



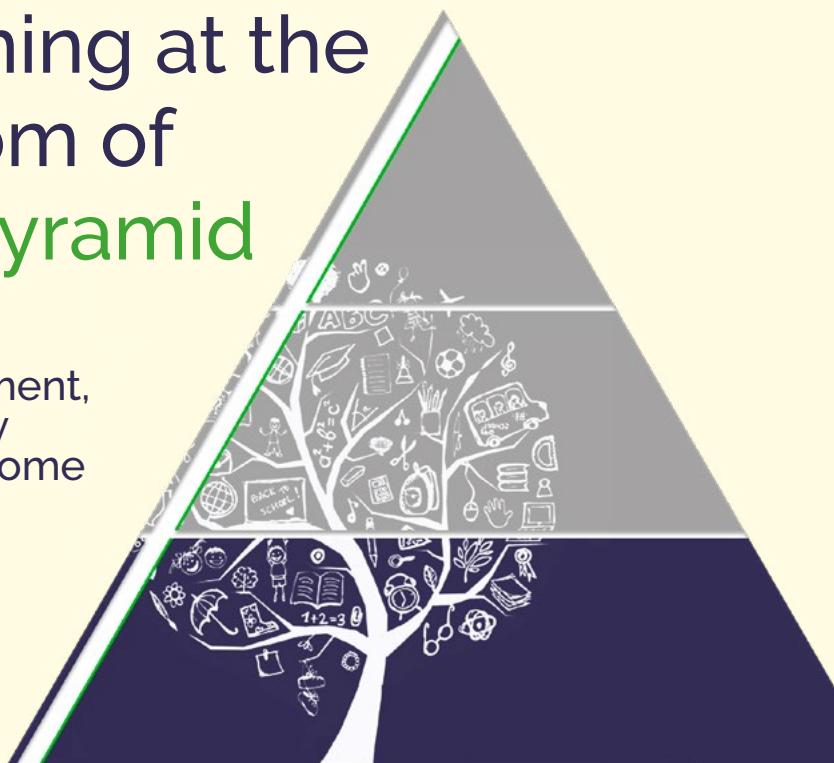
United Nations
Educational, Scientific and
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International Institute
for Educational Planning

Learning at the bottom of the pyramid

Science,
measurement,
and policy
in low-income
countries



Edited by
Daniel A. Wagner,
Sharon Wolf, and
Robert F. Boruch

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Chapter 10

Learning at the bottom of the pyramid in youth and adulthood: a focus on sub-Saharan Africa

Moses Oketch

Introduction

A good-quality education is now considered a human right and a global public good because of the economic and non-economic benefits that are associated with education. Today, education is viewed as a means to shared prosperity and an end in its own right, enabling individuals to fulfil their own potential and contribute to open societies. A recent report in *The Lancet* has projected that the Republic of Korea will exceed 90 years in average life expectancy by 2030, in large part due to its inclusive quality education that has promoted shared prosperity and enabled individuals to fulfil their potential (Kontis *et al.*, 2017). Yet, among the poor and marginalized in low-income countries, too few young people make the transition from primary to post-primary learning, and as a result many have reduced life-chances. If priority needs to be given to supporting this transition, what kinds of opportunities can build relevant life and labour skills and support civic participation for the marginalized group at the bottom of the pyramid in learning? What types of measurement tools can or should be used (or not used) in order to determine effective learning and effective policies for enhancing educational achievement at the BoP in the domain of youth and beyond?

Following the attention on the UN SDGs, many countries are poised to revive education policies around learning outcomes and their measurement. While examinations have been used to capture learning outcomes at the primary level, they have been insufficient in providing an evidence base for supporting inclusive learning for marginalized youth and adults who face special challenges in making the transition to post-primary learning. This is because high-stakes examinations, which are dominant in low-income countries in sub-Saharan Africa, are structured in such a way that they produce winners and losers – and poor, marginalized children often are the losers. They end up as youth at the BoP who have failed to make the post-primary learning

transition because of education systems in which such progress is based purely on meritocracy.

