Sub-Saharan teachers' conditions and circumstances: a review

Bernardo Schotgues[A]

A   *Federal University of Paraná (UFPR), Brazil*

Keywords

Abstract

This non-systematic review explores the state of public primary school teachers in Sub-Saharan Africa (SSA), including pre-service training, professional development, absenteeism and teaching and learning materials (TLMs). Overall, there are severe deficits in teacher content knowledge, pre- and in-service training, quality and quantity of available teaching and learning materials, and attendance. However, cases of resilience and effectiveness are also reported, based on qualitative data, which is also used to discuss decentralization and bottom-up approaches to educational challenges in resource-poor settings.

Correspondence

ber.schotgues@gmail.com [A]

Article Info

Introduction

It is a truism that teachers are fundamental to the experience of schooling. While teachers do not tell the whole story of school achievement, it is unlikely for it to occur in the absence of proper teaching. However, guaranteeing qualified instruction comes with its own set of complex challenges, especially in resource-poor settings. Universal basic education is something that national governments in the global south were not prepared to provide in 1990 when the concept officially came about, and, in many cases, something they are not able to provide now. The explosive expansion of free schooling implied that the education provided would be of very low quality (Härma, 2021; World Bank, 2003; Birger & Craissati, 2009; Winkler & Sondergaard, 2008). One of the reasons is that the required human resources for teaching were not available and could not be quickly sourced overnight (Hansen, 1965; Indire & Hanson, 1971; UNESCO, 2019). Some countries did not have enough educated people who could become teachers if given the opportunity. Malawi, for instance, hired 20,000 new teachers, the overwhelming majority of high-school graduates with a quick two-and-a-half-week course as training. Countries ended up with a mixture of untrained, retired, and voluntary teachers (Birger & Craissati, 2009). The cohort of 500,000 teachers in 1970 reached almost 2.8 million in 2009 (UNESCO Institute for Statistics, 2011), and continues to grow in ever insufficient numbers. SSA has the world's highest and most consistent growth in school-aged population (World Bank, 2019a, 2019b). Qualified teachers would not only have to be arranged for, but this would need to be accomplished at a rate that could match the rising multitudes of children.

How qualified are the teachers?

National qualification requirements vary, making comparison frail. The proportion of qualified teachers can, however, indicate whether countries fulfill the requirements they have set for themselves. Average proportion of qualified primary teachers in SSA has decreased from around 85% in 2000 to 64% in 2015 (UNESCO, 2019) as schools continually hire unqualified teachers to fill their immediate needs at a lower cost. In the long term, poorly educated students grow up to be low-quality teachers, making the full picture rather bleak. Despite efforts to qualify teachers, many are functionally illiterate.

Some countries (e.g., Mauritius, Botswana, Kenya, Namibia, Uganda) reach 90% of qualified teachers; others (e.g., South Sudan, Benin, Angola, Senegal) are below 50%. Trends vary across and within countries, urban and rural areas, and time of entry into the profession. Data suggests positive developments: of 24 SSA countries, 17 had over 95% of newly recruited teachers meet national qualification standards (Nordstrum, 2015).

"Qualified teacher" does not mean quality teaching. Correlations between teacher training and student outcome in SSA are often very weak (e.g., Fehrler et al., 2009). Indicators such as years of experience and level of education are also unable to consistently predict teacher quality. Content knowledge is used as an indicator, as a teacher is expected to know what she or he teaches.

A study by Ngware and colleagues (2013) in urban informal settlements across six cities in Kenya showed that only 5% of teachers had no training whatsoever, and about half the sample had completed at least lower secondary education, with 22% having at least a bachelor's degree. But experience and qualification had little to do with the performance of their 3rd grade students in literacy and numeracy. In a test of math content knowledge, pedagogical knowledge and pedagogical content knowledge, teachers scored around 50%, with no difference between training and educational levels. Older and more experienced teachers scored less, though the difference was small. Another study from Kenya (Martin & Pimhidzai, 2013) showed that math and English teachers scored 73% and 56% in their respective subjects in a test intended for the lower-primary level; and all teachers scored a mean of 36% in pedagogical knowledge and skill. Training and seniority did not correlate with the teacher's performance.

In Nigeria, all 19,125 teachers in the state of Kwara, one of the nation's poorest, were tested on primary four material across four subjects (Johnson, 2008). To be considered "competent", a teacher was expected to score 80% or higher on all four subjects – which only seven people out of the sample managed to do. Many failed to score at all. Similar studies were conducted in southern Nigeria, with allegedly even worse results not made public (Härma, 2021).

Bold and colleagues (2017) used a sample of hundreds of schools across eight countries, representative of close to 40% of the SSA population. From each school, on average five teachers were tested. Instead of filling tests themselves, teachers were asked to mark mock student tests in language and mathematics from the lower primary. The math test also asked questions from upper primary school. 7% of teachers could reach the 80% mark in language, with the levels being uniformly low across countries. About 70% of math teachers reached the mark, but there was great variation, from 49% in Togo to 93% in Kenya. Along with the content knowledge for the subjects they taught, the research also probed pedagogical knowledge, how teachers monitor student progress and how much they apply their pedagogical knowledge in the classroom, based on direct observation. As in other tests, the threshold for being considered appropriate was getting 80% of the items right. 11% of teachers reached the threshold, in four countries, fewer than 5% did so.

Overall, most teachers in the SSA region are hardly qualified to offer a quality education. They struggle with the content knowledge they teach and with the skills necessary to translate this content knowledge into effective instruction and activities for their students. This is somewhat consistent throughout different levels of teacher education, pre-service training, and years of experience.

What education do teachers receive?

Many places have minimum qualification standards for teachers and established institutions to see them through, although a large cohort of teachers were and still are hired without meeting said standards to deal with the insurmountable demand. Teacher training usually requires at least lower secondary education, though it is not uncommon for people with upper secondary or post-secondary education to attend. Most are at the level of professional training. A few, such as in Mali and South Africa, require full-fledged bachelor's degrees and sometimes further study. The professional teacher training and degree programs can interact, allowing fast tracks and alternative options. Length is usually between one and three years. Kenya, Tanzania, and Uganda require one year; Senegal, Benin and Niger require two; and Zambia requires three, for instance. Fees and costs of attendance vary. Incentives, scholarships or special conditions may be available – e.g., In Uganda, teacher training is free, provided the teachers agree to teach in public schools. In other cases, like Burkina Faso, costs can be quite prohibitive (Nordstrum, 2015).

