Occupational Standards, which have begun to be rolled out in five trades, and likely cover a much larger set of subjects than can feasibly be rolled out across the country at once.

However, NERDC asked each of the states to provide the top three vocations of economic interest to the state. This selection process at the state level varied in terms of rigor and depth of analysis, for example, in some states the selection process included inputs from private sector actors and alignment with state development strategy, and in other states, education bureaucrats selected the trades of most interest without further consultation.

Similarly to the planning issues that plagued the roll-out of the technical curriculum in the 1980s, **planning and budget allocation was limited on the part of the federal government regarding the vocation/technical curriculum roll-out**. While the NERDC held a number of sensitization workshops with teachers at the state levels, there have not been the appropriate resources to identify the right teachers or train existing teacher to teach the new curricula, deploy resources for infrastructure and recurring expenditure costs for materials. There are significant amounts of upfront time for training and teacher practice and financial resources required for curriculum roll-out.

The new curriculum clearly meets a previously identified need for skills, but will require "catching up" on the part of state governments. While three states–Lagos, Ekiti, and Abuja FCT–have started to roll-out the trade and entrepreneurship curriculum ***and*** to test their students in the 2014 examinations, the majority of the states are likely to be unprepared to train their teachers and students on these subjects.

The following chapter further discusses the challenges with curriculum roll-out, summarized at the national level. ***Appendix B (State-level case studies)*** provides details on the state-level challenges and solutions to the new curriculum roll-out, including how states are coping with staffing, physical resource, and funding deficiencies.

Roles and responsibilities

For the effective roll-out of the curriculum, there are a number of actors who each have a role to play at different stages. Based on stakeholder interviews and a global review of education delivery, an ideal mapping of roles and responsibilities for a federation, might include the following:

- **Needs assessment:** the Federal government would carry out a needs assessment to ascertain the problem within the curriculum they were addressing. In this case the NERDC undertook the curriculum development to ensure all students "acquired relevant functional trade/entrepreneurship skills needed for poverty eradication, job creation and wealth generation."[22] In addition there would be consultation with some private sector actors to understand the skills-gaps that existed for their entry level graduates in order to know what aspects the curriculum would have to cover.

- **Curriculum development:** The NERDC would develop and disseminate the curriculum for all 34 vocational subjects and States choose technical subjects which are in line with their strategic growth sectors. At this stage, the state government would also assess implementation and capacity needs, determining what it would take to roll-out the curriculum effectively.

- **Teacher training:** Teachers would be trained by trainers/officers/teachers hired by the state government in the effective delivery of the subjects their states have chosen, including how to use equipment and what industry standard outputs look like.

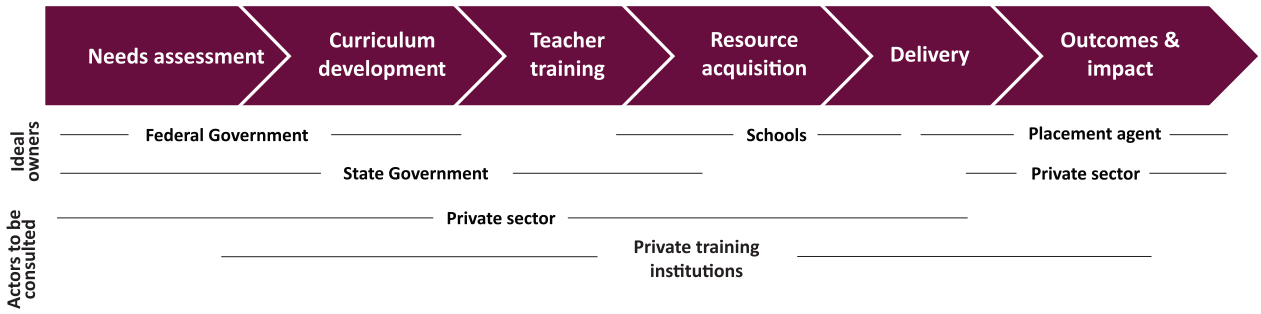
- **Resource acquisition:** Schools are equipped by the state government with the materials they need for their technical subjects of choice.

- **Delivery:** Students are taught skills in such a way that they are labor-market ready. They are familiar and proficient with all equipment and material pertaining to their technical subject

22 NERDC presentation at sensitization workshop- presented on 25th April 2013.

- **Outcomes and impact:** Students are able to be placed and employed into an industry that requires their technical expertise with minimal additional training.

Figure 4: The education "value chain" with ideal actors



In actuality, the process in Nigeria has not taken these "ideal" steps or assigned the ideal roles and responsibilities to relevant actors. In some instances, the actors that should have been consulted were not included in the process. The challenges with roles and responsibilities has left gaps in the effective roll-out of the new curriculum:

- **Needs assessment:** There was a task team established to look at the new curriculum and identify the challenges. However, the findings of the task team were not widely disseminated and used to develop the new curriculum. From interviews, there are questions about private sector consultation in the needs assessment and the breadth of such involvement, e.g., whether MSMEs included, primarily large companies, etc.

- **Curriculum development:** A detailed curriculum is yet to be developed for each of the 34 trade subjects. As it stands teachers are using elements of old curriculum to teach the subjects that most closely align to existing curricula.

- **Teacher training:** Teachers have been sensitized to some extent by the NERDC and various state-level authorities about the new curriculum. However the in-depth training on the pedagogy and actual delivery as well as use of equipment for technical subjects has for the most part been missing.

- **Resource acquisition:** The new trade subjects (depending on the ones chosen) need equipment to ensure students familiarity and there is a practical component to each one. The extent to which the state governments have been able to equip the schools vary. Some are making do without and improvising with what they have while others have turned to the school PTA's and private donors to help fund-raise for equipment. For consumable materials this may not be a long term solution.

- **Delivery:** Teachers are relying on their familiarity with other subjects to teach the new trade subjects. However there are a number of gaps that will not be filled if this focus on familiar subjects continues. For example, when catering and craft practice is being taught as home economics there is a question of scale–cooking for a family is different from cooking professionally for large numbers. A focus on audience and marketing, hygiene and sanitation, and the range of equipment are much wider in catering than in home economics.

- **Outcomes and impact:** These skills gaps continue to exist and the students leave school unready for the labor marketplace. As students are learning half-baked skills, they require that much more training and a much bigger investment upon entering the workforce. Many private sector actors are unable or unwilling to make this investment, leaving positions open or else hiring from tertiary institutions in the hope that graduates are able to fulfil these roles with less training than a secondary school leaver.

Overview of key issues

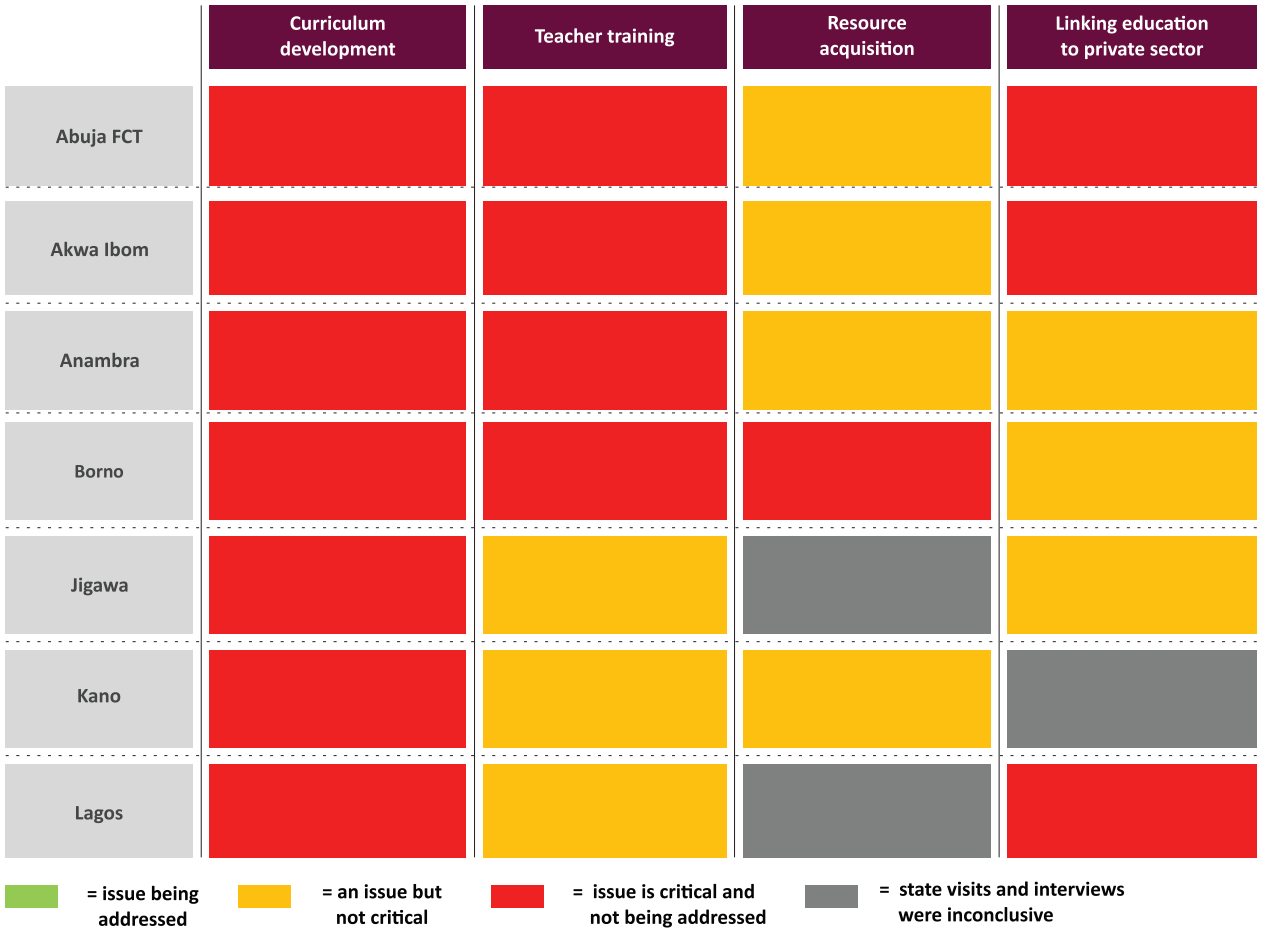
The NERDC curriculum development and state-level rollout of the new curriculum has occurred haphazardly. Part of the problem has been the difficulty in mobilizing and managing the large amount of resources required to prepare teacher training and recruitment, facilities and materials across the country.

Anecdotal evidence from stakeholder interviews indicates that a lack of prior planning on the part of the Federal Government regarding the vocational/technical curriculum roll-out has led to a range of issues with implementation and lack of preparedness, including:

- Resource and materials for vocational/technical education–facilities and materials to continue training. Part of the challenge being the amount of money required to maintain these resources, e.g., consumables for practical training
- Teacher capacity and development, and teacher availability
- Curriculum development

The figure below includes an overview of the challenges faced by each of the states–one per geopolitical zone–which were the focus of further research and analysis. The summary is based on interviews at the state level with private and public sector stakeholders and donors. Further details on each of the states is provided in the *Annex B. State-level case studies*.

Figure 5: Overview of state-level readiness and challenges with new curriculum roll-out



The sections below identify some of the overarching issues in education and the particular challenges regarding the trade subjects curriculum development, teacher capacity, and finance and resourcing challenges in Nigeria.

Curriculum development

Education has been regarded as the tool for achieving desirable change, and the curriculum as the instrument for the delivery of educational goals and objectives. The development and implementation of academic and vocational curricula is, thus, a key issue in the education sector.[23]

Some fundamental issues however plague the new curriculum and the capacity for states to implement it effectively. The most striking issue pertains to the weaknesses in how the new SSEC curriculum was developed, and broadly, how the education sector curricula are typically developed.

One role of the NERDC is to provide curriculum frameworks which outline the knowledge, skills and competencies expected of students. This framework is organized by subject and reviewed every five years. The teaching syllabi used by teachers for lesson planning and delivery, are based on the curriculum framework. States have the liberty to develop or strengthen the syllabus based on guidelines provided by NERDC and state-level priorities. Evidence from key informant interviews however reveals that the NERDC curriculum developers lack requisite contemporary knowledge and competencies to enable them carry out their task effectively. In addition, NERDC has only conducted two research studies in the past ten years. It does not have the resources to gather this knowledge of trade subjects. Further, teachers are not sufficiently consulted, and with regard to the SSEC, the new requirements–particularly on entrepreneurship and vocational skills–are not well fleshed-out with sufficient content on which to base a teaching syllabus. Whilst employers of labor are normally expected to be integral to the curriculum framework development process, their participation in Nigeria appears to be occasional and ***ad hoc***.

From literature on curriculum implementation in Nigeria, it is noted that the recurring problems of technical and vocational education in Nigeria are: inadequacy of qualified teachers, inadequate teaching and learning facilities, poor motivation of teachers and poor perception of Technical and Vocational Education and Training (TVET) by parents and students alike. The fact that curriculum development is a largely incoherent process underlies all the implementation issues highlighted below.

Teacher capacity and development

Teachers face a number of challenges Teachers are often unable or unwilling to upgrade their own skills in order to adapt and deliver on new curricula. There has been some reporting around the lack of basic ICT skills among Nigerian secondary school teachers which could significantly impact their ability to effectively teach the new curriculum. Most teachers are trained in specific subject areas, with few generalists, which exacerbates the difficulties in introducing a change management mind set. The new NCCE curriculum, rolling out in 2014, re-categorized teachers to include specific training for Early Years, Primary and General Education, which should help ensure some flexibility in teachers' ability to teach across a number of subjects and to incorporate new materials. Currently there are approximately 274,000 secondary school teachers in Nigeria and the country is need of an additional 65,000 teachers in order to realize Universal Basic Education targets.[24] From conversations with schools and teachers, the reality is that no additional teachers are being hired to teach the technical subjects. In part this is because those with the appropriate level of technical expertise do not have the requisite teaching qualifications that would allow them to be employed in public schools. On the other hand, those with the requisite teaching qualifications are hard to come by and lead to a number of vacancies even within the "core" subjects.

At the heart of the teaching problem is a lack of prestige around the teaching profession, with people choosing to go into teaching as a last resort. The system is designed to attract the least able rather than the most able. The grades required to gain admission to colleges of education are significantly lower than those required for entry into university. Further, a lack of passion to impart knowledge for some of the teacher cohort has been noted, with those teachers often being set-in their ways, having little hope in the system, and displaying a low-level of commitment to their students. Coupled with the low regard that vocational training holds in Nigeria, there are very few trained vocational training teachers available in the market, which will affect any interventions to introduce vocational training at scale.