Non-formal education (NFE) could be a remedy if taken seriously at the level of national policy formulation and resourcing, and it is noteworthy that there is a resurgence of interest in this topic after nearly 40 years of debate and neglect (Britto, Oketch, and Weisner, 2014). Learning, however, is now the focus of such interest, which resonates well with the present attention on learning outcomes at the global level (Aspin *et al.*, 2001; Hanushek and Woessmann, 2008). If anything, there is already impetus given to non-formal learning through the SDGs framework, and a rise in technologies extending to those at the BoP. The reference to non-formal learning in the SDGs and in technological advances represents recognition that to reach and address the challenges of learning at the BoP in the domain of youth and adulthood, new approaches to learning will have to extend beyond formal systems.

This chapter will consider the roles of non-formal learning, with reference to the reality that formal school systems alone will not be able to cope with the challenges youth and adults at the BoP face when trying to transition into post-primary learning. Without alternative programmes for learning at the BoP in the domain of youth and adults, it is likely that a negative demographic transition will happen – in a few years' time, those at the BoP who have failed to make the transition to post-primary learning will become adults who lack relevant life and labour skills and civic engagement awareness, thereby extending their marginalization from youth into adulthood.

Given school systems' focus on meritocracy, it is no wonder that youth hold an unenviable position (Resnick and Thurlow, 2015), since many drop out of school or face limited intake or transition into post-primary learning. The concern is that on the one hand in such contexts, the youth who make the transition are considered 'agents of change' who are driven by the aspiration for a better life through their contributions to a productive labour force. They are portrayed as a 'youth dividend'. On the other hand, those at the BoP – because they have dropped out of school – are viewed as 'a lost generation' who are trapped by their BoP status and economic vulnerability. These youth and adults at the BoP can be found in the slums of cities where they seek highly vulnerable employment opportunities, and others are found idling in rural areas with little to do after failing to transition into post-primary learning. Yet, there is also agreement that acquiring skills relevant to current and future employment opportunities would

be key to leveraging the potential that African youth constitute for economic development and prosperity (Filmer and Fox, 2014).

Context for youth and adults at the BoP in sub-Saharan Africa

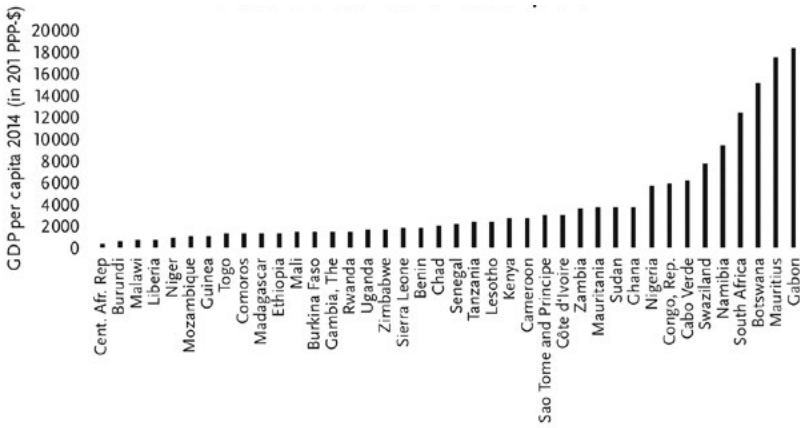
Economic trends across sub-Saharan African (SSA) countries have tremendous variability (see *Figure 10.1*). This has implications for analysing the challenges of learning at the BoP in the domain of youth and adulthood. A positive economic growth outlook is necessary to absorb skills into the labour market. Skills are in turn a necessary condition for a positive economic growth outlook, especially in systems that have in place strategies for addressing inequalities resulting from education systems. It can be argued that there is a feedback effect between the economy and skills development. Yet, the economic picture in SSA has not been systematically analysed through the lens of challenges of learning at the BoP, also associated with limited transition into post-primary education.

