SDG 4 targets: Neglected questions on conditions and circumstances for education reforms in Africa

Moses Oketch

University College London (UCL), Institute of Education, 20 Bedford Way, London WC1H 0AL, United Kingdom

ARTICLE INFO	ABSTRACT
	This article argues that the SDG 4 targets failed to sufficiently address the critical aspects concerning the conditions and circumstances required for the successful implementation of education reforms to achieve these targets in Africa. As a result, at the midpoint of 2030, it is evident that these targets are unlikely to be achieved. Today, a pressing issue in many African countries is the widespread problem of low learning levels, which affects the majority of children. Many children attend school but find themselves several grades behind in their understanding of the expected curriculum and this has exacerbated and perpetuated education inequality, which remains unaddressed by the SDG 4 targets and undermines their achievement.

1. Introduction

Education systems in Africa are undergoing a significant reorientation, shifting their focus from serving privileged groups to providing universal access to quality education for all, including intentionally focusing on historically marginalised groups. Consequently, the composition of the groups of children who are in-school has shifted in countries such as Ethiopia such that many more are first generation learners than previously (Iyer et al., 2020). Yet, it is also well understood that learning levels and learning progress among students in many African countries fall substantially short of those in higher income (e.g. OECD) countries and of those required by SDG 4 targets. According to Africa Sustainable Development Report (2022), more than 60 % of children and young people are not meeting the minimum proficiency requirements in reading and mathematics. Low levels of learning progress, linked to poor quality education systems, deny young people and African nations the full social and health benefits of quality education (Raghupathi and Raghupathi, 2020; McMahon, 2002). In countries where access to education has improved markedly such as Ethiopia, concern regarding quality remains (Oketch et al., 2021). The central argument in this commentary is that SDG 4 targets did not focus on questions relating to the conditions and circumstances under which education reforms are undertaken to realise meaningful schooling and learning for all children, including those who have been traditionally marginalised, in African countries. Furthermore, targets alone won't reach learning goals (Pritchett and Sandefur, 2020). Specifically, the comments here focus on three interconnected issues of relevance to the

failure of SDG 4 targets in Africa: (1) limited attention to system performance and diagnostic; (2) not appreciating reform pathways and catalysts; and (3) clarity of policy influence. The commentary starts with a brief background. It then explains system performance and diagnostic tools. Next, the commentary explains reform pathways, blockages and catalyst. Policy influence follows. The final section presents a brief conclusion.

2. Background

First, this section provides the context for the three interconnected issues introduced earlier. It serves a crucial role in setting out the background necessary for the subsequent discussion of these three issues.

There is now mounting evidence available to policy-makers and policy analysts both with regard to the key drivers of educational quality at the system-level and especially the likely impacts of reforms and interventions intended to improve education quality and learning outcomes *at scale.* Much attention is now directed towards better synthesis and integration of available research, especially on *Foundational Learning*, which according to UNICEF (2022) is defined as being able to read, do math and have the socio-emotional skills to engage with others in society. Crouch, Kaffenberger, and Savage (2021) have argued that there is a need to focus on systems improvement, and to use foundational learning as the guiding principle to ratchet up equitable learning for all.

Covid-19 eroded enrolment gains that had been made on education

in Africa as it put 288 million school-age children out of school (Africa SDG Index and Dashboard Report, 2020) and it is hard to imagine a focus on learning when millions of children are out of school in the first place. COVID-19 was not anticipated in the formulation of the SDG 4 targets, but it brought to light a series of interconnected crises affecting the economy, healthcare, and education. The pandemic exacerbated existing inequalities and vulnerabilities, revealing the profound disparities that exist within many African countries and their institutions, with tangible consequences for young people's lives. Even prior to the pandemic, significant disparities in learning outcomes were observed among countries and in progressing toward any of the SDG 4 targets. According to the SDSN (2022) report, only Mauritius and Seychelles were reported to be on track in meeting enrolment and completion targets. Emphasising learning alongside schooling is pivotal in achieving SDG 4. Learning is the core objective of schooling, and the significance of attending school lies in facilitating this process. Without effective learning, the purpose of attending school diminishes.

While evidence concerning the impacts of children's socio-economic backgrounds and of a number of key features of teacher quality on learning outcomes is somewhat consistent and fairly robust across a large volume of 'education production function' (EPF) studies, covering many countries, much less is known about the macro-level drivers of system performance such as the political economy and its role in education system reforms success. An educational production function establishes the relationship between inputs from both schools and students and the quantification of educational outcomes produced by the school system. But large differences between systems demand much greater attention to the macro-level, and to the inter-relationships between systemic factors and the micro and meso-levels of pupil, class, teacher and school which SDG 4 targets does not help to address. Further, strong evidence is available for the impacts of individual interventions, such as national literacy programme in Kenya (Piper et al., 2018), from randomised control trials, while the generalisability and 'scalability' of such interventions to achieve the SDG 4 targets is highly dependent upon external conditions, namely strength of government system and reform-capacity; each of which is much less well understood using SDG 4 targets.