Finance and resources for schools

Financial resourcing for education is crucial to education planning and delivery. As Oseni (2012) states, "availability of adequate funds from the proprietors is ***sine qua non*** for the good running of educational establishments." Government educational institutions are funded from budgetary allocations to the educational sector for a particular fiscal year. Recurrent and capital expenditures are drawn from the annual education budget. However, the education sector in Nigeria has for several years been at the receiving end of insufficient budgetary releases across all education levels (from primary to tertiary).[25]

23 The New Senior Secondary School Curricula: Prospects and Challenges for Achieving the Millennium Development Goals, 2011. Orji, Nna Sunday.
24 Education for All Global Monitoring Report 2013. "PSIPSE Regional Themes and Challenges: Learning Outcomes in Nigeria".
25 Pakistan Journal of Business and Economic Review, Volume 3, Number 1, Adequacy of Budgetary Allocation to Educational Institutions in Nigeria. 2012. Oseni, Michael.

Nigeria continues to face severe challenges pertaining to insufficient schooling access and inadequate learning facilities (Adamu, 2003; Aluede, 2006). These issues severely constrain the overall effectiveness of the education sector.

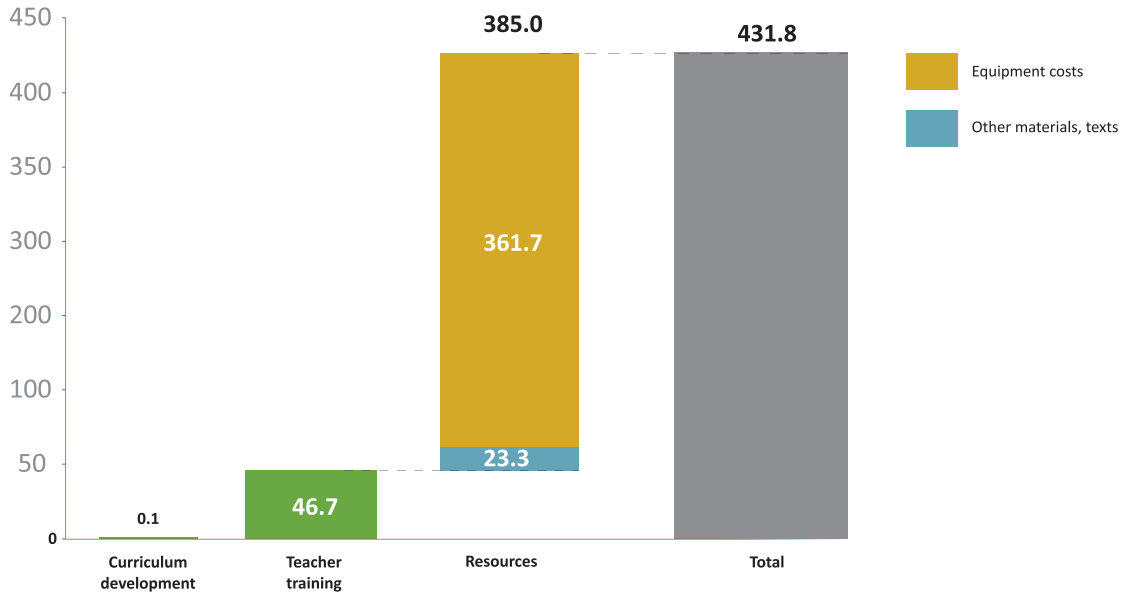
The 2013 national budget speech–Fiscal Consolidation with Inclusive Growth–provides for an aggregate expenditure of 4.92 trillion NGN representing a modest increase of about 5% over the 4.7 trillion NGN appropriated for 2012. The education sector appears to receive a significant portion of the budget with key allocations in the budget as follows: Works – 183.5 billion NGN; Power – 74.26 billion NGN; Education – 426.53 billion NGN; Health – 279.23 billion NGN; Defense – 348.91 billion NGN; Police – 319.65 billion NGN; and Agriculture & Rural Development – 81.41 billion NGN. While the figures seem to support 10% of budget allocations to education, actual dispersal is another challenge.

Further, little strategic planning precedes design and implementation of education policies such as the new senior secondary curriculum that makes trade subjects mandatory for all pupils. The estimated costs of implementing this curriculum at state level seem not to have been considered, when developing the curriculum. Whilst there is a genuine concern at national and state level about the dearth of technical and vocational skills, there is an urgent need to increase budgetary allocations and releases for TVET, at both secondary and tertiary levels.[26]

In particular, vocational and technical education requires a significant "practical" component that is outside the costs normally associated with academic curricula rollout. For example, laboratories or workshops equipped with appropriate machinery and expensive (and consumable) materials will be required to ensure that students are not just learning about the trade subjects, but are also given practical training.

Based on the review of existing technical and vocational programs, Nigerian education data, and stakeholder interviews, financing required for the roll-out of the new curriculum for one year is roughly estimated to be at 431.8 billion NGN (US$ 2.7 billion). This figure is significant, and even higher than the Federal budget allocation for the entire education sector for 2013. However, the estimation is generally in line with the expenditure documented in other African countries, with TVET expenditures ranging from 0.8 to 13.8 times more than that of general secondary education.[27] The figure below provides an overview of the rough estimate and overview of the high-level assumptions.

Figure 6: Estimate of financing required for the new curriculum roll-out (billion NGN)



Source: Stakeholder interviews; Open Data for All; UNESCO Institute for Statistics database (UIS) database; DfID Nigeria Teacher Development Programme costs per teacher; Johanson and Adams, Skills Development in Sub-Saharan Africa, 2004; desk research; Dalberg analysis

26 European Scientific Journal, August 2013 edition, Volume 9, Number 22, "Identifiable Problems Inhibiting the Effective Management of Vocational Education Programmes in Nigerian Universities." Chidinma Dokubo, Isaac Dokubo.

27 From Johanson and Adams, ***Skills Development in Sub-Saharan Africa***. The World Bank Group. 2004. 0.8x ratio from Mali and 13.8x ratio from Mozambique. "At the high end, Gabon spent US$ 1,820 per TVE student in 1992." This figure would equal 822.8 billion NGN to train today's public secondary school population in Nigeria.

Of note, **the "resources" category makes up approximately 90% of the estimated expenditure for one year of new curriculum rollout** – enough materials to properly train each public secondary school student in Nigeria on the practical applications of the trade and entrepreneurship subjects. The scale of the estimation suggests that while resources are an important component of the curriculum roll-out, full financing for purchases of these materials on a yearly basis is unlikely through federal budget sources alone.

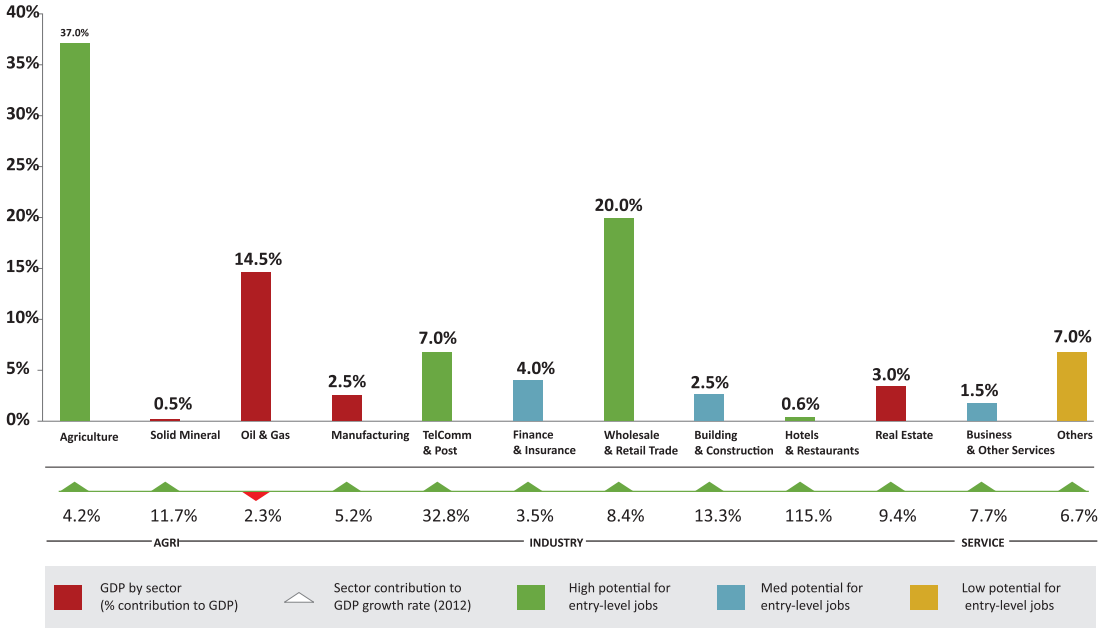
Identifying opportunities to cost share, repurpose existing materials, and deliver training through existing infrastructure or innovative delivery channels may support cost efficiency and feasibility of successful curriculum rollout. A number of private and social impact investment models may be feasible within TVET subject roll out. Investing in workshop that trains students and markets their trade products, e.g., catering business, leatherworks, poultry, etc. may lead to financial returns, and at a minimum, support ongoing materials investment and teacher training, if properly managed. Further, investments in specific regions and increased flexibility in the school schedule may allow multiple schools to take advantage of facilities sharing, e.g., at a private or public TVET institute, or within a public secondary school.

Linking education to private sector employment

A key area for implementation and improvement of curriculum delivery is in ensuring that the new trade subjects go beyond simply adding theoretical material to the existing curriculum, and provide meaningful applications of vocational skills to employment and entrepreneurship opportunity. This entails mapping skills training to future labor force needs and growing sectors of the economy. While the NERDC requested states to suggest which trades (and thus which trade subjects) are most important at the state level, the underlying analysis did not take into account growth potential nor is the analysis or listing of trades by state readily available. Linking the private sector to vocational and technical education in Nigeria is important across the roll-out process: first, in curriculum development and design, second, in teaching the curriculum and provided practical training, and third, in reviewing and maintaining standards of the curriculum, and finally in employing talent trained in the industry-approved curricula.

As a starting point for understanding the future demand for labor–and thus the private sector actors to engage in the process outlined above–there are two aspects of growth sectors: which sectors of the national economy are growing fastest and what is the likely variation in extent and location of this growth. Fastest sectors can be measured by total industry size, e.g., relative contribution to gross domestic product, and growth rate of the industry, as measured by the annual number of new jobs, particularly entry-level jobs, added in the sector. Variations in size and geography of growth, measured by state-level assessment of relevant industries, could help ensure improved and targeted skills training at the state level, where it matters not just which industries are relevant on a national scale. Intensity of activity and hiring outlook among different industries and large employers will vary greatly across geographical location. The figure below includes an overview of strong growth sectors at the national level, taken from the National Bureau of Statistics' Revised Economic Outlook for 2012-2015.

Figure 7: Overview of sector growth and contribution to Nigeria's GDP and employment (Q1 2012)



Source: National Bureau of Statistics Revised Economic Outlook 2012-15

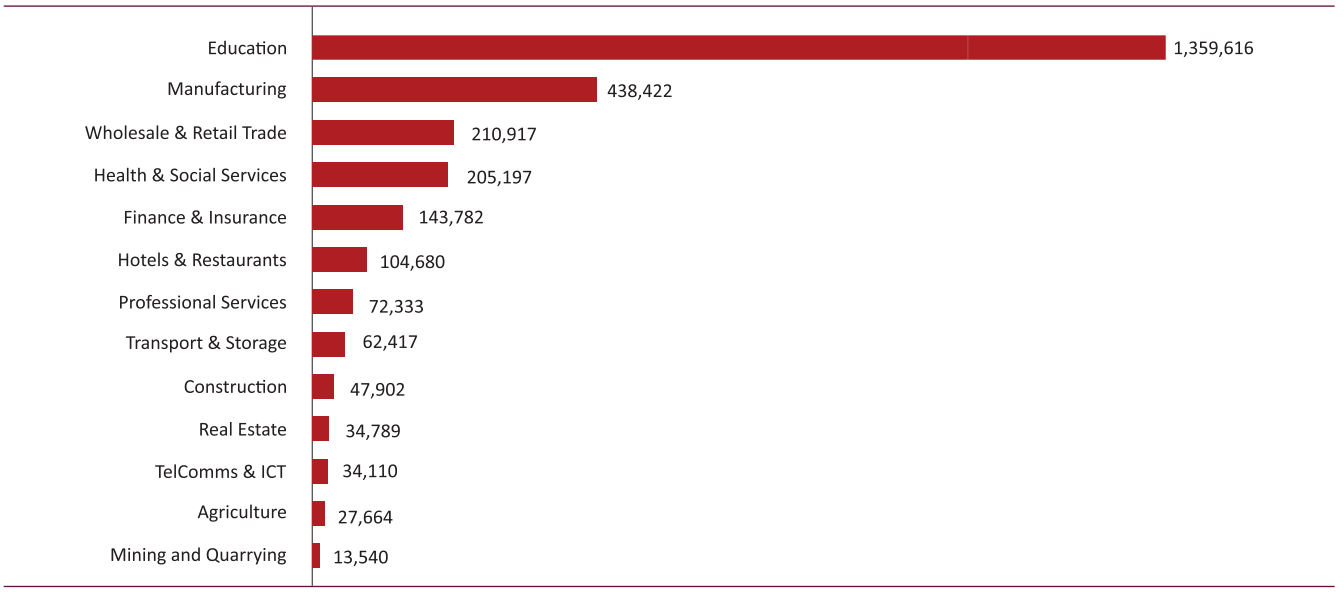
While the oil and gas sector was shown by the recent GDP rebasing exercise to be of less relative importance than previously thought, agriculture still plays a dominant role in national production value.[28] The sector is however largely the reserve of older citizens, with little appeal to the younger generation of workers due to widespread perception of farming as a non-modern, non-financially viable, rural activity. (Attempts are being made to change these perceptions with initiatives like the Youth Employment in Agriculture program (YEAP) or the "Nagropreneur" program.) Still, agriculture provides ample opportunity for low to medium skilled workforce entrants, and the sector is growing, with a number of potential off-farm roles along the value chain.

In terms of sector contribution to GDP growth, the telecommunications sector boasts the strongest expansion, at an annual rate of almost 33%. The next strongest growth contribution is seen in the **Building and Construction** and **Hospitality** sectors, both–by their labor-intensive nature–are amenable to inclusion of young labor force entrants with basic literacy, numeracy and craft skills.

It is important to note however, that significant contributions to GDP by a sector do not necessarily translate to large workforce absorption potential, due to differences in level of mechanization and labor intensity across sectors and industries. Figure 7 and Figure 8 graphically represent data from the National Bureau of Statistics' Job Creation Survey Report: 2013 Quarters 2-4.

Education, while not listed by NBS as a significant contributor to GDP, is the most important sector in the survey in terms of employment potential, providing almost as many jobs as responding establishments from all other sectors combined. The next largest sector employers were manufacturing, hospitality and retail. Vocational skills programs must pay particular attention to these industries' associated skillsets.