As shown in *Figure 10.1*, there are extremes in the economic growth pattern in SSA. The Central African Republic shows a very low GDP per capita of less than \$1,000. In contrast, Gabon has the highest GDP per capita of about \$20,000. However, in terms of challenges of learning at the BoP for youth and adulthood, at these two extremes they are likely to be similar. This is in part because these growth figures are driven by commodity goods such as oil in Gabon, and much insight could be drawn from them to advance our understanding of the challenges of learning at BoP in the domain of youth and adulthood. For many SSA countries, these economic indicators draw much attention, far more than the challenges of learning at BoP. Whereas, if these two were combined – such that interest in these economic indicators was matched with interest in learning, and specifically challenges of learning at the BoP in the domain of youth and adulthood – a much better policy evidence base might be generated that would serve to articulate better ways of addressing the learning challenges. So, unless there is attention to learning at the BoP for youth and adulthood, positive change will be very difficult.

In SSA, it is also clear that there is a youth ‘bubble’. Some term this, optimistically, a ‘demographic dividend’, but a large investment in schooling is needed as well as sufficient labour market demand to leverage this demographic potential (Oketch, 2017). There are also large youth bulges, though in some countries these have started to decline (see *Figure 10.2*). This is a sign that peaks may have been

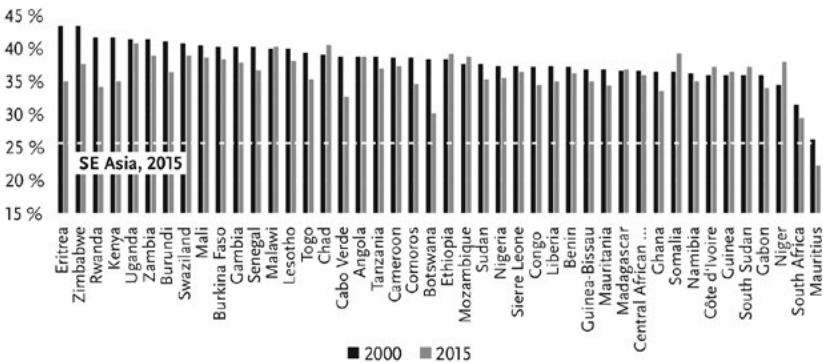
reached and a demographic dividend might happen – but these are general trends that do not address the challenges of those at the BoP, due in particular to the persistent problems of school dropout during and after primary schooling.

Figure 10.1 GDP per capita in sub-Saharan Africa



Source: Oketch, 2017.

Figure 10.2 Change in youth population aged 15–24 years between 2000 and 2015

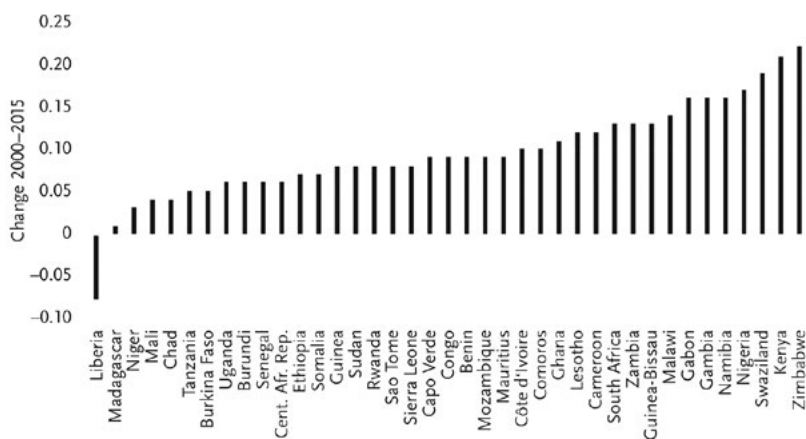


Source: Oketch, 2017.

Furthermore, low-quality schooling is associated with poor teaching methods and overcrowded classrooms, due in part to past high fertility rates, which have caused a major strain on education systems

in SSA. However, populations in Africa have higher rates of education today than ever before (see *Figure 10.3*). The figure displays the change in the fraction of the population 15+ with at least secondary education attainment. Apart from a drop in Liberia, secondary education has expanded from one percentage point in Madagascar to over 20 percentage points in Kenya and Zimbabwe (Oketch, 2017). This positive trend excludes the youth at the BoP. In addition, it only tells us about enrolment, and not learning outcomes. Assessing the learning of those at the BoP is becoming an ever more necessary endeavour.