Increased teacher demand have pressured training institutions for output, leading to a decrease in quality which may already have been lacking. A report from Nigeria (Thomas, 2011) describes the strategic, operational, technical, political and attitudinal challenges at an educational college, where there were not even functional toilets. The three state colleges in Kwara were producing over 13,000 "qualified teachers" per year. This was actually above the demand, but reduced income from fees was seen as a threat to the colleges' position.

Additionally, the absence of qualified school leavers lowered entry requirements. The teaching career is not held in high regard. Teacher training absorbs school leavers who fail to pursue other paths of further education. In Lesotho, Eritrea, and The Gambia, passing mathematics was not a requirement for entry to teacher training or to teach mathematics (Mulkeen, 2009). Niger set a high standard by requiring a written thesis for training completion, which backfired with a national problem of forged teacher licenses (Nordstrum, 2015).

Teacher training mostly fails to compensate for trainees' lack of content knowledge. In Tanzania, only a fourth of mathematics and reading teachers received any pre- or in-service training focused on teaching their content area (Brombacher et al., 2013), with similar findings in Nigeria (RTI International, 2013) and Rwanda (deStefano et al., 2012). Ethiopia and Kenya show better figures for pre-service training, though teachers report a lack of in-service training (RTI International, 2012; Piper, 2010). When subject knowledge is present (e.g., Ghana's; Asare & Nti, 2014), instruction leans on more advanced material, assuming student teachers grasp basic school-level content, which they often do not.

Those teaching in teacher training also were inefficient. Across Eritrea, Malawi and Zambia (Mulkeen, 2009), tutors for primary teacher training colleges were picked based on academic qualifications. Most were former secondary teachers, some with no experience teaching primary. In The Gambia, 77% of tutors had never been primary teachers. In Zanzibar, the masters-level requirement kept the most experienced in primary school from becoming tutors.

To address the question of quality, some countries employ standardized tests, which need to be taken at some point during teacher training. In 2018, Zambia began to administer an aptitude test to teaching-job-hopefuls, with complete training as a prerequisite. If anything, this could bar illiterates from becoming teachers, which had, admittedly, happened before (Härma, 2021). A similar test was suggested in South Africa, facing stern objections from teachers' unions (My Broadband, 2018). In the early 2000s, Ghana introduced a test at the end of the first year of teacher training, which gatekept further study, guaranteeing that no time would be wasted on inadequate candidates (Akyeampong, 2003).

Once again, completing training does not mean that a teacher is qualified. National standards usually mean passing certain courses rather than being able to teach well. They frequently focus on education theory and pedagogical knowledge rather than practice in the school setting. In Tanzania, only a fourth of mathematics and reading teachers received any pre- or in-service training focused on their content area (Brombacher et al., 2013), with similar findings in Nigeria (RTI International, 2013) and Rwanda (deStefano et al., 2012). Ethiopia and Kenya show better figures for pre-service training, though teachers report a lack of in-service training (RTI International, 2012; Piper, 2010). Even if proper training is available and dedicated future teachers adhere well to it, in many cases, the material and curriculum may be lacking, for instance, focusing on an idealized classroom, very different from the extremely harsh conditions of many African schools. Teachers are then overwhelmed by real-world challenges and eventually succumb to the inertia of the system (Akyampong et al., 2013).

What is the reality and perspective of teacher professional development?

Making the teaching career attractive to candidates is an important component for growing and maintaining a qualified workforce. Teacher cohorts must contend not only with the growing school population, but also with teacher attrition and retirement. A teacher needs to continue to provide service to justify investment in quality via continuing education. Working conditions, career progression, salaries and alternative job opportunities are just some of the incentives that may lead to qualified and unqualified teachers both leaving the profession or moving to the private sector. In Uganda, the rise in the proportion of qualified teachers was due not only to qualifying new teachers, but also because many unqualified ones left the workforce. In Namibia, Mali, Angola and a handful of other countries, the rate of attrition is not sustainable (Nordstrum, 2015). In contrast, Kenya and Niger actually encourage senior teachers to retire in order to free up funds (Lengoiboni, 2014).

The incentives for the career of civil servant teacher can be quite high. In South Africa and Kenya, powerful teachers' unions negotiate allowances, maternal leave, and other

benefits (Kenya National Union of Teachers, 2007). Zambia offers daily subsistence allowance, 20% double shift allowance, 20% bonus for degree holders, permanent housing for 25% of primary teachers, and bonus for teachers working in rural areas, in addition to salaries (Mulkeen, 2009). SSA teachers' salaries may seem modest for those in developed nations, but when corrected for purchasing power, most countries offer at least four times the country's GDP per capita, with some reaching ten times the GDP per capita (UNESCO Institute for Statistics, 2011). Many teachers are relatively well-off for their country's standards of living, others not so much. Nigeria offers high salaries on paper, but teachers may receive them in part, late, or not at all. Some teachers rely on gifts from the students and parents for survival. The relatively high salaries and benefits are usually restrained to actualized civil servants, which often are a minority. Contract teachers' salaries and benefits are substantially less. The journey or opportunities for an unqualified contract teacher to become a certified and trained civil servant varies across countries and can be quite cumbersome.

National governments have frequently employed some form of "catching up" mechanism, so that teachers currently in exercise without proper certification may be trained without ceasing the provision of their services. Benin uses a combination of distance learning and face to face instruction over three years (Republic of Benin Ministry of Education, 2013). Ghana provides an alternative version of the traditional training, taking two years instead of three, as well as a distance learning four-year alternative (Ghana Education Service, 2012). The National teachers' institute of Nigeria provides distance learning courses for initial certification, upgraded qualifications, and professional development opportunities. Kenya made a six-moths distance learning program available in 2009, to deal with those already teaching and with the 18,000 unqualified personnel they hired that year (which led to strikes by unions). Uganda has a dedicated program for upgrading teaching certification into a full-fledged bachelor`s while in-service (Mulkeen, 2009). Mozambique, contrary to the norm, requires teachers to already be working via contract hiring to start their career before receiving pre-service training. Candidates then apply for a bureaucratic process which makes them probatory civil servants for two years and, afterwards, permanent civil servants. The process should take a minimum of four months, but many are left waiting for an indefinite amount of time. This is due to both government inefficiency and the high fees the teacher is expected to pay for registration (Beutel, 2011). Mozambique holds one of the highest proportions of uncertified teachers.

Both literature reviews and empirical research of "upgrade programs'' in Tanzania, Malawi and Nigeria (Krujier, 2010) found hurried introduction and implementation, and little regard for design, piloting and redesign. Training centers can be far from schools, making face-to-face tutoring and in-service mentoring hard to balance. Face-to-face tutoring was criticized as too crowded, short, and passive in some cases, with a lot of time spent on lectures. Content often focused heavily on participatory methods, not considering how appropriate it would be or whether it could be adapted to over-80-student-classrooms.