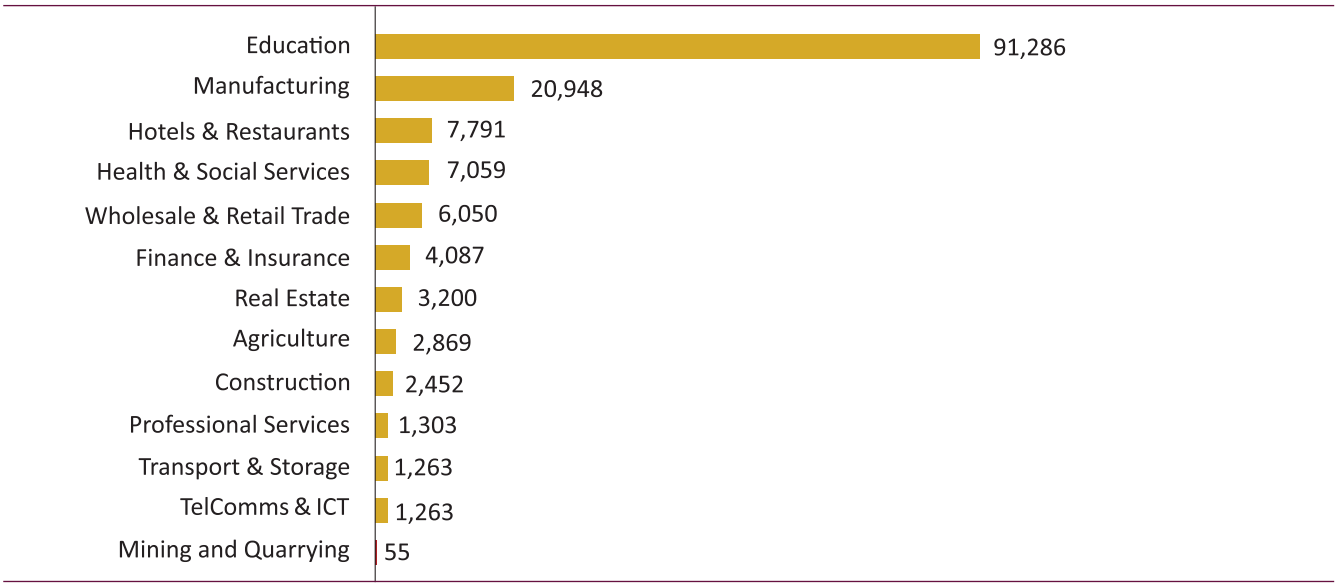
Figure 8: Formal jobs by sector, fourth quarter 2013 (number of jobs available)



Source: NBS Job Creation Report, May 2014

28 Nigeria carried out a GDP rebasing exercise in 2013. Previously, agriculture comprised 33% of GDP, whereas services accounted for 26% of GDP. With the new GDP results, agriculture now accounts for 22% of GDP, while the services sector has increased to 51% of GDP. Oil and gas now comprise 15.9%.

Figure 9: Formal sector jobs created among youth (15-35), second half of 2013 (number of jobs created)



Source: NBS Job Creation Report, May 2014

For a state-level view of current employment and job creation dynamics, the 2010 National Manpower Stock and Employment Generation Survey from the National Bureau of Statistics represents the latest statistical update on this scale. As a household rather than establishment survey, based on the national census sample frames, the Manpower survey covers more respondents than the Job Creation report, measuring economically active individuals in household employment and microenterprises as well as the formal sector jobs reported above. The leading sector analysis at the state level is included in the state level appendix to this report, ***Appendix B: State-level case studies***. Sectors providing less than one per cent of total reported employment in each state are omitted from graphics.

Perceptions of "trade" as a career

Perceptions of technical and vocational training in Nigeria have been that those who cannot perform academically undertake the "lesser" trade subjects. This perception has historical roots in the post-colonial period when the government launched a dual track secondary program where some students would be chosen to take the academic track that presumably led to tertiary education and the other "less-academically inclined" students were chosen to take the vocational education track, where they would be armed with a skill in either wood or metal work, domestic science or agriculture and moved into an apprenticeship or employment. These manual labor occupations typically did not pay as much as the professional occupations and did not carry a high level of prestige within society.

These perceptions continue to plague vocational and technical training today although the subjects have evolved, as well as the level of skill required to enter occupations that require these technical skills. Further, given the increasing gaps between secondary and tertiary education (only 30 per cent test takers gain admission to university) and increasing youth unemployment – for both secondary and tertiary education graduates – there is pressure for students to gain employable knowledge and skills. However, there is reluctance and resistance to study these subjects especially from parents and students. Although the technical subjects are now being made compulsory at the secondary level, these negative perceptions have an impact on the level of engagement and interest as well as on the types of subjects that schools are choosing.

Perception, while not as tangible as some of the other key risks, does affect what students and parents consider in their range of post-secondary options. While the statistics claim that the majority of secondary school graduates will not go on to a tertiary institution because so few other options are presented as viable, all these students and parents are putting their resources behind the academic track while vocational training offers a range of opportunities. As an educational expert stated "as the world of work changes, everyone is becoming a knowledge worker", even those who historically were seen as purely laborers. Perceptions need to "catch-up" to this changing reality. Although changing perceptions and prejudices is difficult given its unspecific, nebulous nature, interventions focused on exposing students and parents to the possibilities of vocational education–professional development and satisfaction, livelihoods, etc.–may support increased interest in trade as a career.

Chapter IV

Existing education interventions focused on secondary education

Based on desk research and interviews, a range of existing programs were identified that focus on secondary education in Nigeria. These on-going education interventions–whether targeted at students or teachers–covered a range of focus areas across the education "value chain": curriculum development, teacher training, resource acquisition, delivery, and outcomes and impact and across Nigeria's geopolitical zones.

Focus on vocational/technical and broader secondary education

The table below provides an overview of these different programs and organizations with interventions focused on secondary education (formal or informal) in Nigeria. The majority of programs focused on the secondary level, with only a few programs dedicated to vocational education. There is a wide range of interventions in terms of impact and reach but each are attempting to tackle a challenge facing the education sector.

Table 8: Education interventions by focus area

Intervention ecosystem	Vocational education	Broader secondary education
Needs assessment		
Curriculum development		
Teacher training	**UNESCO** Skills Acquisition for Girls and Women **dRPC SSEC** implementation support **UNESCO** Revitalizing Adult and Youth Literacy	**Corona Teachers College** iTeach **British Council** Connecting Classrooms **British Council** Badiliko Digital Hubs **British Council** CLIL Teacher Training **Youth Empowerment Education Initiative** Teacher Corps Scheme **Bilyak Consulting** MyLearningAcademy **UBA Foundation,** Study Technology Workshop in collaboration with McCrae & Co **Etisalat,** support to Teacher Training program by British Council **Microsoft,** Microsoft Partners in Learning Programs
Resource acquisition	**Fundacion Paraguaya** Self-sufficient Schools **Ecobank Foundation,** donation to SAFOCO center, training program in Entrepreneurship and management **Guinness Nigeria Foundation,** scholarships for a 3-year skills acquisition program **First City Monument Bank** support to SIFE and Skills for Life Project **Coca Cola Foundation** support to SIFE	**Mindset Learn** digital curricula **Lagos State/World Bank** Eko Schools Project **DFID** DEEPEN **UAC Nigeria Goodness** League Initiative **ZODM Libraries** Book Corner **Included in this section are 24 additional CSR initiatives by a range of private sector actors that consist primarily of one-off donations. Further details are provided in the annex*
Delivery	**Samsung/Lagos State** Engineering Academies **Total Nigeria**, skills development in various trades **Honeywell Group**, Footprints Occupational Training Center , Honeywell baking School **GE Foundation**, garages program partnering with **Dangote foundation** **Junior Achievement Nigeria**, business skills development **African Artists' Foundation**, talent discovery and development	**Co-Creation Hub** Efiko Mobile Test **RISE Networks** Passnownow.com **GidiMobile** GidiBrains app **Campus Schools Awada** Campus Night School **UAC of Nigeria,** The Free Weekend Classes **National Directorate of Employment (NDE),** apprenticeship and skills acquisition programs
Outcomes and impact	**Honeywell Group,** Honeywell Excellence Program	**UAC of Nigeria,** industrial attachment opportunities

This list was gathered by desk research and interviews, it is by no means exhaustive. However, the programs, offered by a range of actors within government, social sector, and private sector, suggest a depth of access to finance and innovation for secondary education in Nigeria. Of note, there are a number of interventions and programs focused on education but outside the scope of this assessment, e.g., adopt-a-school programs for primary school, post-secondary training or certifications, etc.

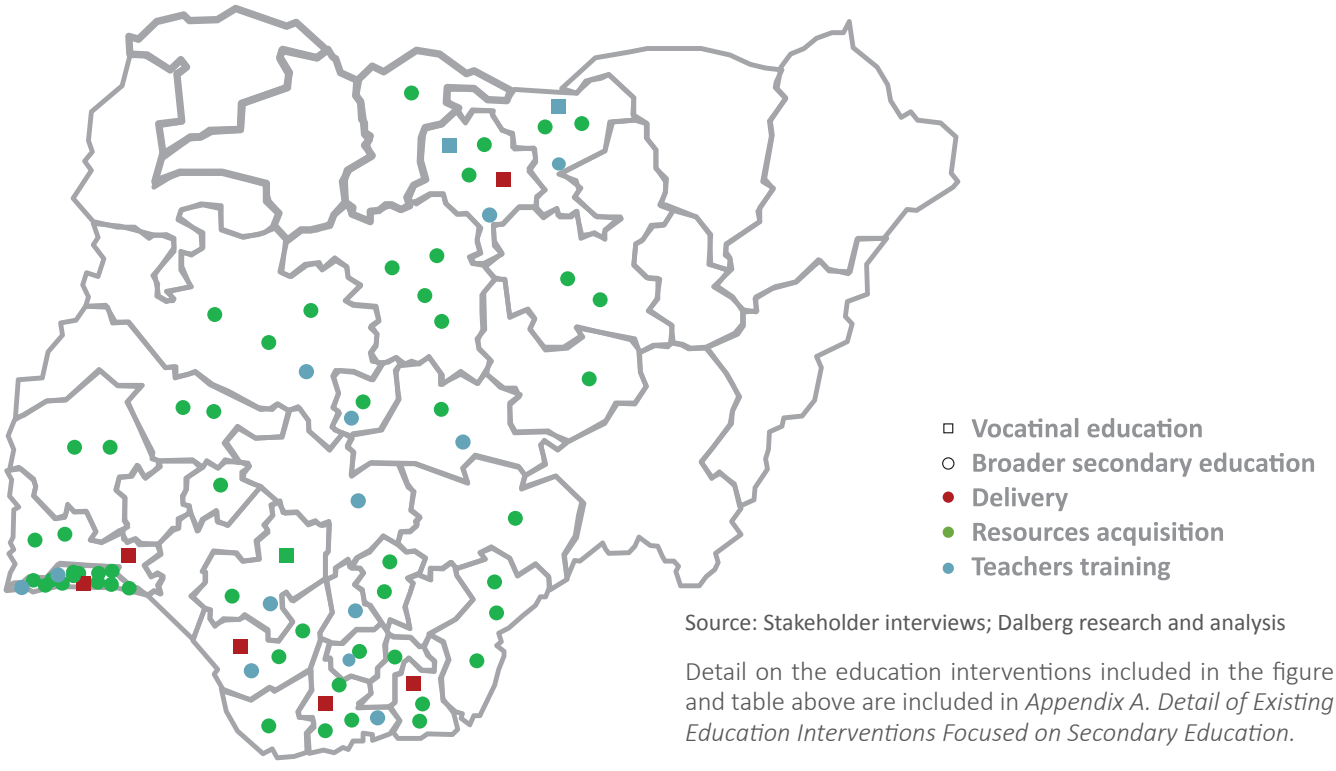
There is strong interest and recognition of need in **teacher development** across the range of implementer types, but there **remains room for funding**, **scaling/replicating** and **networking of existing interventions**. While **e-learning** applications present strong **scale benefits** for large urban areas, or those where learners can reasonably be expected to access mobile phones or computers, they have limited application to more rural areas and are only beginning to be tested across the country. (A non-smartphone mobile intervention is being developed by Nigerian mobile learning company Tutor.ng to make use of basic phone features for SMS and call based learning, but is not yet operational.) A gap exists in out-of-school learning with support primarily driven by innovative partnership opportunities with the private sector, and comparatively few donors focused on this area. Finally, several **material support programs** are making strong individual contributions, with the Eko Schools Project and DFID's DEEPEN program representing large scale pilots. Beyond the initiatives listed here, private sector CSR activities and individual philanthropy may further support the material support to schools.

Although not covered here, at the post-secondary level in particular, there are hundreds if not thousands of educational institutes across Nigeria offering post-secondary diplomas, certificates, or training focused on vocational education. These private sector models for curriculum delivery may help bridge the resources gap in partnership with other actors, e.g., by providing training facilities and access to equipment and materials. Further, even though the programs may not specifically target secondary level now, they may be appropriate partners for state governments implementing the new SSEC."

Geographic coverage

Although secondary education programs exist across a range of channels or type of intervention, there is limited geographic diversity. Across Nigeria, interventions are clustered in similar geographic areas, with some digital learning platforms attempting nationwide coverage. In Figure 10, blue dots represent school or learner focused programs, while the green represent teacher development oriented initiatives. The North West and North East states and states in the South West (outside of Lagos) have limited existing programs. Although government programs across Nigeria are excluded from this geographic analysis, the dearth of programs in these geographies is linked to private sector, donor, and civil society interest or focus on the regions. *This list of initiatives was gathered through stakeholder interviews and detailed desk research. The list is not meant to be exhaustive, but is believed to be representative*.

Figure 10: Location of profiled education interventions



Source: Stakeholder interviews; Dalberg research and analysis

Detail on the education interventions included in the figure and table above are included in *Appendix A. Detail of Existing Education Interventions Focused on Secondary Education.*

Summary of lessons

Based on the review of existing programs in Nigeria, we have drawn four conclusions that will support future program design in the vocational/technical education space.

Partner with the private sector to multiply impact. Public Private Partnerships offer great potential to mobilize funding and realize benefits from synergies in organization goals and competencies. Strong political will from state authorities, combined with additional funding from the private sector and donor agencies, will significantly improve the material state and teaching resources of schools. Partnerships are vital in aligning the different competencies and capacity of a range actors, as a multi-pronged approach is required to address education challenges, including grants to schools, administration performance incentives, and teacher development.

A phased approach to systemic interventions could begin with an emphasis on capacity and partnership building with policy makers to improve government mechanisms that could better serve teachers and learners. When it comes to "on-the-ground" implementation, there is significant private sector interest in skills development, driven by employers' demand for work-ready talent. This interest can be leveraged through PPPs for increased funding to programs, better aligned curricula (with private sector input), and stronger education-employment linkages. Additionally, pairing public and private or local and international schools utilizes partnerships to encourage sharing of best practices and capacity building of local public educators.

Use innovative program models to circumvent resource challenges. One model encourages students to run businesses based on the skills learned in the classroom to alleviate materials costs and funding challenges while also providing hands-on vocational training. Another is targeted provision of portable, low-cost learning materials, such as the ZODML book corner for schools which lack libraries, in lieu of the significant time and cost attached to constructing and stocking a full library. In one of the global case studies, sharing resources across a number of schools was another cost-effective "innovation." Digital learning platforms are another option for circumventing physical infrastructure and resource challenges, and extending program reach, where the basic technology to enable widespread access exists.