A systems-approach to improving learning is now emphasised and centres on the relationships between components of an education-system, including for example, teacher training and deployment, school-management and curricular design, within a comparative framework, including through a rigorous case-control approach to understanding the internal and external conditions which enable better system performance (Pritchett, 2015). For example, while it is obvious in one sense that the quality of an education system cannot exceed the quality of its teachers, teachers with similar characteristics in one setting may produce outcomes quite different from those in another, as is often shown in several studies of private versus public schooling, even at the within-country level; and in a number of cross-country studies which find a large unexplained country-effect after accounting for differences in pupils' socio-economic background and in teacher quality and classroom conditions (Tooley et al., 2005; Carnoy et al., 2015). But macro-level factors frequently resist analysis through reduction to simple proxy indicators. Measures such as per-pupil spending and teacher-pupil ratios explain relatively little of the differences between systems. Historical and political factors explain more differences between systems –but these are less well understood and less readily quantified, highlighting the key role of analyses drawing on perspectives from political economy, which offer to shed light on the role of institutions and of formal and informal structures and mechanisms of decision-making and policy-implementation within and across contexts.

Moreover, diagnoses of system failure for not being on track to achieving the SDG 4 targets as presented in AU/UNECA/AfDB/UNDP (2022) report "All African countries are facing challenges at different levels and are not on track to achieving goal 4 by the target date, except Mauritius and Seychelles" (citing SDSN, 2022) are not in themselves

solutions. Understanding dynamics of systemic change is required to establish potentially successful reform pathways and to understand the blockages that stand in the way of achieving the SDG targets. Understanding the structural changes that accompany successful movement towards the SDG 4 targets in Mauritius and Seychelles and describing them comprehensively can be a key step towards improving system performance, leading ultimately to the construction of new systemic change in education and the development of mechanisms to galvanise their uptake towards achieving SDG 4 targets in other African countries.

According to AU/UNECA/AfDB/UNDP (2022) Africa Sustainable Development Report which has tracked SDG 4 progress by targets, at midpoint toward 2030, African countries have demonstrated some advancements in some targets. The completion rate (Target 4.1.2) stands at over 80 %, while the net enrolment rate in pre-primary education (Target 4.2.2) is approximately 70 %. In terms of inequality indices for education indicators (Target 4.5.1), there has been a notable improvement, reaching around 75 %. The organised teacher training target (Target 4.c.1) has been achieved at a rate of about 60 %, and the proportion of schools offering basic services (Target 4.a.1) slightly exceeds 40 %. Focusing on Target 4.1, where progress has been observed, the minimum proficiency level in grades 2 and 3 for mathematics was 25.8 %, and for reading, it was 24.1 % in 2019. However, these figures are notably lower than the global average minimum proficiency levels of 46.4 % in mathematics and 47.2 % in reading. Disparities across countries were also evident. Regarding Target 4.1.2, which addresses completion rates for primary, lower secondary, and upper secondary education, primary school completion increased from 60.6 % in 2015 to 64.1 % in 2019. The completion rates for lower secondary and upper secondary education were 46.2 % and 29.1 %, respectively, in 2019 (AU/UNECA/AfDB/UNDP, 2022). Out of the ten targets, it can be acknowledged that some progress has been made in aspects of Target 1 (universal primary and secondary education). However, the overall conclusion is that the SDG 4 targets will highly likely not be met in African countries, with the exception of Mauritius and Seychelles.

3. System performance and diagnostic tools

Second, comparing education systems is useful because it provides better evidence on both the efficiency and effectiveness of education systems that are making progress. This forms the starting point for establishing summary performance indicators for the SDG 4 targets at the system level, akin to the work of Global Education Monitoring Report (UNESCO, 2020). Differences in education systems depend both on differences in outcomes and inputs, while the key to improving performance within a limited resource envelope is in improving the efficiency and effectiveness with which inputs are employed. This is because measures of performance, efficiency and effectiveness do not provide explanations of how and why an education system is where it is or of what works to improve it. Instead of targets, the development of system diagnostic tools is a crucial step for understanding the reasons for differences in system performance such as between Mauritius and Kenya. These tools should be designed to identify strengths and weaknesses in systems. Weak links in education systems are especially important, owing to the interdependence of components within a system. For example, poor school accountability (which involves measuring and assessing how well schools are meeting specific educational goals and standards, and then holding them responsible for their performance) may explain high levels of teacher absenteeism as well as poor compliance with a range of educational directives and reforms, and indeed the prevalence of corruption which then contribute to challenges towards achieving the SDG 4 targets. The specific mechanisms and metrics used for school accountability can vary widely between countries and regions, but the overarching goal is to ensure that schools are effective in providing quality education and that they are held responsible for their performance in achieving educational goals and standards.