A plethora of SSA countries have plans for career progression and in-service training of teachers, beyond and complementary to certification and degrees. However, in practice, several of those initiatives are crippled by the lack of manpower and obstacles such as distant schools and high costs. As part of professional development, and also to improve and monitor quality in school, there are plans for counselors or inspectors to regularly visit schools and provide support and feedback (e.g. Benin, Mali, Uganda, Zambia, Niger). Becoming a counselor is sometimes a progression from the teaching cadre, and/or requires special degree qualifications.

In Burkina Faso, it requires three years of teaching experience, and becoming an instructor requires 6. Given the lack of teachers, counselors and inspectors are also drastically understaffed. In 2009, each inspector in Uganda was responsible for 771 teachers in 70 schools, in Zambia, for 181 teachers (Mulkeen, 2009). Many schools never see an inspector. And many would prefer not to. These counselors are often able to influence or determine the career progression of teachers, and thus, what was originally meant as a support and feedback mechanism threads a feeble line between helping and accessing, which can make teachers resistant to their interference. Mali has taken active measures to prevent this, changing inspectorates to "pedagogic advice centers", designed for advice support and training, instead of supervision (Lugaz & de Grawe, 2010). Kenya initially struggled to establish proper in-service training systems but was able to establish education resource centers which have tutors visit schools to discuss curricula and best practices. Benin organizes training around districts of four or five schools, and have an instructor focus on issues identified by school supervisors, while secondary teachers receive training with educators of the same subject on themes identified at the national level. Niger has ongoing training for directors, pedagogical supervisors, and inspectors on how to observe and give feedback to teachers (Antonowicz et al., 2010). Nigeria has student centers throughout the country, and professional development workshops through distance learning. Very active teachers' unions seek to bring teachers together for seminars and discussions.

Other places have more punctual interventions. Burkina Faso sought to provide regular seminars. Zambia offers in-service training offered through seminars and workshops by education colleges, though this is not regular or consistent, and is limited mostly to urban areas. Of note, however, are the Zambian dedicated programs for treatment, allowance, loans, and counseling to HIV positive teachers. The country, and the overall region, have a serious AIDS epidemic (UNAIDS, 2021). In Mozambique, teachers are required to participate in "pedagogical days" throughout the year, where they are provided additional instruction, receive help from their peers and share experiences. Short in-service training is available through teacher training colleges, but adherence is very low. Longer programs are available, but financial and time constraints are often overwhelming.

Though plans are made for professional development, they hardly come to fruition, especially in the rural countryside. Making them effective would be extremely costly, not only for arranging the qualified staff and keeping consistent

follow-ups to interventions. It would also require simple transportation, food and lodging costs for those involved; or the technology that would need to be arranged for to make distant learning a real possibility. In a 2012 Nigerian survey, 47% of teachers claimed to never have had the opportunity for in-service training (Nordstrum, 2015). The same was heard for 61% of Ethiopian (Piper, 2010) and 73% of Rwandan teachers (deStefano et al., 2012).

South Africa was more successful in providing training and tying this training into a cohesive career progression plan, which both makes teachers more accountable and offers incentives for desired results. The nation has regional, district and school-level monitoring and evaluation systems. The institution responsible for evaluating is independent from the school administration system and provides assessment reports of curriculum delivery and school management practices at the school, district, province and Department of Basic education levels (Nordstrum, 2015). All educators in public institutions must be registered in the South African council for educators.

There are "Continuing Professional Teacher Development" programs. These require registration and involve employers, non-governmental organizations (NGOs) and teachers' unions offering courses, programs and activities. Educators must receive a minimum number of professional development credits in three-year cycles (South African Council for Educators, 2013). Remuneration is based on the "Quality management System". Teachers receive ratings based on performance reviews conducted semi-annually. Teachers who meet expectations are reviewed as "good" and have their salary increased by 3% every two years. Teachers who surpass expectations are rated "outstanding" and have their salaries increased by 6% (South African Ministry of Basic Education, 2013). Teachers may also be promoted by performance, experience, and desire for leadership roles. After five years of teaching, they can qualify for head of department. After two years in the latter position, they may become deputy principals, and then, after two more years, a principal.

Other countries also have career or incentive plans, taking different factors into consideration, each with its trials and tribulations. Ghana's teaching career structure is based on professional accomplishment in the classroom, school management and district levels. When beginner teachers are promoted to licensed teachers (the immediate next level on the hierarchy), they are assigned a senior teacher to act as their mentor. Years of experience are still required for promotion, along with completion of in-service training, evaluations and interviews. Higher positions, such as head teacher and director, require evidence of management and leadership skills (Ghana Education Service, 2012). Kenya has a pathway through performance evaluation, order of merit lists and teacher proficiency courses. Mozambique teachers' salaries are determined by qualification, level of responsibility in leadership, and years of experience. Salaries vary greatly.

Incentives are not always maintained consistently. Governments may find themselves unable to promote or pay teachers once they have established requirements, as

was the case in Kenya, Mozambique and probably elsewhere (Nordstrum, 2015). This is likely to demoralize and prevent any gains the incentive system might have provided. Other countries are altogether missing institutional incentives for high-quality teaching, with rewards delinked from performance and determined by qualifications and seniority (Bold et al., 2017; Nordstrum, 2015; Bruns et al., 2011).

The question of teacher absenteeism

Growing evidence indicates the enormous issue of teacher absenteeism in SSA (Read, 2015). Absenteeism could reflect difficulties and obstacles that make attendance less likely. Some take time for religious practices, like Friday prayers for Muslims. There is low extrinsic motivation, with no supervision, no payment, underpayment, or late payment. Unrecognized and unrewarded workers frequently feel overburdened and undervalued, contributing to absenteeism. Some miss classes to supplement income with other activities. Salaries, when available, may need to be collected at distant locations. In Nigeria and Zambia, rural schools can close for a week every month as teachers go back and forth to collect salaries (Nordstrum, 2015). The daily trip to school may require arduous commutes. The lack of school facilities, especially sanitation, toilets and potable water may discourage attendance.