Ensure programs reinforce learning beyond the classroom through work experience and mobile applications. Effective self-testing and learning tools can supplement teacher efforts in the classroom, by allowing additional reinforcement of concepts and assessment data for teachers to better respond to learner needs. Agreements with employers to provide experiential learning opportunities increase the value of technical subject acquisition. In addition, students who leave or are left out of the formal education system can be reintegrated while pursuing current informal sector livelihoods, through accommodations such as night school programs that allow them to work alongside their learning.

Identify programs to tap new sources of teaching talent to improve the image and quality of TVET. For practicing teachers, education authorities should explore the potential of short in-service re-training and reorienting teachers to new curriculum material as part of the roll-out process. In recruiting, high achieving university graduates provide a great source of teaching potential, given a brief conversion/orientation process, and these programs may also help change the perception of teaching as a second-choice career. Perception management is a major component of realizing the potential of technical and vocational education. Targeted advocacy can change the mind set of students and parents, highlighting the economic value of practical skills.

Chapter V

Emerging partnership opportunities

Based on the five key issues identified through the landscaping, the range of public and private organizations active in the education space, and the large variety of approaches and programs, several opportunities exist for organization interested in transforming secondary education with a focus on the new curriculum.

Defining the potential partner space will require a clear selection of what technical/vocational secondary level education means as there are several channels through which technical and vocational education is currently being provided.

First, **formal secondary education**, in the form of new curriculum trade subjects, is the most widespread, but also the least developed and most poorly implemented. Impact in this area is best achieved through strengthening policy planning at Federal level and state-level, for example through convening a policy review summit- potentially funded and directed by the private sector, and state-level implementation support, through programs that link classroom education to experiential learning in work environments.

Second, **non-formal education**, comprising out of school youth and mass literacy institutes, focuses on individuals outside of classrooms – some of them above or below secondary-level, non-enrolled youth, drop-outs and adults. While a pressing need area, this channel may fall partly outside the scope of secondary education, as the beneficiary group is wider than this defined area.

Finally, **polytechnics** (tertiary-level vocational training institutes) are starting to provide Saturday and other training programs to a youth/out-of-school target demographic, and so present a parallel space that can account for a significant portion of TVET delivery, though not strictly secondary-level. This raises the question of whether the boundaries of ninth to twelfth grade supersede the category of technical and vocational skills priority-wise given a focus on technical/vocational education at the secondary level.

Across these three areas (formal secondary education, non-formal education, and polytechnics) the (Federal and state-level) public sector plays an important role in curriculum design and delivery. However, a number of private sector polytechnics, secondary schools, and other training institutes and private companies training and employing Nigerian youth are involved at various intervention levels. Finally, a range of donors are involved in financing and monitoring education outcomes across the country.

Forward-thinking state governments are likely to be the "best" partners given: the important role they play in secondary education delivery and potential for direct impact on students and teachers, the political will (particularly states leading in innovation in curriculum adoption and education improvement), and budgetary control/ownership (as opposed to the Federal level). A number of donor organizations are focused on state-level interventions given these factors:

- The British Council, active on a number of fronts in the education space have already received indications of positive impact from their School Leadership program (imparting administrative best practices and teaching methodologies in 8 states) – the Ministry of Education has reported improvements – mainly in management practices – in the schools covered so far, and additional funding could scale the program across more schools and states. This initiative demonstrates the potential of working directly with government education authorities.

- The UK's Department for International Development's Teacher Development Programme (TDP) is engaged in significant reform work with the National Commission for Colleges of Education (NCCE), implementing the Enhancing Teacher Quality program in two teacher training colleges per state in three states in Northern Nigeria.

In addition, there is significant private sector interest in supporting the development of work-ready graduates, and effectively mobilizing private sector actors holds huge potential for driving impact. The following examples of existing partnership arrangements provide context, and potential entry points, for organization to consider convening various actors around selected programming. The nascent Private Sector Education Alliance (currently in the process of setting up a governance structure), comprises corporations seeking work together to solve education problems by funding interventions. Presidential/ Government Private Sector Committee on the Development of TVET is an 18-member committee which has membership from government and NGOs, with Aliko Dangote (whom has 16 billion Naira invested in the Cement Institute) as chairman and Dr Masud Kazaure, the Executive Secretary of NBTE, as secretary. The committee, whose purpose is to design education programs and strategies, incorporating learning from other environments, is an example of leveraging government policy ownership, while also harnessing extensive private funding and influence. Procter & Gamble (P&G) is leading the way in single-company contributions. P&G is reportedly investing US$ 100 million in Nigerian education, supporting the UNESCO skills acquisition programs, partnering with Lagos State Government to establish an engineering academy for TVE students, and providing internships with channel partners. The landscaping suggests that there are hundreds of private sector investments in education at the secondary level across Nigeria. However, only a handful of these investments have focused on vocational training at the secondary level or in formal secondary schools. The section of this report on existing education interventions provides a further classification of these interventions.

While newer partnership models are being explored, they are not currently well-organized or "speaking to each other". With a range of actors and models being launched in Nigeria, there may be potential for a convener of data, resources, ideas, and individuals focused on secondary education in Nigeria. Focus areas included:

- Experiential learning. The British Council and UNESCO have expressed interest in introducing pilot models of experiential learning using employer relationships to set up work-based opportunities for students. During the landscaping, no models were found which combined the physical resources of private sector SMEs or multinationals with formal public sector schools. In one instance in Akwa-Ibom, one now defunct model had secondary school students attending courses at a technician's workshop. However, organizations such as the African Artists' Foundation's Youth Empowerment Through Contemporary Art project offers a full arts curriculum in partnership with the Lagos State Government, providing hands-on skills building to formal secondary school students (although outside of the formal curriculum/testing structures).

- Teacher training. British Council with funding from the MacArthur Foundation through the Partnership to Strengthen Innovation and Practice in Secondary Education (PSIPSE), is researching pre- and in-service teacher training to improve education quality for girls. Whereas DfID's programs have focused on the basic and junior secondary level, they have developed partnerships with the Federal and State teacher training colleges for new teachers.

- Schools management: Anambra State and Rivers State (among others) have outsourced portions of schools management to private actors. In Anambra State, management of over 1040 of public schools (both primary and secondary) is completed by the church/mission. In Rivers State, two Indian companies are managing the model secondary schools and supporting the rollout of IT training at the primary school level.

Chapter six

Recommendations

Based on the research and analysis included in this report, five program design recommendations have been developed, given the exist gaps and the significant potential for impact on technical/vocational education in Nigeria:

- Get buy-in from state governments and private sector actors;
- Incentivize private sector inclusion in the curriculum roll-out;
- Focus on teachers and material resources;
- Bring together the vast number of stakeholders on the relevant issues; and
- Sensitize the public to the possibilities that vocational training can provide students.

A requirement for the success of in broader scale technical/vocational education at the secondary level will be in securing the appropriate level of buy-in from both the government and private sector. Increasing government commitment to and promotion of vocational education (as compared to traditional academic tracks) would bring improved policy, resources and public perception to the field. Though engaging at the Federal level with education agencies is essential to the pre-planning and endorsement for the work with the states, program units would be most effectively deployed at state-level, where implementation of curriculum development, teacher training, and resource acquisition are managed. In addition, Federal level engagement on curriculum refinement will support broader impacts following state-level learning. The private sector engagement may lead to partnerships and opportunities to leverage private sector funding to increase overall impact. Gaining this buy-in will entail building the case for the specific program intervention, ensuring alignment with public and private sector interests, and keeping in close contact with the key stakeholders through formal partnership agreements.

The involvement of the private sector is important in that it ensures a demand-driven approach, a clear link to employment opportunities, and the maintenance of quality standards. The private sector actors need incentives, an impetus, or a platform for making investments in technical and vocational education in Nigeria. A program that enables private sector involvement, e.g., a challenge fund, partnerships with a set of schools in a state, etc. is more likely to be financially sustainable than a program not encouraging such involvement. Targeting and promoting the most relevant skills will ensure private sector interest in program participation. The selection of trade subjects in the new SSEC curriculum is generic, rather than aligned to contemporary industries. For example, non-"formal" industries like Film and Fashion could be considered (especially in Lagos), as well as an emphasis on Retail, Manufacturing, Hospitality, Building & Construction, where much of the job growth is happening.

Teachers and resources have the greatest potential for direct impact on students' educational experiences and ability to transfer the in-classroom knowledge to actual jobs and employment opportunities. For teachers, whether training new teachers with or without vocational skills or training in-service teachers, providing the skills and resources to effectively deliver on the curriculum will hugely impact student outcomes. A range of opportunities exist to invest in teachers through bricks and mortar structure such as teachers colleges, in addition to online and mobile resources available through a range of services providers in Nigeria.

To enable access to resources, an assessment of what materials are already available on the ground is required–assessing what partners/implementers already have by way of facilities and consumable materials through data gained from schools, private sector, and government programs on informal education. With the state visits and interviews completed during this study as a guide, it is unlikely that significant resources exist at the secondary level. However, private sector training institutes, private companies, and polytechnics may provide sustainable resourcing opportunities, e.g., through sharing of resources, public-private partnerships, etc.

With a significant number of initiatives and programs focused fully or partly on technical and vocational education at the secondary level in Nigeria; value can be driven by better coordination and information-sharing across the initiatives. Whether these programs focus on e-learning, teacher development, out-of-school learning, or provision of infrastructure and resources, they are likely to have overlaps in goals and execution, particularly given the geographic concentration of the programs. Limited centralized resources, outside of the Center for Education Innovations, exist with recent educational data, stakeholders, and programs on secondary education in Nigeria. In addition, given the range of actors in the sector and the need to transform the way education is approached (at a massive scale), there may be significant value from connecting actors to each other formally. Whether through existing partnerships, alliances, the Ministry of Education, or otherwise, there is a role to play in convening actors.

In the overview of global programs and based on the Nigeria landscape, sensitizing the public - to the possibilities that vocational training can provide students - plays an important role in integrating vocational training into the mainstream curriculum. Changing the perceptions of the general public helps both parents and students move the focus from a purely academic track into thinking through other viable options that will lead to a career. A number of private sector players that hire secondary school graduates, recognize that they do not have clear career trajectories mapped out and that demotivates many of their entry-level employees, whom want to be able to be upwardly mobile. Helping the private sector understand the skills that vocationally trained employees are equipped with could also potentially open up more pathways for employment for secondary school leavers.

Beyond these five recommendations, however, numerous pilot projects exist in the education sector in Nigeria and out-of-school youth remain a major part of the youth demographic. A further assessment of existing programs in Nigeria, and whether or not and why the program has been brought to scale (within a state, across states, nationally) may help focus investments in the space. In some cases, implementing partners have administrative and financial constraints that do not allow external funded sources. However, rather than starting a set of new programs, a range of existing programs should be reviewed to determine whether they fit the program design recommendations (buy-in, private sector incentives, teachers and resources, and convening power). Further, while out-of-school youth would not necessarily be the focus area of the program, identifying investments to leverage existing resources for deeper impact, should be core to program implementation. For example, there may be programs and state governments already leveraging vocational and technical resources to reach a broader demographic, e.g., actively using secondary school resources for after hours and weekend courses for youth and adults, showing innovation in delivery.

In order to truly impact vocational education at the secondary level in Nigeria, and increase employment outcomes for youth, a significant commitment will be required bringing together private, public, and social sector actors and using innovations in funding and technology for greater impact and scale.

Appendices

Appendices

A Detail of existing education interventions focused on secondary education

Teacher training

UNESCO

Program: Revitalizing Adult and Youth Literacy

Focus area: Teacher Development - In a nationwide program UNESCO aims to integrate skills into non formal education programs through apprenticeships. UNESCO has dedicated 1 million dollars for training of teachers and facilitators of vocational education. They plan on using lecturers from NCCE to serve as resource personnel and have signed agreements with a range of universities

Location: Maiduguri (NE), Bayero (NW) IBB (NW) Benin (SS) SE (Nsukka) SW (Ibadan)

Size of program: N/A

Takeaways: An initial emphasis on capacity and partnership building with policy makers to improve government delivery for public education can produce long-term benefits "on the ground", by improving the mechanisms in place to reach teachers and learners with effective education and support

Source: http://www.vanguardngr.com/2014/03/unesco-always-launch-literacy-programme-nigeria/ ; Revitalizing Adult and Youth Literacy Programme document

British Council

Program: Connecting Classrooms schools partnerships

Focus area: Teacher Development - Connects Nigerian and British classrooms for reciprocal learning as well as providing professional development for teachers. The program takes place globally and in Nigeria

Location: Lagos, FCT, Kano, Rivers, Edo, Jigawa and Imo

Size of Program: 160 schools are taking part

Takeaways: Pairing public and private or local and international schools widens the use of expertise and encourages sharing of best practices and capacity building of local public educators

Source: http://www.educationinnovations.org/program/connecting-classrooms-school-partnerships

British Council

Program: Badiliko Digital hubs for teacher development

Focus Area: Teacher Development - In conjunction with Microsoft, British Council is building digital hubs at schools and community centers across a number of African countries, including Nigeria. The hubs provide a cascade model of professional development for teachers and school leaders where teachers are trained in leadership and innovative teaching practices, learning how to make the best use of the information and communications technology for transforming student learning

Location: Lagos, FCT, Kano, Rivers, Edo, Jigawa and Imo

Size of Program: 210 schools

Takeaways: Pairing public and private or local and international schools widens the use of expertise and encourages sharing of best practices and capacity building of local public educators

Source: http://www.britishcouncil.org/partner/corporate/our-stories/project-badiliko-microsoft;http://www.educationinnovations.org/program/badiliko-digital-hubs

Corona Teachers College

Program: iTeach 4 month innovative training program for bachelors

Focus Area: Teacher Development - The program, which is run tuition free, aims to train teachers in 21st Century pedagogic methods; to promote more effective teaching in Nigerian classrooms. The program aims to attract and inspire high achieving young graduates of tertiary academic courses who might not otherwise have entered into the teaching profession

Location: Lagos

Size of program: Cohort of 50 graduates

Takeaways: High achieving university graduates provide a great source of teaching potential, given a brief conversion/ orientation process, and these programs can change the perception of teaching as a second-choice career

Source: http://www.educationinnovations.org/program/corona-iteach

British Council

Program: CLIL Teacher Training:

Focus Area: Teacher Development - The Nigerian Teacher Training Initiative offers teachers 40 hours of face to face training over nine days through the Content and Language Integrated Learning (CLIL) course, which helps teachers support their students with the English of their subjects, as well providing a solid base in basic teaching methods

Location: TBA

Size of Program: 1500 teachers

Takeaways: Policy makers and program designers should explore potential of short in-service re-training for up-skilling teachers and reorienting to new material

Source: http://www.britishcouncil.org.ng/programmes/education/teacher-training; http://www.teachingenglish.org.uk/teacher-training