While system diagnostics can provide a fuller understanding of the sources of good or poor performance at the present, they do not in themselves provide a way forward with respect to specific reforms needed (or likely to be effective). For example, while poor school accountability may be a proximal cause of low learning progress, this leaves open the question of *how to improve* accountability. Randomised controlled trials (RCTs) based studies offer some insight at small-scale on potential mechanisms of change, but where the blockage lies at the macro-level there is a danger of over-simplification or reduction when using experimental evidence. With respect to macro-level questions, for example, curricular reform, alternative solutions such as decentralising curricular decisions or indeed centralising them could equally well improve or worsen system performance towards achieving the SDG 4 target, depending on the institutional and political-economic context, so that understanding 'reform pathways' is a linked but separate endeavour from understanding system performance and establishing appropriate diagnostic tools. Pritchett and Beatty (2013; 2015) have highlighted the issue of a mismatch between teaching, learning, and the curriculum, specifically referring to over-ambitious curricula that exceed students' actual levels of learning. This mismatch is identified as a contributing factor to low educational outcomes and limited progress in learning, and this is a typical macro-level question.

4. Reform pathways, blockages and catalysts for reform

Third, the effectiveness of education reforms in respect of individual dimensions of the education system, such as curricula or teacher training is often limited to a considerable extent by the 'next weakest link' in the system. For instance, improving text-books may yield improvements in learning, but these improvements will depend upon teachers' knowledge and training being adequate to employ the new books effectively and on regular assessment of pupils' learning feeding back into teaching and learning. Many of these links are *learning opportunity processes* (Carnoy et al., 2015), rather than more readily measurable simple inputs, which require more complex indicators, to be developed. Reform pathways are more than mechanisms for change of individual features of a system (e.g. teacher absenteeism) but reflect the full chain of linkages required for achieving SDG 4 targets. Reform pathways describe routes from the present status quo to improved system performance based on a holistic system-oriented approach, which results from a thorough diagnosis of weaknesses and strengths plus a full understanding of the interdependence between mechanisms of change. The identification of reform pathways begins with a situational analysis of the education system status quo - an understanding of the reasons why changes in any of the Africa countries education systems that have been brought about by SDG 4 and are considered necessary to achieving the targets have not been undertaken or have not succeeded to date (in contexts not experiencing conflict). The identification of reform pathways relates largely to the political economy of individual education systems (Gershberg et al., 2023), which was not addressed by the SDG 4 targets. Syntheses of the evidence across contexts and in the African countries to enhance understanding of the nature of decision-making and implementation processes and their influences, can provide a framework for understanding political economies of education and their linkages to both educational quality and learning outcomes linked with SDG 4.

5. Policy influence

Fourth, informed policy change in education requires technical analyses of system performance, diagnosis of priority areas for development and an understanding of the political economy of systemic change, so as to link potential reform mechanisms to the systems in which they are most likely to be effective. Further, the initiation of reform-oriented policies is dependent on the demand for such policies within states and societies. Accordingly, improving the demand for reform by governments and for the evidence required for evidence-based policy-making is

necessary. Better understanding of the demand for evidence and for evidence-based reform can provide insights into why only two sub-Saharan Africa countries (Mauritius and Seychelles) are reported to be on track to achieving some of the SDG 4 targets and better than others at driving change. A fuller understanding of the reasons for disconnects in education policy (and relevant policies in other sectors) and how to remedy them is important. A systemic perspective can draw together evidence on the strengths and weaknesses of approaches which are focused heavily on issue-specific areas – such as literacy programmes or more recently the research by Filmer (2020) on Learning-adjusted years of schooling (LAYS). A systems-approach can serve to develop the characteristics of successful programmes or reforms and an analysis of their uptake and institutionalisation.

6. Conclusion

To conclude, in several African countries, education systems are currently undergoing a significant transformation. They are shifting their orientation from catering to privileged groups to ensuring universal access to quality education for all. This transformation has led to changes in the composition of in-school children, with a notable increase in first generation learners in countries like Ethiopia.

However, despite these efforts, it is evident that many African nations are falling short of meeting the Sustainable Development Goal 4 (SDG 4) targets except targets on completion rate, net enrolment rate (pre-primary), inequality indices for education indicators (4.51.), organised teacher training (4.c.1) and proportion of schools offering basic services (4.a.1) on which it is reported accelerated progress has been made.