Health conditions like malaria and AIDS are highly prevalent, and a sick teacher is in no condition to show up, even more so with the absence of healthcare facilities available in or close to the school. Maybe related to this are the frequent funeral attendances, also given as a reason for absenteeism. Lack of staff can divide teachers between multiple classrooms, implying attendance to only one at a time. Non-teaching responsibilities, such as cooking, can likewise limit classroom presence. Many countries do not recognize time spent outside the classroom, even if it's for lesson planning. Statutory working time is limited to teaching hours in Benin, Côte d'Ivorie, Djibouti, Guinea-Bissau, Guyana, Mali and Ekiti (Ekiti is a Nigerian state; UNESCO, 2017). Finally, in-service training can take up teaching time in an official capacity, especially if it requires travel. In Senegal, between 2007 and 2014, only 57% of planned school days were delivered. 15% of missing days were due to individual teacher absence, another 13% were due to (mostly teacher) strikes and 5% were due to teacher administrative duties (Niang, 2017). Some accountability interventions have increased student outcomes, but not teacher attendance, maybe because even with the will to, there is no sustainable way of attending. Notwithstanding, considering the data on teachers who show up but spend most of their time not teaching, low effort may also partially explain absenteeism.

Nearly 20% of teachers in Uganda were absent on any given day (Mulkeen, 2009); 25% were not in class when they were meant to be (Winkler & Sondergaard, 2008). A World Bank report on Uganda (Wane & Martin, 2013) found that 27% of teachers were absent, and of those present, a third were not teaching. 40% of classes received no teaching. A pupil in northern Uganda would receive 50 days of teaching in a year, 90 days less than in Kampala.

Kenyan teachers were absent from school 14% of the time but absent from class 47% of the time. Students received just over two hours of instruction a day. Older male teachers with seniority, higher education and training, and on permanent contracts were the most likely to be absent (Martin & Pimhidzai, 2013), suggesting that the lack of accountability and monitoring may be a contributing factor. Posting additional teachers to schools increased absenteeism (Duflo et al., 2015).

In Tanzania, in 2014, unannounced school visits found 14% of teachers absent despite being listed on the school roster (Wane & Martin, 2016). Students on average had just over two hours of contact with teachers (Fredriksen et al., 2015). The study by Bold and colleagues (2017), representing close to 40% of SSA population, found that across countries, a mean 44% of teachers were absent, either from the school or the classroom. This means a third of classrooms were unattended. Rates of absenteeism are remarkably stable over time. They remained about the same in Uganda, while in Tanzania the decline in school absenteeism was offset by absence from class, something also seen in other countries (Bold et al., 2017; Chadhury, 2006).

Additionally, teachers present in class may not be teaching. Monitoring with minute-by-minute snapshots revealed lesson time lost varying between 18% (in Nigeria, the lowest absence rate) to 3% (in Uganda, with the highest absenteeism rate). Across SSA, about 10% of schools provide five hours of teaching daily, and an equally large share provides no teaching at all. Altogether, on average, students receive 2h 46 min of instruction per day - about half the scheduled average time. The highest country average was Nigeria, with just over 3 hours, and the lowest was Mozambique, with 1h 43 min. The average compulsory instructional time in OCDE countries is 4.5 hours.

Teaching and learning materials availability, use and effectiveness[1]

The most common teaching and learning material (TLM) is the textbook. Textbook-per-pupil-ratio (TPR) is a common metric of resource availability. Textbooks can be teachers' only support in delivering the syllabus. Availability has been considered one of the most effective interventions. Most material inputs were severely lacking in SSA for the last decades. More recently, some countries managed to source textbooks in adequate amounts or even above demand (Read, 2015). Others (i.e., Botswana, Kenya, Malawi and Namibia) could not match enrollment, despite increased provision. In Malawi, the percentage of students who did not have a textbook or who shared with at least two colleagues increased from 28.5% in 2000 to 63% in 2007 (UNESCO, 2014).

Out of 33 SSA countries with data indexed by the World Bank (Nordstrum, 2015), six managed to reach 1:1 TPR, and another five surpassed it. 11 countries had between 1:1 and 1:2 TPR, where students likely have some access to

1 Much of the information in this section has been originally compiled and presented in Read's (2015) book "Where have all the textbooks gone?"

the material without individual provision. Alternatively, this could suggest high heterogeneity, with provision covering only some schools. The remaining 11 countries had 1:2 TPR or more. Cameroon reached 1:12, followed by Chad, with about 1:5.

The Southern and Eastern Africa Consortium for Monitoring Educational Quality (SACMEQ), which administers international assessments in the region, shows the availability and trends in textbook access for 6th graders and differs greatly from the World Bank's data. Countries which should have surplus textbooks still hadn't reached 1:1 TPR. Swaziland and Lesotho show high figures, but many countries have a hard time providing textbooks for even half of their students; Tanzania specially lags far behind, with barely any pupil having their own textbook.
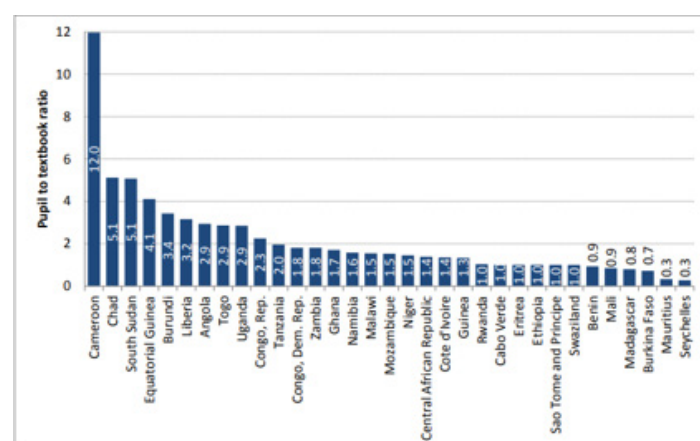

Figure 1: Pupil-textbook-ratio in SSA countries with data indexed by the World Bank Source: Nordstrum's (2015) rendering based on data from The World Bank's DataBank Education Statistics http://databank.worldbank.org/data/databases.aspx
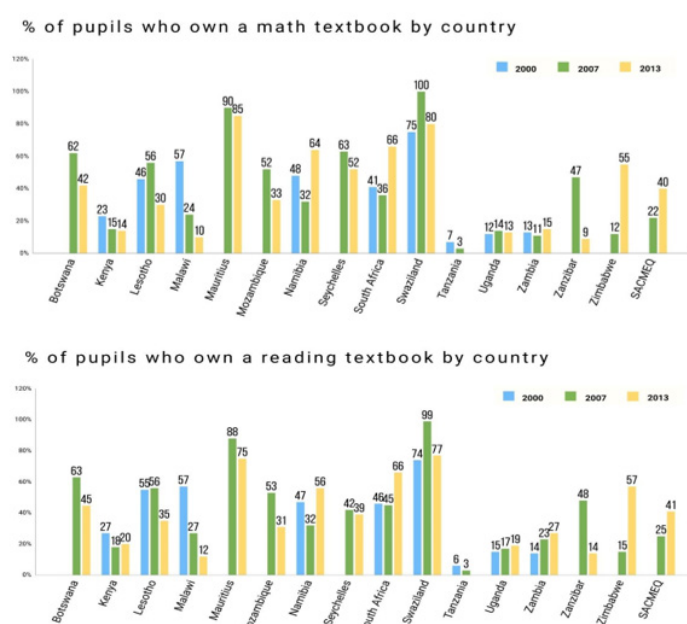

Figure 2: Of pupils who won reading and mathematics textbooks by SACMEQ country. Source: Author's own rendering based on data from the SACMEQ 2 and 3 (Hungi et al., 2011; Spaull, 2012) and 4 (Awich, 2021).