Youth Empowerment Education Initiative

Program: Teacher Corps Scheme for tertiary science graduates

Focus Area: Teacher Development - Teacher Corps Scheme is an education intervention scheme, which recruits Nigerian graduates of science, provides them with teacher training, and posts them to teach in public schools all over the country, particularly in hard-to-reach areas where there is a shortage of quality teachers

Location: FCT, Kogi, Niger, Delta and Nassarawa

Program Size: 24, 650 learners

Takeaways: High achieving university graduates provide a great source of teaching potential, given a brief conversion/ orientation process, and these programs can change the perception of teaching as a second-choice career

Source: http://www.educationinnovations.org/program/teacher-corps-scheme

development Research and Project Centre (dRPC)

Program: Strengthening SSEC implementation and teacher development

Focus Area: Teacher development- dRPC is leveraging the opportunity of reforms to the national secondary school education curriculum to improve the performance of 3,600 Northern Nigerian girls' in livelihood subjects. The program is adopting several strategies, including mentoring, to change attitudes that parents, teachers, and secondary school girls have about the relevance of secondary school education. Students have the opportunity to acquire income-generating skills through new technical subjects on offer

Location: Kano and Jigawa

Program Size: 5600 learners

Takeaways: Perception management is a major component of realizing the potential of technical and vocational education. Targeted advocacy can change the mind set of students and parents, highlighting the economic value of practical skills

Source: http://www.educationinnovations.org/program/strengthening-implementation-new-secondary-school-curriculum-girls-secondary-schools-jigawa

UNESCO

Program: Skills Acquisition for Girls and Women

Focus area: In partnership with P&G, the program aims to enhance numeracy and writing, literacy and vocational skills development among girls and women particularly around ICT. This initiative falls under the Revitalizing Adult and Youth Literacy program. The program is only running in Rivers State because of the educational structures that already exist

Location: FTC, Rivers

Size of program: Targeting 50,000 people

Takeaways: Public Private Partnerships offer great potential to mobilize funding and realize benefits from synergies in organization goals and competencies

Source: UNESCO Global Partnership for Girls' and Women's Education report; http://www.punchng.com/news/unesco-fct-to-train-50000-women-on-skills-acquisition

Resource acquisition

Lagos State Government/ World Bank

Program: Eko Schools Project

Focus Area: Infrastructure/Resources - Aim of the project is to improve the quality of public junior and senior secondary education in Lagos state through school development grants- providing public secondary schools in Lagos access to yearly discretionary resources with an explicit focus on improving the quality of education services. There is also a focus on quality assurance by standardizing students learning outcomes and supporting teachers by helping them teach more effectively

Location: Lagos

Size of program: State-wide

Takeaways: Strong political will from state authorities, combined with adequate funding, can improve the material state and teaching resources of schools. A multi-pronged approach is required to address education challenges, including grants to schools, administration performance incentives, and teacher development

Source: http://www.worldbank.org/projects/P106280/lagos-eko-secondary-education-project?lang=en; http://lagosekoproject.org/about.php

DfID

Program: Developing Effective Private Education Nigeria (DEEPEN)

Focus Area: The project aims to improve the education landscape in Nigeria by applying a market systems approach to improving education quality for the first time. This approach emphasizes sustainable, systemic change at a large-scale and is more commonly used in economic development initiatives.

A portfolio of interventions will tackle the major constraints to schools investing in better learning conditions and teaching practices. The other component of this will be to provide support for innovation for the development of innovative business models for low cost private education

Location: Lagos

Size of program: 1.5m learners

Takeaways: Low-cost private education can serve as a model for improved education outcomes, with moderate initial investment in ensuring quality delivery systems

Source: http://devtracker.dfid.gov.uk/projects/GB-1-202678/; http://www.camb-ed.com/Experience/Ourprojects/DevelopingEffectivePrivateEducationinNigeria.aspx

Fundacion Paraguaya

Program: Financially self-sufficient schools with vocational skills training

Focus Area: Infrastructure/Resources - The purpose of Self-Sufficient Schools is to give low-income students from primarily rural areas the opportunity to receive a quality secondary education for little cost while learning practical technical and business skills. To achieve both of these goals, the model relies on teaching students to operate real businesses, which eventually generate enough income for schools to become financially self-sufficient. Every school operates under the "Learning by Doing, Selling, and Earning" methodology, which gives students hands-on experience in operating on-campus microenterprises

Location: TBA

Program size: One franchise school in Nigeria, multiple locations globally

Takeaways: Innovative business models for low-cost private schools can alleviate funding challenges while also providing hands-on vocational training

Source: http://www.educationinnovations.org/program/financially-self-sufficient-schools

UAC Nigeria

Program: The Goodness League Initiative

Focus Area: Infrastructure/Resources- The initiative aims to address both soft and hard issues facing the education sector. While the hard issues focus on positive interventions in schools through the provision of infrastructure, power, and equipment; the soft issues identify academic gaps and fill them through a volunteer scheme (drawn from various subsidiaries and departments of UAC) which enable volunteers to impart knowledge and provide guidance and counselling services to students

Location: Lagos, Kano, Kaduna, Rivers, Cross River, Akwa Ibom, Plateau, Niger, Nassarawa, Benue

Program Size: 1500 learners

Takeaways: A multi-pronged approach is required to address education challenges, including grants to schools, administration performance incentives, and teacher development

Sources: http://www.educationinnovations.org/program/goodness-league-initiative; http://www.uacnplc.com/company/csr/

Bilyak Consulting

Program: My Learning Academy (MLA)

Focus Area: E-learning- MLA is a low cost mobile teacher training portal. MLA produces e-content and an e-learning innovation that helps to improve Nigeria's education, human capital needs, and ICT infrastructure specifically in math, science, and secondary school teacher-training courses. Many of the courses are free. Users can visit the e-content website to purchase the courses of their choice with the option to buy both electronically and through SMS. Courses come at a standard cost of N100 (75 cents) per course. With a cloud-based mobile learning platform, training courses can be delivered directly to users as long as they have internet connection

Location: Nationwide

Program Size: 3000 Learners

Takeaways: Effective learner tools can supplement teacher efforts in the classroom, by allowing additional reinforcement of concepts and assessment data for teachers to better respond to learner needs

Source: http://www.educationinnovations.org/program/mylearningacademy; http://www.mylearningacademy.com/learner/Default.aspx

Zaccheus Onumba Dibiaezue Libraries

Program: ZODML Book Corner

Focus Area: Infrastructure/Resources- The Book-Corner provides reading materials to students in public schools where libraries are non-existent The Book-Corner is delivered to public secondary schools and placed in a location where the books can be readily accessible to students. With the innovative 'Book-Corner Adopt-a-School project', prospective partners donate a sum in exchange for the right to select or nominate a school anywhere in the country for the Book-Corner to be set up

Location: Lagos

Program Size: 2055

Takeaways: Targeted provision of physical learning materials can have large impact in a defined area. Innovative funding and delivery models should be considered in addressing infrastructure challenges

Source: http://zodml.org/what-we-do.php

Private sector actors with once-off donations include:

Ecobank Foundation in-kind support to selected schools

Nigerian Breweries Plc in-kind and cash donations to selected schools

First Bank Plc, in-kind and cash donations to schools

Guaranty trust bank Plc, Adopt-a-school program

UBA Foundation, in-kind support to schools

Flour Mills Nigeria, in-kind support to schools

Stanbic IBTC, Adopt-a-school program, cash donations to schools

Guinness Nigeria Foundation, scholarship program, in-kind support to schools

Chevron, scholarship program, cash donations to schools

First City Monument Bank, in-kind donation to Financial literacy Initiative

Coca Cola Foundation in-kind support to schools

Etisalat, Adopt-a-school program

MTN, SchoolsConnect Project

Lafarge Cement WAPCO, bursary scheme, in-kind donations to schools

Total Nigeria, scholarships, in-kind donations to schools

Unilever Nigeria, in-kind donations to schools

UAC of Nigeria, Schools Support Programme, Scholarship Scheme

Cadbury Nigeria Plc, School Award programs

Airtel Nigeria, Adopt-a-school program, Nigerian Research and Education Network (NgREN)

Seplat Petroleum Dev Co Plc, Education grants, Scholarships for PEARLS Quiz

Shell, skooolNigeria.com web-based solution

Microsoft, in-kind support to schools

CISCO, in-kind support to schools

Delivery

Co-Creation Hub

Program: Efiko self-testing mobile learning platform

Focus Area: E-learning - Efiko is an interactive social testing and learning platform that enables learners to take curriculum-based tutorials and tests on their mobile devices. The short tutorials and quizzes, based on the Nigerian national academic curriculum at the secondary level, are designed to stimulate and personalize the learning experience outside of school. The app aims to reach

Location: Lagos, Kano, Jigawa and Rivers states

Size of Program: 11,835 learners

Takeaways: Effective learner tools can supplement teacher efforts in the classroom, by allowing additional reinforcement of concepts and assessment data for teachers to better respond to learner needs

Source: http://www.efiko.com.ng/about.html

Mindset Learn

Program: E-learning curricula development, distribution

Focus Area: E-learning – The Mindset Network develops and produces high quality, contextually-relevant educational content for distribution through video, computer-based multimedia and print platforms across the continent. Mindset's educational materials target students and teachers in grades 10, 11, and 12 and are divided between classroom resources and "Learn

Xtra" revision notes. Classroom resources take on a cumulative approach and span subjects such as math, science, economics, information technology and English. The network also uses its social media presence to create interactions between learners who can have their questions answered by peers or a Mindset expert

Location: Nation-wide

Size of Program: N/A

Takeaways: Digital learning platforms are an option for circumventing physical infrastructure and resource challenges, and extending program reach, where basic technology to enable widespread access exists

Source: http://www.educationinnovations.org/program/mindset-learn

RISE Networks

Program: Passnownow.com

Focus Area E-learning - Passnownow.com is an education and social networking website that seeks to promote and support flexible learning for secondary school students. It provides users with access to past question papers pertaining to subjects in the comprehensive national curriculum for education. In addition, users have virtual access to tutors who provide learning support

Location: Nationwide

Size of program: Target 100,000 learners

Takeaways: Effective learner tools can supplement teacher efforts in the classroom, by allowing additional reinforcement of concepts and assessment data for teachers to better respond to learner needs

Source: http://passnownow.com/about-us/ ; http://risenetworks.org/about/

GidiMobile

Program: GidiBrains mobile learning suite

Focus Area: As a downloadable app, GidiBrains provides rich content based on Nigerian education curriculum to learners. Specifically, resources such as past examination questions and study guides are provided to users free of charge. Practice questions for widely taken standardized certification exams, such as ICAN, CISCO, and GMAT are also available

Location: Nationwide

Program Size: 2300 leaners

Takeaways: Effective learner tools can supplement teacher efforts in the classroom, by allowing additional reinforcement of concepts and assessment data for teachers to better respond to learner needs

Source: http://nairabrains.com/2014/06/gidimo-app-now-available-on-blackberry-android-nokia-and-java-enabled-phones/ ; http://www.educationinnovations.org/program/gidibrains

Campus Schools Awada

Program: Campus Night school for low income dropouts

Focus Area: Out-of-school Learners- The night school is largely utilized by boys who dropped out of formal school to engage in various form of entrepreneurship in the surrounding commercial cities of Onitsha, Obosi, Nkpor and Ogbaru. The night school was purposefully established to assist out-of-school males in these communities' to complete primary and secondary education without having to lose their livelihoods. The program strongly advocates for boys in the area to acquire a full course of primary and secondary education

Location: Anambra

Size of program: 1,000 learners

Takeaways: Formal education is an important gateway to formal employment, and students who leave or are left out of the system can be reintegrated while pursuing current informal sector livelihoods

Source: http://www.educationinnovations.org/program/campus-night-school

Samsung Electronics West Africa

Program: Samsung Engineering Academy

Focus Area: Out-of-school Learning - Equipped with the latest electronics, the Academy is aimed at addressing the dearth of technical and engineering skills in Nigeria by providing hands-on, vocational skills training for secondary school students. Students go through a year's program in engineering skills, aligned to their technical school's curriculum, after which they are eligible for internships with Samsung's channel partners in Nigeria. Established in partnership with Lagos State/Eko Schools Project

Location: Lagos

Program Size: 72-graduate cohort

Takeaways: There is significant private sector interest in skills development, and demand for a better-prepared workforce. This can be leveraged through PPP's for increased funding to programs, better aligned curricula (private sector input), and stronger education-employment linkages

Source: http://www.samsung.com/africa_en/africancitizenship/blue-engineer.html; http://www.samsung.com/africa_en/news/localnews/2012/samsung-africa-launches-third-engineering-academy-in-nigeria;

Outcomes and delivery

Honeywell Group

Program: Vocational training programs

Focus Area: Host a 3-week vocational training program in Baking technology called the Honeywell Baking School. They are also supporting the establishment of the Footprints Occupational Training Center (doesn't exist yet), which will offer training in craftsmanship and life skills for youth in Machine Work, Fabrication & Welding, Plumbing & Pipe Work, Refrigeration and Air-Conditioning, and Electrical Installations in partnership with state governments in Nigeria.

Source: http://www.honeywellgroup.com/contributions.php?sid=39

UAC of Nigeria

Program: CSR programs

Focus Area: Provide summer/temporary jobs and industrial attachment to students in higher institutions of learning to provide practical experience across business and technical schools. They also have a Secondary School Scholarship Scheme provides scholarships to students of serving and retired employees of the company.

Source: http://www.uacnplc.com/company/csr/index.htm

B State-level case studies

The following state case studies were developed based on interviews and desk research on the key issues affecting the new curriculum roll-out. The case studies are not to be viewed as a diagnostic of state performance on education or roll-out, but rather to provide an overarching picture of the varied state of vocational curriculum roll-out across the country.

Abuja FCT

Overview

Abuja is home to over 43,000 senior secondary school students, 2,700 senior secondary school teachers, and 56 senior secondary schools.

According to FCT Baseline data (2010) about 68.1% of the unemployed people surveyed within the state claimed to have no vocational skills despite a number of government interventions, claiming that this is because most vocational skills target the informal sector and individual enterprise. Of those beneficiaries of the vocational training only 11.6% said they were currently using that skill to earn a living, the rest claimed that they were not using the skill because of a lack of seed capital (58.8%), skill redundancy (18.6%) and lack of a market for that particular skill (14%). The vocational training interventions – in the form of vocational training centers –the state government has tried to implement have been unsuccessful as they are difficult to access, ill-equipped and the subjects offered are not in line with labor-market needs.

Teacher capacity and development

Although there are not enough teachers to teach new technical subject according to the state government, there is a reluctance to have artisans teach within schools. There is a concern of having artisans – whom may bring habits and manners at odds with a school setting – teaching impressionable students, especially with a lack of teaching qualifications and understanding of pedagogy and teaching methods. As a solution to this challenge, the FCT is aiming to set up 6-7 “mega schools” or cluster centers to which students may circulate in each of the senatorial zones. Teachers at these schools would be trained in certain subjects, and return to teach. This plan is currently at the concept phase.