Figure 10.3 Change in fraction of population 15+ with at least secondary education attainment



Source: Oketch, 2017.

To sum up, while there has been a generally positive economic trend in SSA in the past decade, there has not been an analysis on how this has impacted the youth at the BoP, and how it might be related to the challenges of learning at the BoP in the domain of youth and adulthood. Only when governments begin to understand and address the challenges of learning at the BoP in the domain of youth and adulthood will these indicators be more useful in realizing the ‘demographic dividend.’ For far too long, learning at the BoP has been left out of discussions concerning technical and vocational education and training (TVET), a topic to which we now turn.

The role of TVET

A World Bank (Filmer and Fox, 2014) report states that 11 million youth are expected to enter the labour market each year in SSA, and this trend will continue over the next decade. The majority of those who will fail to secure employment will be those at the BoP. They will also lack requisite skills to improve the quality of the available work in the informal sector, where many of them currently work. In this context, TVET is often proposed as a potential magic solution, and of strategic importance in addressing the special challenges faced by marginalized youth in Africa (African Union, 2007).

Yet, research on TVET and youth employability in SSA remains contested and uncertain (Oketch, 2007, 2015, 2017), often lacking a strong empirical base and analytical robustness (Fox and Thomas, 2016). Therefore, the relative effectiveness of TVET participation in improving learning and the labour market outcomes for young people at the BoP remains uncertain. Analyses that look at TVET participation, the degree to which it affects the post-primary learning transition, the wide range of effects on different individuals, and the stability of the potential effects over the working life would highlight the extent to which those at the BoP are impacted. This can be done by leveraging cross-national micro-level data to illuminate the effectiveness of TVET in different education systems and under varying labour market circumstances. This would surely advance our understanding of how the youth and adult learning transition and labour market interaction can be assessed under different contexts, to begin to understand and address the challenges of learning at the BoP.

In addition, qualitative system-level data on TVET policies and practices can be applied to better associate learning at the BoP with youth employment outcomes across countries. It is only after such analysis has been done that the role of TVET in this domain may be clearly assessed. At the moment, many countries have placed their hopes on TVET without a framework for how it can address the challenges of learning at the BoP. The focus should be on understanding how TVET systems address low levels of literacy and numeracy, limited functional language development, low attainment qualifications, weak social capabilities, and so on – all necessary employability component skills for youth at the BoP. Answering these questions requires an understanding of some specific TVET experiences.

TVET experiences in sub-Saharan Africa

There is a large body of literature on TVET in SSA straddling the disciplinary fields of education and economics. Much of it consists of single-country policy analysis, studies of access to TVET, and the changing nature of supply and demand more generally from a policy perspective. Biavaschi *et al.* (2012) provide an extensive review of this literature. Prominent within it is the mismatch between TVET provision and the labour market skills needed. Other significant trends are the low level of provision, the growing importance of private providers, and the role of new technologies. In most SSA countries, TVET has played only a marginal role to date (UK DFID, 2007; Oketch, 2007, 2017) despite recurring policy recommendations. Enrolment in vocational education as a share of all enrolled in secondary education has been noted to be below 10 per cent in most SSA countries – some exceptions include Liberia and Mali (with both reaching more than 30 per cent), as well as Angola, Rwanda, and Sierra Leone with more than 10 per cent (UK DFID, 2007; Atchoarena and Delluc, 2001).

In terms of unemployment rates and youth unemployment, the literature indicates that the position of young people in these labour markets is aggravated by a lack of education and training (Rioust de Largentaye, 2009; Garcia and Fares, 2008) and suffers from long transition periods from school to their first job, lasting between one year (Côte d'Ivoire) and 6.7 years (Mozambique) (Garcia and Fares, 2008). Other scholars have focused on the difficulties with the promotion of TVET that are attributed to issues such as its mismatch with young people's aspirations (Oketch, 2007; Atchoarena and Delluc, 2001; Foster, 1965). For extensive discussion see Biavaschi *et al.* (2012).