Data can be unreliable. Many schools have no records, and teachers who say they "don't remember" how many textbooks their school has likely have none. This fails to compose the average and is counted as missing data. A study of 13 schools in Namibia (Bontoux, 2008) finds core TPR usually stays between 1:1 and 1:4, though some schools are completely unattended, leading to averages of up to 1:62. Between 1997 and 2006, Rwanda received substantial funding for primary textbooks. Both government and development partners (DPs) assumed 1:2 TPR had been reached nationwide. Research involving two thirds of districts (Umubeyi & Bontoux, 2007) revealed that, despite heavy funding, grade 1 TPR averaged at 1:20 for French; 1:143 for Kinyarwanda and 1:180 for math.

Timing cripples effectiveness. Funding is often released late, leading to late printing, distribution, and increased costs. The Tanzanian Primary Expenditure Tracking Survey (Claussen & Assad, 2009) found that many schools received their first grant allocation several months into the year, with corresponding delays in textbook delivery. 89% of Tanzanian teachers reported not starting the year with the correct number of textbooks. 75% waited more than three months before receiving them (Brombacher et al., 2013). The majority of Kiswahili (81%), English (75%), and mathematics (75%) teachers reported having inadequate classroom materials for these subjects.

Availability does not imply usage or effectiveness. Benefits of textbooks seem to be much weaker than assumed when excluding less rigorous studies. A comparison of 40 experimental and quasi-experimental studies on the cost-effectiveness of various inputs (Evans & Ghosh, 2008) and a meta-analysis of 76 randomized controlled trials (RCT)'s on 110 inputs (McEwan, 2013) both found textbooks to be a low-cost, effective intervention, but noted research was not robust to checks from study moderators. A summary of results from 13 RCT's (Glewwe et al., 2011) found textbooks had no statistically significant effect on learning. Two other studies (Glewwe et al., 2007; Kuecken & Valfort, 2013) found that textbooks in their current form are only beneficial to high-achieving students. Even then, in one study (Kuecken & Valfort, 2013) high-achieving students only saw positive impacts for sharing textbooks, not for owning them. There is evidence that textbooks are more likely to lead to improvements in student learning if they are linked to changes in classroom pedagogy (Read, 2015). An international project providing free textbooks to all primary schools in Kenya found that it improved the quality of homework assignments, child-centered learning and classroom reading time. In a sample of 159 classes, 84% of teachers used textbooks (DFID, 2006). The following year, a randomized evaluation by the National Bureau of Economic Research (NBER) in the United States pointed out that scores only improved for students with high initial achievement. Low and average achieving students saw no overall impact, likely because the textbooks were in English, most students' third language, and many could not read them (Glewwe et al., 2007).

Poor textbook practice is widespread. In Uganda's Primary Curriculum Review (and likely elsewhere; Read & Hicks, 2004), reading, writing, listening, and speaking were not allocated enough classroom time, and teachers had no skills to do so. Oral work is fundamental for reading, though an "oral approach" often results in simple rote learning. In classrooms, teachers read each sentence of a text, and pupils repeat it several times, or write it down in their notebooks (Read, 2015); or teachers write from their textbooks on the blackboard as students copy, with no explanation. In a study with 204 Namibian children (O'Sullivan, 2003), 88% were unable to read a text from one year below their grade, though they could "read" the current reading book perfectly without looking at the text.

A review of classroom practice in South Sudan (Mikulska, 2014) likewise finds classroom time is spent with teachers copying from textbook to blackboard and asking students to memorize by copying from the blackboard into their notebooks, which are collected for marking. Teachers spend up to 15 hours a week in the staffroom marking notebooks. Very few spent their time teaching. This did not change, although the TPR went from 1:60 to 1:2. In a training workshop on effective TLM use in Namibia (Hiddleston & Hovelmann, 2013), trainers concluded many styles of textbook usage reported by education officers and teachers were inadequate. There was little evidence of creative use of TLMs. Most teachers didn't prepare lessons in advance and relied on the textbook to get them through the class. With no preparation, teachers' manuals were not very helpful and didn't see much use. A leading editor in textbooks for SSA stated she had never met a teacher who used any of the teacher's guides designed to accompany and support student textbooks (Read, 2015).

A significant part of the problem was teacher's lack of confidence on their own knowledge of subject content, skills and competencies specified by the syllabus. When textbooks were used, it was most likely to conceal teachers' insecurities. In South Sudan (Jones & Sayer, 2013), 54% of teachers had no training, and 70% were more familiar with Arabic than English. Teachers did not issue available textbooks to students because they feared being asked questions they could not answer about an unfamiliar language. This situation also occurs in other countries and is especially common in math, science and language textbooks. Alternatively, teachers may prefer to keep textbooks from students so that they will not know as much as them (Read, 2015).

Besides ineffective use, textbooks are often not used at all. In many SSA countries, continued lack of textbooks over many years conditioned teachers to operate without them, either because they grew accustomed to operating without textbooks, forgot or never learned to use them. A national survey of Tanzania (SIDA, 2000) found, although 40% of schools had class sets of textbooks, only 4% used them. In northern Cameroon (Buchan, 2013), schools have not had any textbooks for so long, no child has ever used one. In Uganda, with a 1:14 TPR, just 14% of public and 3% of private-school classes used the textbooks available (Wane & Martin, 2013). Results were in line with another Ugandan study from over a decade earlier (Kalibbala, 1999). Similar reports surfaced in South Sudan (Jones & Sayer, 2013), Zanzibar (Little, 1995; Vere, 1993), Sierra Leone (Sabarwal et al., 2012), the Democratic Republic of Congo, Ethiopia, Ghana, Guinea, Namibia, Rwanda, and other SSA nations

over the last two decades (Read, 2015).