Finance and resources for schools

Recognizing the difficulties in resourcing all schools across the state, especially with enough resources to be able to roll-out effectively, FCT plans on equipping a few model secondary schools. The state is first identifying existing equipment and materials from past technical and vocational training rollout in the 1980s, and determining whether any of these can be repurposed. The challenge currently faced is how to ensure uptake, to ensure that these models are replicated, and to ensure constant funding for consumable materials for practical training modules.

Linking education to private sector employment

Trade and agriculture are the key employers or consumers of labor within the state. There is a large gap in the semi-skilled job market (masons, carpenters, plumbers, etc.) with employers, particularly in construction, looking for solid Mathematics, English, and Physics grounding before investing in training secondary school graduates. Most of the training provided by companies is minimal before the trainee is expected to perform at a certain level. As with many of the other states, private employers have expressed concern about the lack of soft skills in secondary school graduate employees. The planned roll-out has not explicitly sought input from private employers in the state, although there may be room for involvement in the model schools concept.

Figure 8: Percentage Employment by Sector - Abuja FCT

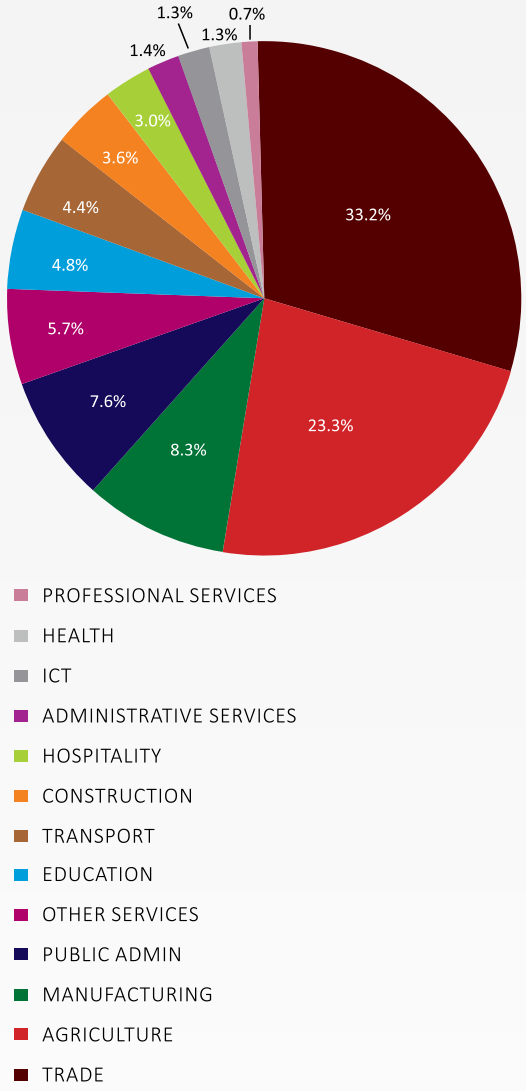
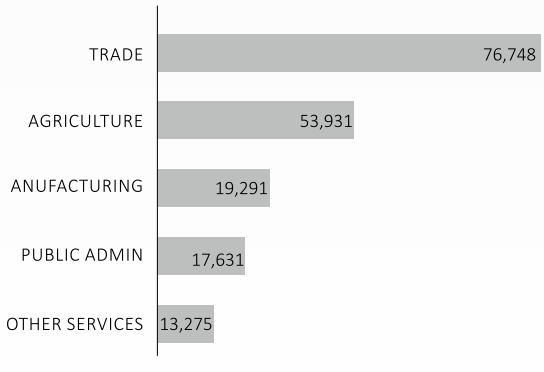


Figure 9: Top 5 Employment Sectors - Abuja FCT



Akwa Ibom

Overview

Under the second term administration of Governor Godswill Akpabio, the focus of the Akwa Ibom state government has been directed at ensuring the provision of infrastructure, (roads, power, water, healthcare, education) and in particular, the completion of key projects of the immediate past administration. These include the Ibom Power Plant, Science and Technology Park, Ibom Le Meridien & Golf Resort, the International Airport, and the Akwa Ibom University of Technology, among others. In the education sector, there is notable investment in the construction and renovation of school buildings. However, as pertains to vocational and technical education at secondary school level, there remains a dearth of facilities and equipment and a shortage of teachers that are suitably trained and competent to deliver vocational and technical curriculum at the secondary school level.

Teacher capacity and development

Amongst teachers in the state, there is a level of awareness of the 34 new trade subjects that have been included in the senior secondary education curriculum. A few teachers were randomly selected to attend an orientation exercise prior to the roll-out of the curriculum. However, expectations for formal training for teachers and administrative staff have not been met. Additional financial resources to aid the implementation of the curriculum have not been forthcoming. Furthermore, there has been very little provision of support staff, instructional materials and equipment for the teaching and learning of these new subjects. Teachers have had to double both as regular subject teachers and trade subject teachers in schools, irrespective of their qualifications and ability to teach these subjects.

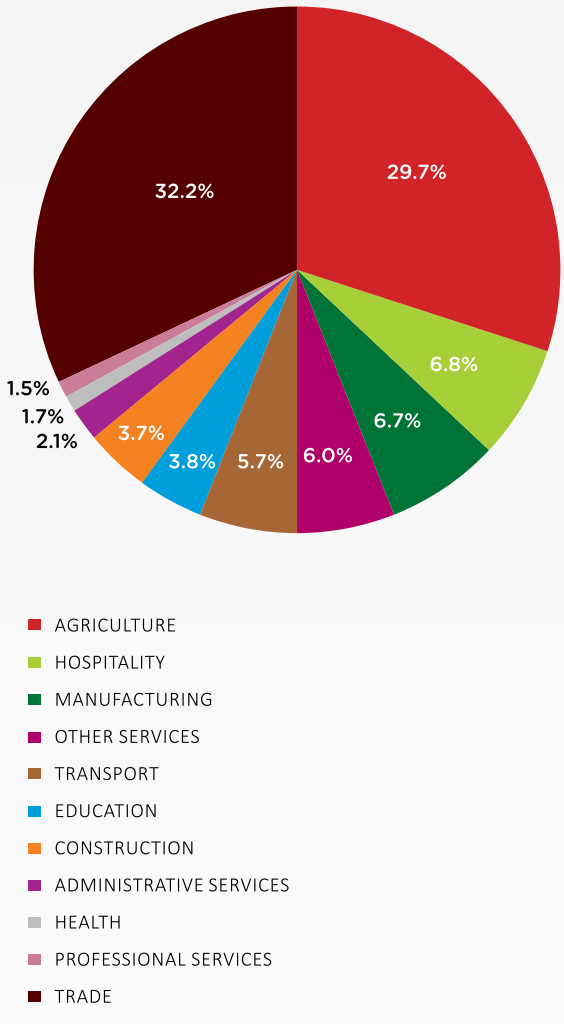
In spite of the challenges the schools have had to face to implement the new curriculum, there is a level of excitement observed in Akwa Ibom state about the curriculum, and a desire to see it properly implemented.

Finance and resources for schools

The state government has made education a priority in the state budget but the government has a fundamental challenge with its financial administration systems. Thus, budgetary releases are often in the range of 10-15% of the education sector budget. The state's technical education board is a case in point; the board was only able to utilize 12.3% of their budget estimate (₦980 million) for 2013. As a result, the six technical colleges are over-populated, dilapidated, understaffed and unequipped.

Regarding non-state participation in education, it is observed that whilst opportunities for public-private partnerships abound, there is little or no inter-sectoral partnership in the sector with the exception of oil companies that sponsor students to participate in quiz competitions.

Figure 10: Percentage Employment by Sector - Akwa Ibom



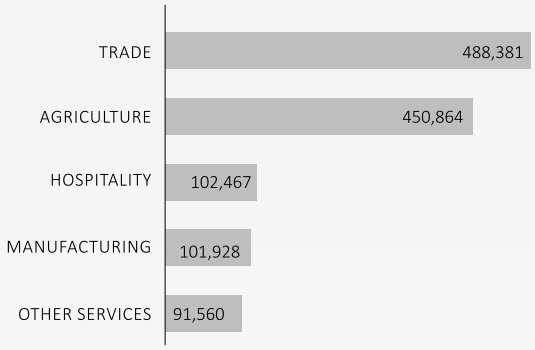
Linking education to private sector employment

According to the National Bureau of Statistics' Manpower Stock and Employment Survey (2010), the majority of Akwa Ibom state's labor force is found primarily in wholesale and retail trade, and agriculture. Akwa Ibom's major sources of employment are trade, agriculture, hospitality, and manufacturing, implying that learners need to be equipped with practical skills suited to engagement in these sectors. Commerce, agricultural science and auto and electrical mechanics are the most relevant technical additions to the curriculum for this state, which is similar to Anambra State's employment profile.

The presence of these sectors presents opportunities to link the trade curriculum to employment. For example, subjects like marketing and salesmanship if well taught, will increase the pool of skilled human resources who can meaningfully contribute to the growing retail trade industry.

However, it appears that the value in establishing linkages between private sector industries and senior secondary schools has not been properly appreciated by the private sector. Consequently, private sector investment in strengthening the implementation of the vocational curriculum in secondary schools has been low. There is therefore scope within the context of this state, to establish mechanisms through which public and private sector dialogue can be established.

Figure 11: Top 5 Employment Sectors - Akwa Ibom



Anambra

Overview

Anambra State under Governor Willie Obiano, following a planned transition process from Governor Peter Obi's administration, has set out an ambitious road map focused on the mechanization and industrialization of the state as well as increasing agricultural productivity. State authorities are aware of the important role that vocational training will play in helping Anambra achieve its end goals.

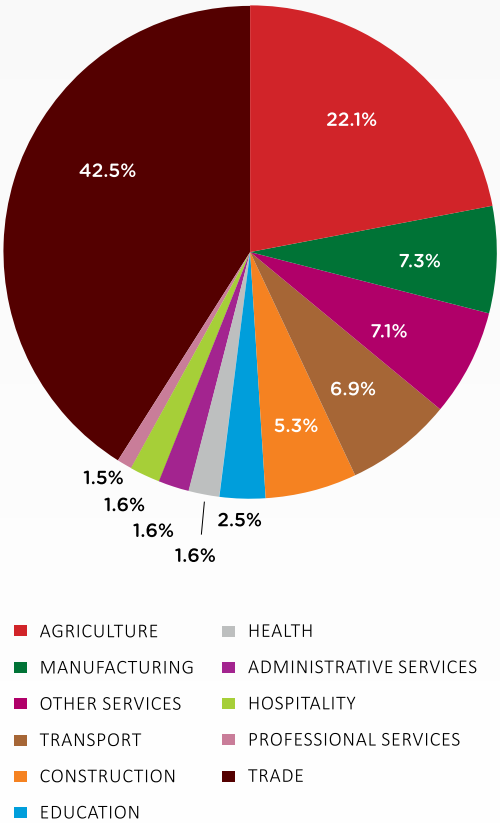
Anambra state has "out-sourced" the management of a number of public schools to the Catholic Church and missions as the "initial" proprietors. Some schools are handled exclusively by the missions – receiving little help from the government – while others are jointly managed – where the mission is in charge of the management but the state continues to pay for teachers and infrastructure.

Teacher capacity and development

The teachers interviewed in Anambra state suggested that additional teachers and training for those teachers would be beneficial to them in order for them to continue to each the curriculum effectively. The teachers all mentioned a lack of clarity around the curriculum and the underdevelopment of supporting learning material (textbooks, etc.)

Teachers were not consulted in the process at the federal or state level before they were expected to roll-out the curriculum. Another challenge was the lack of interest by existing teachers in teaching the new trade subjects. Despite the shortfall of both teachers and adequate training the teachers are all confident that if they had these issues addressed they would be able to teach the trade subjects effectively.

Figure 12: Percentage Employment by Sector - Anambra



Finance and resources for schools

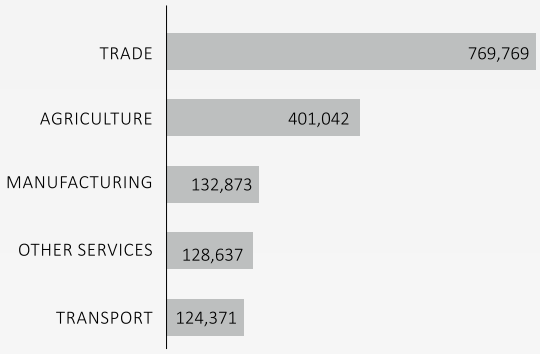
There is a mix of resources available to the schools. The schools that are jointly managed are better prepared as they benefitted from the state laptop scheme and can therefore offer the IT trade subjects, whereas the ones that are mission-run are using fundraising efforts (the parent-teachers' associations, parents and individual donors) to help pay for the materials. Schools that are unable to raise funds for materials have made do and are improvising with what they have available. This type of improvisation often means a lack of practical training to accompany the theoretical aspects and a situation where they are teaching data processing without computers.

Linking education to private sector employment

Anambra's major sources of employment are trade, agriculture and manufacturing, implying that learners need to be equipped with practical skills suited to engagement in these sectors. Commerce, agricultural science and auto and electrical mechanics are the most relevant technical additions to the curriculum for this state.

In line with the state government's strategy they are equipping young people with the skills need for the agricultural space in three value chains – rice, cassava and maize. A few partnerships are in the development stages with technical colleges that will allow graduates access to improved seedling on graduation. In addition there are some preliminary talks with private sector investors that will be looking to source produce from Anambra. The state government is also open to the idea of partnerships with private sector especially in the manufacturing industry that could present interesting opportunities for PPPs.

Figure 13: Top 5 Employment Sectors - Anambra



Borno

Overview

Borno State, led by Governor Kashim Shettima, has faced significant security and stability challenges in the past year. This has negatively impacted both the economy of the State and educational development.

There are approximately 1,300 primary schools and 25,000 primary school teachers in the state. However, there are approximately 80-100 secondary schools and an estimated 11,000 secondary school teachers. While the state has very high pass rates for the region, the level of tertiary access is relatively low. Most eligible school-leavers able to access the next level of education go into higher academic and vocational training.

Instability in the region has severely affected pass rates and school attendance. In 2014, secondary school pass rates were approximately 40% compared to performance over the past five years, which saw remarkable improvements with an average pass rate between 50-70%. Instability has also led to large refugee populations, which are primarily served voluntarily by local teachers, e.g., "serve schools initiative" and informal training.

Teacher capacity and development

Teachers are positive about the new vocational curriculum and its potential impact. They are eager to be equipped with new skills and to transfer those skills onto schoolchildren. According to the unions, vocational centers make it possible to train teachers as the new curriculum is being rolled out. Some teachers are already pursuing courses at these regional vocational centers.

Teacher productivity has gone down significantly as there has been a seven-month vacation in the last school year. Even so, teachers have indicated their willingness to come out to schools amidst the bombing of houses and gunfire. However, the wages for teachers in Borno are 20% lower than the national average according to interviews. In addition, the current state and stage of the roll-out of the new curriculum in Borno State is not advanced: unions were given a three-month notice, and orientation sessions are needed to fully introduce the new curriculum in advance of implementation.