However, other evidence has pointed to the improved labour market performance of recent TVET graduates (Denu, Tekeste, and van der Deijl, 2005), while others have argued that young people turn mostly to self-employment or work unrelated to the skills learned (Lahire, Johanson, and Wilcox, 2011). Better skill formation and inclusion in the labour market, in particular due to the systematic involvement of the private sector, have also been reported (Rioust de Largentaye, 2009). Especially for marginalized youth and adults at the BoP with little formal schooling, apprenticeships may offer an avenue to improved labour market outcomes (Monk, Sandefur, and Teal, 2008). In contrast, some have argued that the development of functioning work-based training systems requires the contribution of the social partners, employers, and trade unions (Rioust de Largentaye, 2009). Yet this is often a difficult task, as the flexible,

informal forces of traditional apprenticeship can easily be distorted and overburdened by dependency on a supply-driven training programme (Mansuri and Rao, 2004). Palmer (2009) discusses several attempts of the Ghanaian government to formalize informal apprenticeships, and points to potential unintended ramifications in Ghana and other African countries.

In the end, TVET retains a difficult standing in SSA countries, despite some evidence that it can lead to better integration into wage employment, as demonstrated by the study on Ethiopia (Garcia and Fares, 2008; Guarcello, Lyon, and Rosati, 2008). Its current relevance in addressing the challenges of learning at the BoP for youth and adults remains debatable and unclear.

Gaps in evidence for improving learning at the BoP

First, there is need for more clarity on who the marginalized youth and adults are. Large populations in SSA have limited opportunities for transition into post-primary education, and there is even less systematic information and data available on those at the BoP and their special learning challenges. Having clear information, classification, and data of those at the BoP is a necessary step towards formulating a clear agenda for instituting programmes, such as NFE, that can address the special challenges of learning for youth and adults at the BoP.

Second, we need a better understanding of the challenges of learning at the BoP, in combination with the challenges or barriers of transitioning into post-primary education. This is necessary in order to develop appropriate programmes to address the needs of those at the BoP. This may include understanding and addressing barriers associated with education systems, such as meritocratic intake into limited spaces in secondary education, expansion of the education system, and making better-quality schools that are comprehensive and inclusive. NFE approaches need to be systematically developed and integrated with the knowledge and skills that those at the BoP already possess and utilize in their everyday economic and civic undertaking.

Among the issues that require attention is assessment of what BoP youth and adults know and are able to do (their skills). We need to know more about what they know, and how they utilize their knowledge specifically and broadly to enhance their informal learning. Tapping into the skills that they already utilize in non-formal learning would support their literacy, numeracy, and general economic and civic knowledge,

and impact their life chances. Obviously, the starting point is to ask how the skills of those at the BoP left out of the school systems can be measured. Once this is systematized and agreed upon, then skills training programmes can be developed and instituted.

These are some attempts to address these issues and offer clarity on the learning for this domain at the BoP (drawn from Gal, 2016: 5):

1. In the Literacy Assessment and Monitoring Programme (LAMP, 2009), the focus was on numeracy skills which are ‘measured using short tasks with mathematical content that are embedded in hypothetical context that stimulate real-life situations’.
2. In the International Adult Literacy Survey (IALS, 1996), the focus was on quantitative literacy in relation to the knowledge and skills necessary to perform everyday mathematical tasks, such as figuring out a tip or determining the amount of interest on a loan or ‘locat[ing] and us[ing] information contained in various formats (including job applications, payroll forms, transportation schedules, maps, tables and graphics)’.
3. In the Adult Literacy and Life Skills Survey (ALLS, 2005), attention was paid to skills that enable individuals to respond to ‘mathematical demands of diverse situations’, and ‘numerate behaviour’ is said to have occurred when ‘people manage a situation or solve a problem in a real context’.