If schools have textbooks and teachers want to use them properly, other obstacles exist. Most classrooms (even when development partners (DPs) are involved in designing and financing them) do not specify built-in lockable storage (Read, 2015). Book storage is often in the head teacher's office or an adjoined room. Collecting and returning books to a central store daily is tiresome to the point that many teachers eventually cease to use TLMs regularly (even more so if the headteacher is absent since he takes the keys). TLMs go unused for months for a simple lack of access. This was the case in three primary schools observed in Ghana (Read, 2010). In one, many books suffered serious water damage due to poor stocking. Insecure storage leads to theft; poorly managed and untidy storage leads to loss and damage; lack of weatherproofing and coverage exposes books to rain, dust, fungus, vermin and insects. If left unchecked, book stocks may be completely destroyed. In schools alone, 10% stock losses are not uncommon, and up to 50% annual stock loss has been reported (Read, 2015).

If used properly, textbook content may be lacking. Relatively little research has been directed to the quality of textbooks or the added value of using a good textbook instead of a bad one (Read, 2015). In developing countries, pupils usually spend more than a year in the first grade and then progress slowly, maybe because the level of instruction is too demanding (Lockheed & Verspoor, 1990). The language level itself is often too high. A content analysis (Cope et al., 1989) found math and language books to require work unrealistically above expectation for the grade, especially given the lack of pre-reading activities available. A comparative analysis (Benavot, 2010) points out that textbooks tend to be more specific than national curriculum guidelines, especially reading and literacy textbooks for primary school.

Many curricula are heavily inflated, reaching up to 12 subjects, each with its own textbook. Content takes little notice of other subjects, with much repetition. Many subjects have no trained teachers and content is extensive to the point that it could never be delivered without rushing. National curricula increasingly emphasize learner-centered and outcome-based approaches, development of competencies and higher order thinking skills; influenced by European and American school systems. Textbooks mostly fail to support teachers in these approaches. They concentrate on presenting facts; have no orientation for activities, no exercises and experiments specific to poor and rural schools; no balance for competency-based activities in different subjects and grade levels.They also have no content for multi-ability groups; no strategy for dealing with the wide variety of contact hours, teacher training, teacher quality and motivation between and within countries. In addition, there are no formative assessment exercises for teachers to determine if students are progressing on the required skills. Content that is not tested is often not taught.

Ministry of Education (MoE) documentation for publishers is closely adhered to. Since it does not consider variability in schools' conditions, publishers do not either. Curriculum developers seem unable to define required "skills and competencies", often because they are unsure of what these are, how they should be achieved, and have not been required to teach them. Methodologies to be developed are, likewise, mostly absent or unclear. Publishers are left to figure that out, on the risk of losing the bid if they get it wrong.

Inadequate curriculum design is frequently paired with the inability to inform teachers about its content and objectives. Teachers then generally revert to factual recall. Examinations do not follow curriculum development, and curriculum development has not taken them into account. A study from Zanzibar (Read & Ibale, 2007) remarks not only on the overloaded content requirements but also the absence of appropriate objectives, non-completion due to time constraints, lack of teacher preparation and inadequate provision. Only 19% of Uganda public school teachers showed mastery of the curriculum they teach (Wane & Martin, 2013) – a situation common elsewhere in SSA.

TLMs in SSA are not properly supporting teachers and students, though sometimes concentrating considerable funding and effort. The whole idea of what they are and the role they should fulfill is unrealistic for most schools, teachers and students. This unrealistic idea is then poorly executed. TLM effectiveness also depends on teachers' classroom practices, so training and manuals might be prioritised over textbooks.

Is education in Africa doomed?

The circumstances described in this paper, which are only a fraction of this incredibly complex scenario, may give off a pessimistic tone. Indeed, there are no magic solutions to the sizable challenges SSA education faces. It does not mean there is no solution, though this is not always clear in this intricate context.

Nonetheless, it would be inaccurate to state that education in SSA is doomed. There are African teachers who achieve good outcomes with their students, both in wealthier regions where stereotypical African conditions are less prevalent and in poverty settings. Even for those who may not achieve expedient educational outcomes, there are teachers, students, schools, parents and officials who go above and beyond to do their best and get results in this most extreme of educational environments. In the data presented here, a minority of schools and teachers do overcome issues such as lack of content knowledge, absence and classroom time. Qualitative data indicates cases of extreme resilience.

In Tanzania, parastatal publishers dominated the textbook market. The Government of Tanzania provided inadequate financing levels, leading to decreased sales, cashflow problems, shortages of working capital, shortages of raw materials and rapidly increasing debt. This led to a further drop in textbook provision and publishing standards. Both public and private schools struggled, and in many rural secondary schools, there were no textbooks at all. However, against all odds, a few select schools managed to reach 1:3, 1:2 or even the extraordinary 1:1 TPR, because sets of old textbooks had been lovingly maintained and repeatedly

rebound (Read, 2015).

Malawi is the seventh poorest country in the world and has consistently ranked amongst the poorest (International Monetary Fund, 2022). 15% of the population is under five years of age and the average age is 17 years old (National Statistical Office, 2019, p. 16). Class sizes often surpass a hundred, with kids ranging in age from 4 to 17. Few progressed past the primary 1, and only 31% stay until Standard 8 (the final year of primary school; Ministry of Education, Science and Technology, 2013). In a rural school in southeast Malawi (Werning et al., 2016), class sizes averaged at 70. There were traditional initiation rituals for the older children, where many girls would afterwards get married or pregnant, and where boys would often start working and stop obeying teachers. Thus, both boys and girls eventually dropped out and ceased their education. Most of their families also had received little to no education and were subsistence farmers. Still, a teacher reported they tried to stay daily at least half an hour after the school shift to help students, even from other classes, who were "slow learners'' or had learning difficulties. No one required this, nor was it mandated by the government. There were no specific prizes or punishments to the teacher, and it was, in fact, unpaid labor – something the teacher was very aware of and did not mind.

The headteacher had prepared mixed seating plans to improve the acceptance of children's diverse educational needs. Likewise, mother/father groups were incredibly active and counseled the students. They went after girls to get them into school, prevent them from dropping out or get them to come back if they left. Also, they got both positive role models to talk to and inspire students at risk and case stories of older women from their community to talk about how they gave up studying when they got pregnant and later regretted. For girls who were unwilling to listen, they would still keep track of them, and look for an opportune time to approach them again. They also talked to the parents of kids who dropped out. Although they appreciated the NGOs who gave humanitarian aid, they felt the focus on girls was leaving boys unattended. A father`s group was then made specifically to help boys. The groups of parents also cooked porridge for the children, tended to fish in the pond and cultivated the school garden, whose product they sold in the market, and thus garnered extra funds for the school. The children who benefitted were not necessarily theirs, as vulnerable children in the school included orphans, kids with learning disabilities, visual or hearing impairments, and other physical disabilities. Kids in the vulnerable group remarked on how the teachers taught well and questioned the students individually, to help them understand. The children also said they did like going to school most of the time. They liked reading, writing, playing with friends and reviewing classroom content, although this was not universal, and some students were also discriminated against.