Some of the skills already exist among the teacher corps in certain schools, including the ability to teach subjects such as carpentry and computer engineering. Even with existing abilities and resources, government support and training would be welcomed, especially where it relates to the rollout of the new curriculum.

Finance and resources for schools

Two of the main challenges faced by schools in Borno State relate to poverty and motivation. The first is a result of absent or deceased parents leading to children having to take on work to sustain themselves and siblings, before completing school. The second is primarily due to the perception that schools do not adequately prepare children for the challenges of the marketplace. Thus, there is little incentive to attend classes instead of eking out a living by taking on paying employment.

Facilities are inadequate and limited equipment is available. Many schools are simply not operating. As a result, the biggest barriers to curriculum roll out would be a lack of facilities, teachers and resources. In addition, a large percentage of schools fall within a police state, with the associated difficulties of allocating and distributing resources, and holding classes.

While Federal budget assistance has allowed infrastructure development to happen, there are significant gaps in the ability to provide appropriate materials and environments for vocational and other education. Local governments, NGOs, organizations such as UNICEF, and corporations provide further support to school budgets, but this support is not evenly distributed across the state.

Linking education to private sector employment

The employment pattern for school leavers is mostly informal employment – with informal trade and farming making up the largest part of employment. The expected job growth areas over the next 10 years in Borno State will rely heavily on artisan skills, especially in the construction sector. Skills that will be high in demand will likely be masons, electricians, skilled brick layers, welders and other construction-related trades. This sector could account for as much as 30-40% of graduating youth employment.

Figure 14: Percentage employment by sector - Borno

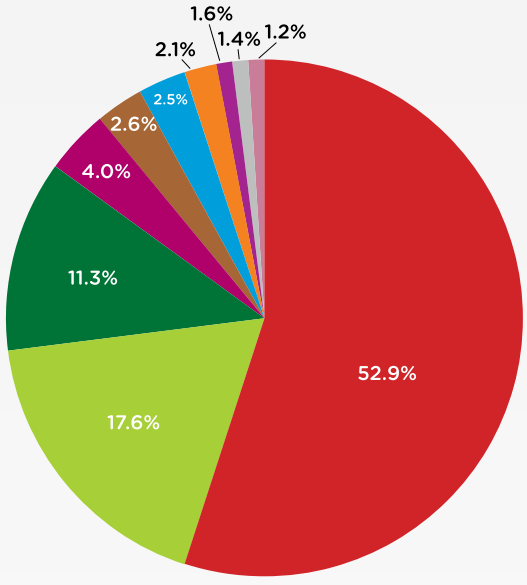
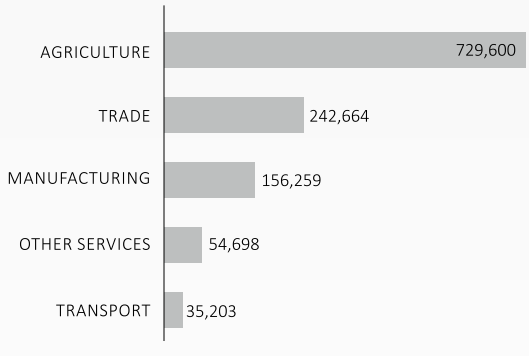


Figure 15: Top five employment sectors - Borno



Private companies in Borno State experience a range of issues, which affect the cost of doing business and constrain their ability to hire and train entry-level candidates. Companies cite the effect of insurgencies on doing business, specifically the delayed product delivery and transport challenges that result. As in other parts of Nigeria, the lack of electricity means petrol generators are used, making the pricing of products uncompetitive. When it comes to public sector employment, the perception exists that influential people make decisions and hiring is based on a select network of connected people, leading to a certain disregard for competency and ability. This perception further discourages individuals from applying themselves in school, as it seems hard work and skills building is not necessarily rewarded. There are thus limited opportunities for entry level graduates outside of more entrepreneurial trades, e.g., agriculture and trade, as in other parts of Nigeria.

Jigawa

Overview

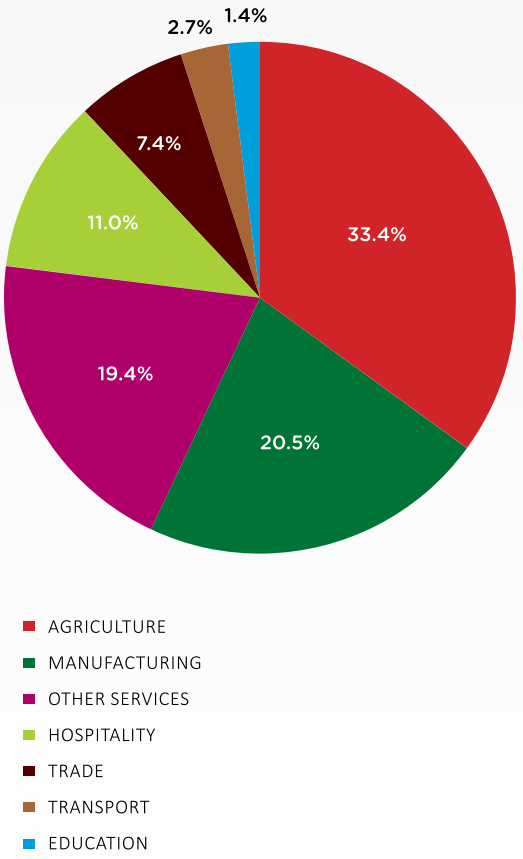
Jigawa State is governed by Governor Sule Lamido, whom is serving his second term in office at the writing of this report. Under the leadership of this administrator, there has been a noticeable increase in the understanding of state authorities regarding the need for and benefits of vocational training in the state. This is against the backdrop of a state where unemployment is prevalent and the perceived value for education is low amongst the populace.

The newly introduced Senior Secondary curriculum is a means through which the state government aims to transform Jigawa state into a fully industrialized state. The support of donor-funded non-state interventions has been vital in pursuing this mission, and initiatives which currently support the implementation of the new curriculum include the UK-government funded Education Sector Support Programme in Nigeria (ESSPIN), the MacArthur Foundation funded development Research and Projects Centre (dRPC), and the Global Partnership for Education (GPE) among others. There however remain significant funding gaps in the delivery of vocational and technical education, resulting in insufficient provision of specialized equipment, facilities and resources for teaching and learning.

Teacher capacity and development

In spite of the stated objective to improve skills in vocational and technical education at the secondary level, the state still faces severe capacity issues pertaining to the competence of teachers to deliver the new curriculum. As with several other states across Nigeria, the new senior secondary curriculum with its emphasis on trade and entrepreneurship subjects was introduced without ensuring that a sufficient number of teachers were trained and qualified to deliver these subjects. The occurrence of teachers taking responsibility for delivering their teaching subjects as well as one or more of the new trade subjects (in which they have not been trained) is common. Of note, and related to the pedagogical challenges faced by these teachers in senior secondary schools, is the fact that there was only minimal consultation with teachers before curriculum roll-out at state level.

Figure 16: Percentage Employment by Sector - Jigawa



The need to strengthen capacity at school level and prioritize relevance of these subjects was noted by one stakeholder, who advised that the, "government needs to get more consultants in the schools… trade subjects should be peculiar to area of implementation, for example agriculture will apply to Jigawa as opposed to salesmanship or hairdressing. More technical training for teachers, head-teachers and principals is vital. A pilot should be done with a certain group of schools for experiential learning, then expand with time."

Finance and resources for schools

According to the table below, the state budget for education has seen a steady increase over the last five years, with internally generated revenue accounting for much of the state's expenditure. Even with recent increases in the state budget, the state government therefore needs to take into consideration the annual financial implication of teaching the new subjects properly. The subjects currently offered in Jigawa – Animal husbandry, Fishery, Catering Crafts, Electrical Installation and Data Processing – require a considerable level of capital investment for equipment and instructional materials for them to be successfully implemented. These resources have not as of yet been earmarked for technical/vocational curriculum rollout.

Table 9: Jigawa state education budget

	2009	2010	2011	2012	2013
Recurrent (NGN)	11,770 billion	13,566 billion	17,913 billion	21,714 billion	23,353 billion
Capital (NGN)	6,846 billion	5,440 billion	3,784 billion	5,223 billion	8,041 billion
Total (NGN)	18,616 billion	19,006 billion	21,697 billion	26,937 billion	31,394 billion

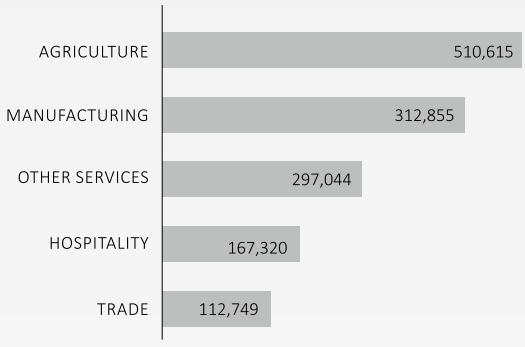
Source: The development Research and Projects Centre (dRPC) database

Linking education to private sector employment

In Jigawa, the top five sectors account for nearly all reported employment, with remaining jobs highly fragmented among the smaller sectors. Agriculture, manufacturing, and 'other services' make up the top three sectors. Agricultural Sciences/Animal Husbandry, Sciences and Mechanics are therefore the most pertinent trade subjects in the new curriculum offering. Hospitality (including hotels and restaurants) and Wholesale and Retail Trade activities are less dominant, but warrant some emphasis on imparting strong literacy and numeracy, and sales and marketing skills.

Due to a large population of the unskilled and unemployed, Jigawa state has begun to invest in education as a strategic link to employment in the private sector. This is following from the premise that the more skilled/qualified students are, the likelier they are to be employed. A private sector respondent confirmed the effectiveness of this strategy if properly executed. Some companies are employing primarily senior secondary school leavers as a part CSR / part strategic investment in future talent. A persistent challenge however remains with the quality of these hires, which are often time unskilled and require re-training particularly in vocational and technical areas

Figure 17: Top 5 Employment Sectors - Jigawa



Kano

Overview

With a population of over 11 million people (2011 estimate), Kano is regarded as the most populous state in Nigeria. The governor of Kano state is Governor Rabi'u Musa Kwankwaso. Kano State is the second largest industrial center in Nigeria and the largest in Northern Nigeria with textile, tanning, footwear, cosmetics, plastics, enamelware, pharmaceuticals, ceramics, furniture and other industries. Kano state is one of the seven states that make up the North-West geopolitical zone of Nigeria- an area that continues to experience challenges based on radical terrorism, cultural practices and political volatility. As a result, the factors affecting education – vocational and technical education in particular – are myriad and widely varied.

Teacher capacity and development

The involvement of the non-state actors in the education sector of Kano state has helped to influence the investment of funds to provide a more enabling environment for the implementation of the new trade subjects' curriculum. Actors like the development Research and Projects Centre (dRPC) work to strengthen the implementation of the new curriculum in girls' secondary schools in Kano by training teachers and working with the local government authorities to sensitize the communities to the advantages of girls' education and vocational training.

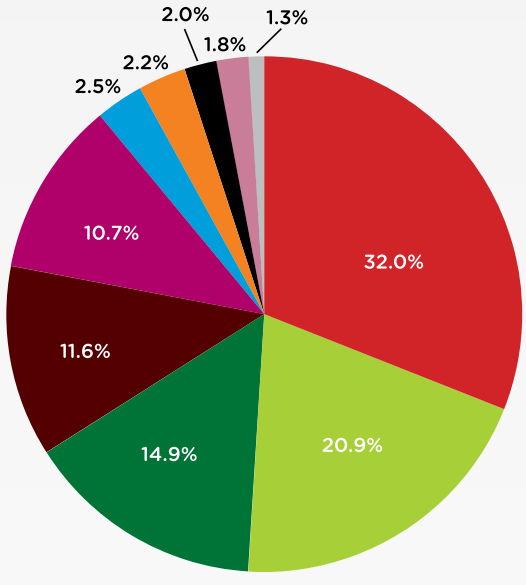
Teachers appear to be more motivated and inspired after undergoing leadership trainings and seminars where they are taught new methodologies in teaching trade subjects and undergo vigorous monitoring and evaluation. Learners also benefit tremendously from this program of support initiated by the dRPC: trade subjects taught in the state include animal husbandry, catering crafts and fishery, and based on their new learning, students have begun to practice poultry, farming and fishery in their homes.

However, in the context of the dRPC, these new initiatives are currently limited as they are implemented in only eight pilot schools. Nevertheless, the attention of the Kano State government has been drawn to the model of curriculum strengthening implemented by the dRPC. The state government is currently looking for funding sources to enable replication of this model in all senior secondary schools in Kano.

Finance and resources for schools

The state allocates between seven and ten per cent of its total budget to education annually. Kano State total budget for 2014 fiscal year is 219.28 billion NGN. Of the total, 20.85 billion NGN (approx. 20%) is allocated to education as follows: Ministry of Education (15.22 billion NGN); Ministry for Higher Education (5.61 billion NGN). This reflects a budgetary increase as compared with previous years' allocations, and represents the state's adoption of a new strategy, which sees the government assuming responsibility for education all the way from primary level to tertiary level, with special focus on vocational training. The allocations also include 1.3 billion NGN which has been allocated for the construction and furnishing of 268 additional classrooms in the state.

Figure 18: Percentage employment by sector - Kano



None of these allocations were found to be specifically earmarked for the new trade and entrepreneurship subjects' rollout, as much of the funding for this support has thus far come from non-state actors.

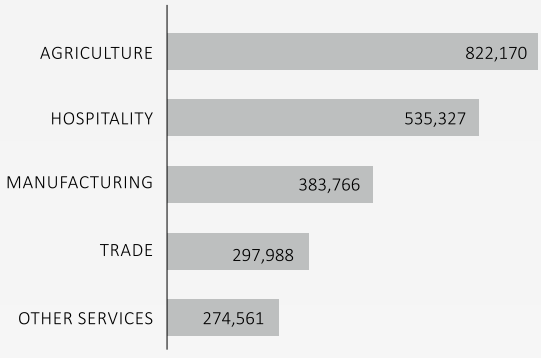
Linking education to private sector employment

In Kano state, 75% of the total working population are engaged directly or indirectly in agriculture and currently, Kano states contributes over 20% of the nation's non-oil export[29] and therein lies opportunities for entrepreneurial activities in the state. In addition to a largely agrarian economy, Kano reports significant activity in the hospitality sectors.

Kano is an industrial state, with several manufacturing companies requiring skilled labor. However, the companies are often unable to pay for specialized skills in the specific areas where they are needed. Examples of such specialized skills include precision welders and machine operators/ maintenance engineers.

To fill these skills gap, these companies employ relatively cheap labor – secondary school leavers and vocational education graduates – who are then trained in the required fields. There is a great opportunity for public-private partnerships to strengthen the implementation of the curriculum while ensuring the human resource requirements for the industrial sector are met. Private sector actors may also support changes to the negative societal perception of vocational and technical education and training in the state.