However, none of the studies cited above focused on the specific challenges of learning for those at the BoP. When developing policies for addressing the challenges of learning at the BoP for youth and adulthood, it will be necessary to determine the extent to which TVET can support a transition to post-primary learning, and to base such analysis on cross-country evidence about TVET uptake and labour outcome opportunities for those at the BoP. Subsequently, existing programmes would need to be reviewed to assess whether there are barriers or enabling conditions to facilitate the role of TVET in supporting learning for those at BoP. Integrating TVET and NFE can offer new learning platforms for understanding and addressing such challenges in SSA countries.

Conclusion

Youth and adult learning at the BoP in SSA will remain one of the most difficult challenges for meeting the 2030 UN SDGs. Clearly, the population of low-skilled youth is growing (even if more African children are going to school than ever before). The quality of learning is

known to be inadequate, leading to a growing number of poorly skilled youth and adults. While many SSA economies are growing, most of the growth is in the sectors that require at least secondary education, a goal that remains out of reach for many people throughout SSA.

In this chapter, TVET was discussed as one important avenue to address challenges of learning at the BoP in the domain of youth and adulthood, but it has also been noted that TVET is itself beset by several challenges. In the decades ahead, the majority of the population in many SSA countries will be at the BoP, including low-skilled youth and adults. At the same time, systematic programmes and attention to adult education are also lacking. There is also little research devoted to adult education and learning. Thus, an alternative focus that addresses the gaps in formal TVET and lack of attention to NFE will be needed. New approaches should include flexible and creative educational pathways and occupational training schemes geared for those at the BoP, and these should be an integral part of future policy (see Gal, 2017).

Economic indicators related to market growth or (un)employment tend to mask trends and problems related to those at the BoP, so how then would it be known if learning at the BoP has improved in the years since 2015? It is important to note that Goal 4.6 of the SDGs calls on countries to ‘ensure that all youth and a substantial proportion of adults, both men and women, achieve literacy and numeracy’ by 2030. Promoting but also monitoring Goal 4.6 will present multiple challenges to stakeholders. To address SDG 4.6, there is greater need for (a) further conceptualization of target skills of literacy and numeracy, as well as (b) improved indicators that can provide comparative data (see Gal, 2016).

Formal TVET options will not be able to adequately serve youth at the BoP until the quality and relevance of primary education equips them to continue successfully in secondary schools (see Muskin, this volume). Therefore, systems and their donors and other partners must look seriously to develop non-formal and informal learning and training options. In addition, the informal sector, which currently serves as the place to gain rudimentary trade skills, is another area of relevance for youth and adult learning at the BoP because of its prevalence in SSA among those who have not gained post-primary schooling (see Muskin, 2009).

In sum, given the rapidly changing demographics and economies across Africa, significantly more attention will need to be paid to the role of learning among youth and adults at the BoP. Non-formal learning is one important avenue to address this need, and especially to produce

skills that will enhance the employment and further education for African youth and adults at the BoP.

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Commentary

Iddo Gal

Oketch's paper reviews many important issues related to learning at the BoP in SSA, mainly from an economic or human capital perspective. My comments focus on two key topics, of relevance to low-income countries, both in SSA and elsewhere: (a) equal attention to adult education and (b) greater attention to teaching and monitoring of numeracy and mathematics.

First, concerning equal attention to adult education. The paper highlights gaps in the transition from primary to secondary education and to the employment market, and questions the educational options available for out-of-school youth. As Oketch notes, while these are critical targets to address, he acknowledges that changes in education *quality* (vs. mere access) at the primary and secondary levels are slow, and its improvement will face many obstacles. Hence, I argue that a forward-looking educational policy, and programmes for workforce integration, should not focus so intensively on youth, as Oketch does, since in coming decades the majority of the adult population in many high BoP countries will continue to have (relatively) low skills, even if skills of the youngest cohorts of adults (slowly) improve.