What educational success has been possible, especially in rural or informal areas, relies, sometimes heavily, on voluntary work and informal structures of collaboration and support. The impact of community involvement and effectiveness of community monitoring has been noticed in the literature.

Decentralization may be a key component for successful intervention, especially where centralized institutional means are less robust and capable, what has been conceptualized as "short route" accountability (World Bank, 2003). Although evidence is mostly qualitative and case studies, it does point to positive impacts of such approaches (Bruns et al., 2011). A report from the Chikhwawa district, Malawi (Mwanza & Ghambi, 2011), indicates a community scorecard process as an accountability mechanism was useful in stopping child-labor (rampant in some schools). It also committed specific actors to monitoring and finding evidence of poor salary administration in schools, consequently leading to changes in salary payment to teachers.

Some contexts may require easing intervention or consideration for more bottom-up approaches. Social responsibility interventions' effectiveness is highly contextual, but there is evidence of successful cases. It involves the matter at hand, the capacity of a particular community and the openness of influent government personnel, among other factors (McGee & Kelbert, 2014). It is unclear how much upscaling or institutionalization informal structures can bear, which requires caution. If the effectiveness of decentralized grassroots efforts is their decentralized grassroots nature, upscaling paradoxically destroys it.

Alternatively, informal networks of success might speak not necessarily to the strengths of communities, but to governments' inherent and present incapacity. Often, organizational issues and institutional constraints seem to be at least as important as intervention design. After successes with contract teacher interventions in India and Western Kenya, an RCT (Bold et al., 2012) investigated expansion to 14 districts in eight Kenyan provinces. A third of the sample served as control; a third had the intervention implemented by the international NGO that previously implemented it successfully; and a third had the same intervention implemented by the Kenyan MoE. Timing, salary levels, recruitment procedures and other experimental protocols were held constant. Geographical heterogeneity made no difference. Where the program was administered by the NGO, there was an increase of 0.19 standard deviation on combined math and english scores, consistent with previous research. Where the MoE administered it, there was no effect, probably reflecting the challenges of centrally administering a program which required local recruitment and monitoring.

Despite dire circumstances, there are cases of educational success in Africa, and their nature points to the persistent will of those most affected to make education work. Although harnessing and applying such efforts on a large scale is much harder than simply noting their existence, the desire for and dedication to schooling is and will likely continue to be a key component in guaranteeing proper education across SSA.

Closing remarks

This review covered some of the evidence on the conditions of teachers in SSA, providing a sense for the challenges low-income regions may face. Acting on developing an

educational system requires a thorough understanding of its complex practical functioning.Education for All (EFA) initial and continued inability to provide significant learning is partly due to the rushing and inflexibility it intrinsically carried. On the principle that universal education was ethically reasonable and politically satisfying, spurious amounts were spent without the expected return on investment. Part of the failure to provide adequate and sustainable solutions can be attributed to the failure in recognizing failed approaches, low institutional memory, and poor dissemination of what information is available on good, bad and (in)effective practices.Collecting and organizing evidence is highlighted in this review to emphasize the need for greater sensibility to the peculiarities of each context while maintaining an absolute, ruthless and unwavering realism for what can be accomplished, under which conditions and with which resources as it relates to practice, processes, inputs and outputs.

References

Akyeampong, K. (2003). Teacher training in Ghana-does it count? *Multi-Site Teacher Education Research Project (MUSTER), Country Report One* (No. 666-2016-45498).

Akyeampong, K., Lussier, K., Pryor, J., & Westbrook, J. (2013). Improving teaching and learning of basic math and reading in Africa: Does teacher preparation count? *International Journal of Educational Development, 33*(3), 272-282.

Antonowicz, L., Lesne, A. Stassen, S., & Wood J. (2010). *Africa education watch: Good governance lessons for primary education.* Program Report, Transparency International.

Asare, K. B., & Nti, S. K. (2014). *Teacher education in Ghana: A contemporary synopsis and matters arising.* SAGE Open. https://doi.org/10.1177/2158244014529781

Awich, M, (2021). *Sacmeq IV international report.* http://www.sacmeq.org/sites/default/files/sacmeq/reports/sacmeq-iv/international-reports/sacmeq_iv_international_report.pdf.

Benavot, A. (2010). *Education for all global monitoring report.* UNESCO.

Beutel, M. (2011). *Teachers talking: Primary teachers' contributions to the quality of education in Mozambique.* Research Report, Kingston upon Thames: VSO Internationial.

Birger, F., & Craissati, D. (Eds.). (2009). *Abolishing school fees in Africa: Lessons learned in Ethiopia, Ghana, Kenya and Mozambique.* The World Bank.

Bold, T., Filmer, D., Martin, G., Molina, E., Stacy, B., Rockmore, C., Svensson, J., & Wane, W. (2017). Enrollment without learning: Teacher effort, knowledge, and skill in primary schools in Africa. *Journal of Economic Perspectives, 31*(4), 185-204. 10.1257/jep.31.4.185.

Bold, T., Kimenyi, M., Mwabu, G. Ng'ang'a, A., & Sandefur, J. (2012). *Scaling-up proven education interventions.* ICG (International Growth Center) Working Paper. F-4003-KEN-1.

https://www.theigc.org/wp-content/uploads/2012/03/Bold-Et-Al-2012-Working-Paper.pdf

Bontoux, V. (2008). *Mission report on Namibia textbook reform component.* Millennium Challenge Corporation (MCC) for Ministry of Education.

Brombacher, A., L. E., Nordstrum, M., Davidson, K., Batchelder, C., Cummiskey, & King, S. (2013). *National baseline assessment for the 3Rs (reading, writing, and arithmetic) using EGRA, EGMA, and SSME in Tanzania.* Study report prepared for USAID/Tanzania. Research Triangle Park: RTI International.

Bruns, B., Filmer, D. & Patrinos, H. A. (2011). *Making schools work: New evidence on accountability reforms.* World Bank.

Buchan, A. (2013). *Preparation report for textbook component of world bank-funded Cameroon Equity and Quality Improvement Project (CEQUIL).* International Education Partners for World Bank/CEQUIL.