Figure 19: Top five employment sectors - Kano



Lagos

Overview

As Lagos state is the commercial hub of Nigeria and the primary destination for employers of labor, there is a lack of high quality technical skills to meet the demand. Under the leadership of the current Governor of Lagos State, Babatunde Raji Fashola (SAN), there was a push to emphasize TVET as a major instrument of learning. This push is part of a strategic plan to reduce the skills gap in the economy, as well as to provide a means for Lagosians to be self-employed and gainfully occupied. The state established Lagos State Technical and Vocational Education Board (LASTVEB) and they are in the process of establishing a post-secondary apprenticeship programs the School-leaver Modern apprenticeship training program (SL-MATP) and Graduate vocational employability skill training program (GV-ESTP) that combines both in-class and on the job training.

Co-ordinated efforts in Lagos state toward vocational training would mean that the technical subjects rolled out would be the ones that link most directly to the SL-MATP and would include Brick, block laying and concrete work, Carpentry and joinery, Plumbing, Auto electrical work, Painting and decoration.

29 Retrieved from http://zodml.org/Nigeria/Geography/Kano%20State/ Accessed August 2014

Teacher capacity and development

In Lagos state, teacher capacity to deliver the new trade subjects at senior level is inadequate. Lagos state faces the same challenges as other states with teachers improvising on trade subjects based on their knowledge of traditional subjects. Such curricular subjects include Book Keeping and Office Practice (which are taught by teachers who teach traditional subjects such as Financial Accounting and Commerce) and Catering Crafts (which is usually taught by Home Economics teachers). Schools typically refrain from offering subjects like Animal Husbandry or Electrical Installation, which require advanced technical competencies and substantial investment in facilities or resources.

Beyond the new curriculum rollout, overall number of teachers at the secondary school level has been raised as a major human resource capacity constraint. Even if a few teachers are identified and trained for the new curriculum, the broader challenge of teacher numbers may require a relative lack of specialization – teachers focusing on teaching a few semi-related subjects to fill the gaps.

Teacher development in Lagos state involves a range of stakeholders including the public sector through its Teachers' Establishment and Pension Office (TEPO) which is responsible for ensuring that teachers in the state undergo periodic professional development. Programs of non-state actors like DfID's Education Sector Support Programme in Nigeria (ESSPIN) and the Lagos State Eko Project may provide interesting models to leverage or replicate or in teacher training for vocational training.

Finance and resources for schools

Lagos State allocated a significant portion of the total education sector budget to secondary school (between 38 and 44 per cent in recent years). However, it is difficult to disaggregate how much of the planned expenditure was actually deployed, and how much is earmarked for vocational and technical training compared to broader secondary education.

Table 10: Education sector, recurrent budget and expenditure (NGN)

	2008			2009		
	Personnel	Overhead	Total	Personnel	Overhead	Total
Secondary schools* (NGN)	20,118 billion	658,920 million	20,777 billion	15,048 billion	549,403 million	15,597 billion
Total (NGN)	39,962 billion	7,398 billion	47,361 billion	34,686 billion	6,212 billion	40,898 billion

Source: Lagos State Annual Education sector report 2010

*inclusive of technical and vocational training

In the Lagos state projected budget, vocational and technical education (ensconced within basic education goals) account for approximately two per cent of the total expected education budget.

Figure 20: Percentage employment by sector - Lagos

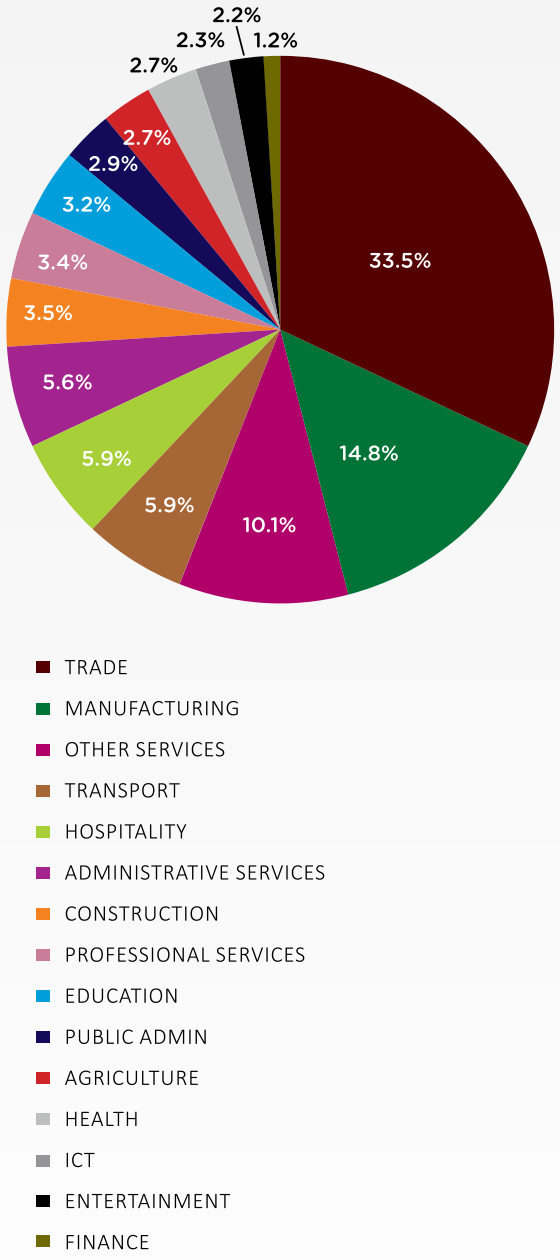
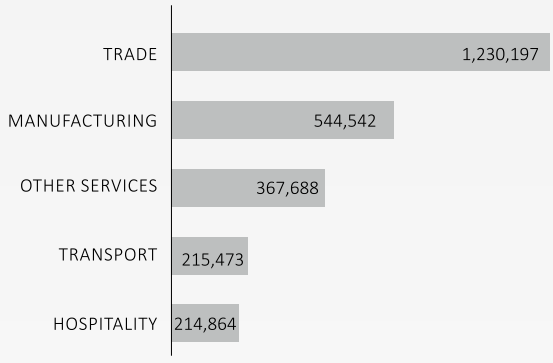


Table 11: Lagos State education sector budgeted expenditure for vocational activities (NGN)

	2013	2014	2015
Improve quality of basic education & vocational schools	1,139,260,245	1,253,186,269	1,378,504,896
Increase access to basic education and vocational centers	909,876,814	1,000,864,495	1,100,950,944
Total budget to achieve stated goals	100,974,096,804	103,266,376,201	111,594,458,283

Source: Lagos state government- Ministry of Education Mid-term Sector Strategy Report (2013-2015)

Figure 21: Top 5 employment sectors - Lagos



Linking education to private sector employment

In Lagos, the most important sector is wholesale and retail trade, accounting for a third of all jobs in 2010. Manufacturing activities and 'other services' – a diverse range of entrepreneurial activities – round out the top three sectors.

Broad designations of transport and hospitality (including hotels and restaurants) account for a nearly half a million jobs. In addition to strong literacy and numeracy, sales and marketing skills should be priority areas from new trade subjects. The private sector, in Lagos, still has challenges hiring at entry-level even from tertiary institutions unless they are hiring for a very specific skillset and have a dedicated training program for new hires. Beyond technical skills, soft skills are reported as particularly hard to find in the market. Instead, private companies are using probationary periods and company training programs to further screen talent before confirmation.

Vocational programs such as West African Vocational Education (WAVE) are beginning to fill the gap particularly for hospitality and the service industry. WAVE takes secondary school leavers and trains them in both the hard and soft skills required in the service industry. This combination of training makes WAVE graduates particularly attractive to the labor market.

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List of stakeholders interviewed

	Organization	Location	Name	Role
1	Kings Guards Security	Abuja	Kayode Adeoye	Regional Manager
2	DFID Teacher Development Programme	Abuja	Nguyan Feese	National Programme Manager
3	British Council	Abuja	Brian Wilson	Director, Education
4	British Council	Abuja	Lynda Ashaolu	Project Coordinator, Schools Programme
5	Borwa Engineering	Abuja	Kassim Bello	
6	DfID	Abuja	Esohe Eigbike	Education Adviser
7	FCT Secondary Education Board	Abuja	Mallam Shehu Omehi Yahaya	Deputy Director
8	FCT Secondary Education Board	Abuja	Yelwa Fatima Baba-Ari	Director
9	Federal Ministry of Education	Abuja	Kenneth Uwah	Technical Adviser to The Honourable Minister
10	Federal Ministry of Education	Abuja	Rose Gold-Idehen	Deputy Director, Secondary Education
11	NMEC	Abuja	Musa Hassan Gusau	Director, Literacy And Development
12	Nordic Villa	Abuja	Fortune Abah	General Manager
13	UNESCO	Abuja	Ngozi Amanze	National Programme Officer
14	Akwa Ibom House Of Reps	Akwa Ibom	Hon. Barr. Luke Onofiok	Chairman Finance And Appropriation, Akwa Ibom House Of Reps
15	Airtel Nigeria, Uyo	Akwa Ibom	Imoh Nyah	Area Business Manager
16	Comm. Sec Commercial School	Akwa Ibom	Mrs Mfon Umoh	Vice Principal Academics
17	D- Farm, D-Paint	Akwa Ibom	Mr Umoh Inyang	Owner, Poultry Farms & Paint Company
18	Ministry of Education, Uyo	Akwa Ibom	Mr Udofia Lawrence	Deputy Director In Charge Of Curriculum, Ministry Of Education
19	Slawd Peters Technical College	Akwa Ibom	Elder O.J Obot	Founder
20	Slawd Peters Technical College	Akwa Ibom	Joshua O. Joshua	Director
21	State Ministry of Education, State Technical Education Board	Akwa Ibom	Mr. Monday Okon Umoh	Director Planning, Research And Statistics
22	State Ministry of Education, State Technical Education Board	Akwa Ibom	Barr. Comfort Etuk	Executive Chairman

	Organization	Location	Name	Role
23	State Ministry of Education, State Technical Education Board	Akwa Ibom	Mr. Okokon Okon	Director Programs
24	State Ministry of Education, State Technical Education Board	Akwa Ibom	Mr. Udosen	Office Manager
25	Uyo High School	Akwa Ibom	Mr Effiom E. Okon	Principal
26	Uyo High School	Akwa Ibom	Mr Raphael B. Effiong	Vice Principal- Academics
27	Anambra State Government	Anambra	Hon Commisoner. Ifeatu Onejeme	Commissioner For Trade, Industry And Commerce
28	Anambra State Government	Anambra	Hon Commisoner. Kate Omenugha	Commissioner For Education
29	Anambra State Government	Anambra	Mark Okoye	Special Advisor To The Governor On Investments
30	Girls High	Anambra	Emodi Josephine	Principal
31	Infant Jesus Secondary School	Anambra	Jane Sylvia Uzoeto	Principal
32	Mater Amabilis Secondary School	Anambra	Lady Ebele Okoli	Principal
33	SAB Miller	Anambra	Lukas Daniel Van-Deventer	General Manager
34	St Charles Secondary School	Anambra	Ezike Patricia	Principal
35	Herwa Community Development Initiative (HECDI)	Borno	Mall. Mohammed N Hassan	Director
36	Samaritan Care for OVCs	Borno	Tina Oleyemi	Chairperson
37	National Youth Council of Nigeria (NYCN)	Borno	Yusuf Atom	Member/Teacher
38	National Union Of Teachers (NUT)	Borno	Bulama Abiso	State Chairman
39	Local Education Authority, Maiduguri Local Government	Borno	Tujjani Abba Nguru	Head of Administration
40	Ford Foundation	China	He Jin	Senior Programme Officer
41	ESSPIN	Jigawa	Danjuma Yakubu	
42	ESSPIN	Jigawa	Hezekaih Odeyale	Planning & Management State Specialist, Jigawa
43	Jigawa State Ministry of Education	Jigawa	Danjuma Ladan	Deputy Director, Planning
44	Jigawa State Ministry of Education, Science And Tech.	Jigawa	Tijani Usman	Director, Planning, Research & Statistics
45	Sara Groundnut Oil Mills, Dutse	Jigawa	Sule Sabo	Director
46	Barde Global Concept Nigeria Limited	Jigawa	Aminu Abubarkar Barde	Director
47	dRPC	Kano	Mallam Suleiman Mahmud	Education Liaison Officer
48	ESSPIN	Kano	Lekan Saidi	Kano State Team Leader
49	Holborn Nig. Ltd. A Pipe Manufacturing Company	Kano	Musa Mshelia	Electrical Engineer
50	Mero Tijjani Girls' Science And Technical College, Kano	Kano	Abdulrahaman K. Muhammad	Principal

	Organization	Location	Name	Role
51	Artee Group	Lagos	Alhadji Kunle Hamzat	Group Head, Human Resources Department
52	Corona Schools Project	Lagos	Ifueko Omowunmi Thomas	Director, Corona Teachers' College
53	Corona Schools Project	Lagos	Adeshina Okonubi	Head Of Faculty, Corona Teachers' College
54	Corona Schools Project	Lagos	Maureen Ihonor	Educational Administrator, Corona Schools Head Office
55	Corona Schools Project	Lagos	Chinedum Oluwadamilola	Vice Principal Academics, Corona Secondary School
56	Eko Schools Project	Lagos	Mrs Ronke Azeez	Project Coordinator
57	Eko Schools Project	Lagos	Dr. Sola Obisanya	
58	Futuresoft	Lagos	Nkemdilim Begho	Director
59	General Electric	Lagos	Ejemen M. Okojie	Pipeline Development Program Manager
60	General Electric	Lagos	Oluwayemisi Fajemidagba	Training Manager
61	Government Technical College, Lagos, Agindingbi	Lagos	Odeh Belinda	Principal
62	Kaizen Ventures	Lagos	Ngozi Dozie	Managing Partner
63	Leap Africa	Lagos	Iyadunni Olubode	Executive Director
64	Majidun Senior Grammar School, Majidun, Ikorodu	Lagos	Abosede Ogunjobi	Mathematics Teacher
65	Microsoft	Lagos	Patrick Onwumere	Director, Youth Enablement, 4Afrika Initiative
66	Microsoft Nigeria	Lagos	Olayinka Ola	National Technology Officer
67	Oando Energy Resources / Lagos State Vocational and Technical Education Board's Industry Advisory Team	Lagos	Ademola Ogunbanjo	Human Resources Consultant / Vice Chairman
68	Oriwu Senior Model College, Ikorodu	Lagos	Christiana Akinsanya	Financial Accounting Teacher
69	Unity High Junior Sec. School, Ikorodu	Lagos	Mrs. Abiodun	Principal
70	West African Vocational Training	Lagos	Misan Rewane	CEO
71	Youth Empowerment Through Contemporary Art / African Artists' Foundation	Lagos	Buki Adebimpe	Project Coordinator
72	Zumatu Islamiyah Senior Grammar School, Igbogbo	Lagos	Joseph Ekundare	Physics Teacher
73	West African Examination Council	Oyo	Professor Pai Obanya	Chairman of the Board
74	Connected California	USA	Gary Hoachlander	CEO


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