Initially perceived as a crucial advancement for enhancing educational system performance, the formulation of SDG 4 targets is now recognised as falling short in capturing the realities in numerous African countries. The current understanding highlights that relying solely on target-based measures of performance does not offer insights into the underlying factors influencing an education system's status or effective strategies for enhancement. Instead of exclusively focusing on targets, it would have been more beneficial to develop contextually relevant tools for assessing system performance and diagnostics. These tools should be specifically designed to pinpoint the strengths and weaknesses within education systems and reform pathways.

Moreover, understanding reform pathways is complementary to system diagnostic tools. The identification of reform pathways is closely tied to the political economy of individual education system, a dimension overlooked in the establishment of SDG 4 targets. These targets failed to consider crucial questions regarding the conditions and circumstances under which effective education reforms are initiated. Connected to the exploration of reform pathways is a focus on drawing insights from successful policy reforms. The lack of integration of system performance, reform pathways, and policy influence, which SDG targets neglect implies that the challenges in Africa's education systems are likely to persist. SDG 4 targets did not adequately address the critical questions related to the conditions and circumstances necessary for effective education reforms to take place to achieve them.

Author statement

I am submitting the revised manuscript addressing the feedback provided by the reviewers. I have incorporated revisions for comments 1, 2, 3 (a), 5, and 6. However, addressing comment 3 (b) does not align with my preferences, as I am not inclined towards endorsing 'best-buys' publications.

Comment 4 has not been addressed as I do not perceive a distinction between quality and access. I have previously explored these themes in my other publications, and the focus of this commentary does not necessitate revisiting that discussion. I firmly believe that access and quality are not mutually exclusive.

CRediT authorship contribution statement

Moses Oketch: Writing – review & editing, Writing – original draft, Formal analysis, Conceptualization.

References

AU/UNECA/AfDB/UNDP, 2022. Africa Sustainable Development Report 2022.

Carnoy, M., Ngware, M., Oketch, M., 2015. The role of classroom resources and national education context in student learning gains: comparing Botswana, Kenya, and South Africa. Comp. Educ. Rev. 59 (2), 199–233.

Crouch, L., Kaffenberger, M., Savage, L., 2021. Using learning profiles to inform education priorities: an editors' overview of the special issue. Int. J. Educ. Dev. 86, 102477.

Gershberg, A.I., Kefale, A., Hailu, B.H., 2023. The political economy of educational reform and learning in Ethiopia (1941-2021). Res. Improv. Syst. Educ. PE09. https://doi.org/10.35489/BSG-RISE-2023/PE09.

Iyer, P., Rolleston, C., Rose, P., Woldehanna, T., 2020. A rising tide of access: what consequences for equitable learning in Ethiopia? Oxf. Rev. Educ. 46, 601–618. https://doi.org/10.17863/CAM.50021.

McMahon, W.W., 2002. Education and Development: Measuring the Social Benefits. Oxford University Press, Oxford & New York.

Oketch, M., Rolleston, C., Rossiter, J., 2021. Diagnosing the learning crisis: what can value-added analysis contribute? Int. J. Educ. Dev. 87.

Piper, B., Destefeno, J., Kinyanjui, E., Ong'le, S., 2018. Scaling up successfully: lessons from Kenya's Tusome national literacy program. J. Educ. Change 19, 293–321.

Pritchett, L., 2015. Creating education systems coherent for learning outcomes: making the transition from schooling to learning. Res. Improv. Syst. Educ. PE09. ⟨https://riseprogramme.org/sites/default/files/inline-files/RISE_WP-005_Pritchett.pdf⟩.

Pritchett, L., Sandefur, J., 2020. Girls' schooling and women's literacy: schooling targets alone won't reach learning goals. Int. J. Educ. Dev. 78, 102242.

Raghupathi, V., Raghupathi, W., 2020. The influence of education on health: an emprical assessment of OECD countries for the period 1995-2015. Arch. Public Health 78, 20.

SDSN, 2022.: Sustainable Development Report 2022:From Crisis to Sustainable Development: the SDGs as Roadmap to 2030 and Beyond.

Tooley, J., Dixon, P., Olaiyan, O., 2005. Private & Public schooling in low income areas of Lagos State, Nigeria. Acensus & comparative survey. Int. J. Educ. Dev. 43 (No. 3).

UNESCO, 2020. Global Education Monitoring Report 2020: Inclusion and education: All means all. Paris. UNESCO.

UNICEF, 2022. Briefing Note Commitment to Action for Foundational Learning. https://www.unicef.org/media/126926/file accessed 10/01/2024.