I thus believe that countries with high BoP populations should not ignore the skills of adults (15+ to elderly) who are beyond the formal school years, since their competencies will affect economic growth and the characteristics of the job markets into which we hope to see integration of school graduates. In order to ensure economic and social progress, future educational policy and research should encompass flexible and creative educational pathways, learning opportunities, and technical and occupational training schemes, geared for adults as well as for youth at the BoP.

Second, concerning more attention to teaching and monitoring of numeracy and mathematics. Oketch argues that general economic indicators related to labour market growth or (un)employment may mask trends and problems related to those at the BoP. If we agree with that, how then would we know if learning at the BoP has improved, in the post-2015 education agenda? Goal 4.6 of the UN SDGs calls on countries to 'ensure that all youth and a substantial proportion of adults, both men and women, achieve literacy and numeracy' by 2030. Promoting but also monitoring Goal 4.6 presents multiple challenges to stakeholders.

Efforts to conceptualize and measure basic skills of adults in low- and middle-income countries have traditionally focused on literacy (i.e. language skills). While literacy is critical, policy and field-level responses are separate for *numeracy* and literacy. Further, ‘numeracy’ and ‘mathematical knowledge’ are related but not the same, yet both are a key gateway to productive employment in many occupations and to technological progress, and for managing personal affairs and creating an empowered citizenship. To address Goal 4.6, we need (see Gal, 2016): (a) further conceptualization of target skills, (b) better indicators that shed light on systemic factors related to numeracy and mathematics learning (e.g. curriculum coverage, teachers’ qualifications), and (c) better monitoring tools that can provide comparative data on levels of numeracy skills both of adults and of school-age learners, whether they are in or out of school.

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Commentary

Joshua Muskin

Moses Oketch makes an important contribution to the discussion of meeting learning needs at the BoP, exploring particularly the education and training needs of youth, young adults, and adults. Exposing the enormity of this challenge in SSA, he rightly links the problem to the endemic failures of systems to provide adequate quality post-primary education opportunities to BoP-dwellers. Importantly, he suggests further that meeting the challenge is a matter not simply of rights, but also of meeting nations' economic and social goals.

Raising important questions about these dimensions, he points to a penury of research by which to delve more deeply into the core query of his title. Looking to the TVET sector as the most promising pathway to raising youth's prospects for emerging from their economic and social marginalization, Oketch finds little to describe how this happens in reality. TVET is clearly a good place to start, but in many countries, it will continue to fall well short of its promise until at least three conditions are met. First, as Oketch notes, the supply of TVET in terms of skills and skilled youth must better match the demand. Second, the scope of accepted modalities for its delivery must expand greatly, including the informal apprenticeship system as well as training in core competencies, such as literacy. Lastly, TVET will not serve youth adequately at the BoP until the quality and *relevance* of primary education equips them to continue successfully in secondary education or training.

Looking at the second point, systems and their donor and other partners must look seriously at developing non-formal and informal learning and training options. This does not exclude TVET.²⁹ It does, however, prioritize meeting youth, young adults, and adults where they are – professionally, personally, physically, and in terms of their cognitive skills – to help them gain and continue to strengthen the literacy, numeracy, 'life', and professional skills they require to have more secure, fulfilling lives.

Strategically, a wide range of learning options should be offered, coupled with efforts to strengthen the overall formal education and training system, which will be slower to gestate. Oketch alludes to one

29. My organization, Geneva Global, is experimenting with a promising strategy in Ethiopia that brings secondary school dropouts back into secondary school after many years away by offering them weekend TVET courses.

of these options: the informal sector. The informal sector is currently a place to gain rudimentary trade skills, but there is great potential for those in the BoP to benefit in terms of both their cognitive and technical skills, as well as to develop behaviours and methods of entrepreneurship (Muskin, 2009). The many functional literacy courses offered by governments and NGOs may (and often do) extend beyond basic competencies to offer lifelong learning options across a range of relevant life topics. And the realm of ICT promises ever-increasing access to information that individuals at the BoP can use to elevate their knowledge, their productivity, and their fulfilment.

Formal education and training paths to escape the BoP are surely important; but more immediate gains may be achieved by promoting non-formal and informal learning options that aim first to raise the BoP floor.

References

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