Chaudhury, N., Hammer, J., Kremer, M., Muralidharan, K., & Rogers, F. H. (2006). Missing in action: Teacher and health worker absence in developing countries. *Journal of Economic perspectives, 20*(1), 91-116.

Claussen, J., & Assad, M. J. (2009). *Public expenditure tracking survey for primary and secondary education in Tanzania* (Final Draft Report). Dar es Salaam, Tanzania: MOEVT.

Cope, J., Denning, C., DeStefano, L., Ralaingita, J. W., Costello, M., Sax, A., & Frank, A. (2012). *Early grade reading and mathematics in Rwanda: Final report.* RTI International.

DFID. (Department for International Development). (2006). *Delivering quality and improving access in primary education: An impact evaluation of the IM and INSET programmes.* MOES, Nairobi. London: DFID.

Duflo, E., Dupas, P., & Kremerm, M. (2015). School governance, teacher incentives, and pupil-teacher ratios: Experimental evidence from Kenyan primary schools. *Journal of Public Economics 123*, 92–110.

Evans, D. K., & Ghosh, A. (2008). *Prioritizing education investments in children in the developing world.* RAND Working Paper, RAND Corporation. http://www.rand.org/content/dam/rand/pubs/working_papers/2008/RAND_WR587.pdf.

Fehrler, S., Michaelowa, K., & Wechtler, A. (2009) The effectiveness of inputs in primary education: Insights from recent student surveys for Sub-Saharan Africa. *The Journal of Development Studies, 45*(9), 1545-1578. 10.1080/00220380802663625

Fredriksen, B., Brar, S., & Trucano, M. (2015). *Getting textbooks to every child in Sub-Saharan Africa.* World Bank. http://dx.doi. org/10.1596/978-1-4648-0540-0.

Ghana Education Service. (2012). *Pre-tertiary teacher professional development and management in Ghana.*

Ministry of Education.

Glewwe, P., Hanushek, E., Humpage, S., & Ravina, R. (2011). *School resources and educational outcomes in developing countries: A review of the literature from 1990 to 2010.* NBER Working Paper 17554, National Bureau for Economic Research, Cambridge MA. http://www.nber.org/papers/w17554.

Glewwe, P., Kremer, M., & Moulin, S. (2007). *Many children left behind? Textbooks and test scores in Kenya.* National Bureau of Economic Research.

Hansen, W. L. (1965). Human capital requirements for educational expansion: Teacher shortages and teacher supply. In C. A. Anderson & M. Bowman (Eds.), *Education and economic development* (pp. 63–87). Frank Cass.

Härmä, J. (2021). *Low-fee private schooling and poverty in developing countries.* Bloomsbury Publishing.

Hiddleston, P., & Hovelmann, W. (2013). *Master trainers training workshops for textbook use for maths, science, and English.* MCA-Namibia.

Hungi, N., Makuwa, D., Ross, K., Saito, M., Dolata, S., Van Capelle, F., & Vellien, J. (2011). *SACMEQ III project results: Levels and trends in school resources among SACMEQ school systems.* SACMEQ Working Document 2.

Indire, F. F., & Hanson, J. W. (1971). *Secondary level teachers: Supply and demand in Kenya.* American Council on Education.

International Monetary Fund. (2022). *GDP per capita, current prices: U.S. dollars per capita*. https://www.imf.org/external/datamapper/NGDPDPC@WEO/OEMDC/ADVEC/WEOWORLD?year=2022

Johnson, D. (2008). *An assessment of the development needs of teachers in Nigeria: Kwara state case study.* ESSPIN/UKAID.

Jones, B., & Sayer, N. (2013). *Annual review of the South Sudan textbook project.* DFID.

Kalibbala, G. (1999). *Sustainable textbook provision and utilization in Uganda. A world bank study.* World Bank.

Kenya National Union of Teachers. (2007). *Strategic plan 2008-2013. Strategic planning document.* Katangi Printing Works Ltd.

Kruijer, H. (2010). *Learning how to teach: The upgrading of unqualified primary teachers in sub-Saharan Africa.* International Education.

Kuecken, M., & Valfort, M. (2013). *When do textbooks matter for achievement? Evidence from African primary schools.* Paris School of Economics.

Lengoiboni, G. K. (2014). *Teachers mandatory retirement on attainment of sixty years of age.* Teachers Service Commission.

Little, A. (1995). *Education in Zanzibar: Classrooms, quality and costs.* Swedish International Development Agency for the Ministry of Education.

Lockheed, M., & Verspoor, A. (1990). *Improving primary education in developing countries. A world bank study.* World Bank for the World Conference on Education for All in Jomtien.

Lugaz, C., & De Grauwe, A. (2010). *Schooling and decentralization: Patterns and policy implications in Francophone West Africa.* International Institute for Education Planning.

Martin, G. H., & Pimhidzai, O. (2013). *Service delivery indicators: Kenya.* https://openknowledge.worldbank.org/handle/10986/20136.

McEwan, P. (2013). *Improving learning in primary schools of developing countries: A meta-analysis of randomized experiments.* Center for Education Innovations. http://academics.wellesley.edu/Economics/mcewan/PDF/meta.pdf.

McGee, R., & Kelbert, A. W. (2014). *Abordagens para promover responsabilização social: revisão de algumas experiências. Laboratório de Inovação do CEP (Cidadania e Participação / Citzen Engagement Programme).* Institute of development studies.

Mikulska, A. (2014). *School teaching and learning: The challenge of education in South Sudan.* NORRAG News.

Ministry of Education, Science and Technology (2013). *Education management information system. Education statistics 2013*. Malawi.

Mulkeen, A. G. (2009). *Teachers in Anglophone Africa: Issues in teacher supply, training, and management.* World Bank Publications. The World Bank.

Mwanza, J. & Ghambi, N. (2011). The community scorecard process: Methodology, use, successes, challenges and opportunities. *Participatory, Learning and Action, 64*, 188-194.

My Broadband. (2018). South African teachers fail simple maths and English tests '. *My Broadband*. https://mybroadband.co.za/news/technology/251847-south-africanteachers-fail-simple-maths-and-english-tests.html.

Ngware, W. M., Abuya, B. A., Admassu, K., Mutisya, M., Musyoka, P., & Oketch, M. (2013) *Quality and access to education in the urban informal settlements in Kenya.* APHRC, Nairobi.

Niang, F. (2017). *Accountability, instructional time loss and the impact on quality education: A Senegalese primary education case study.* (Background report for the Global Education Monitoring Report 2017/8.).

Nordstrum, L. E. (2015). *Effective teaching and education policy in Sub-Saharan Africa: A conceptual study of effective teaching and review of educational policies in 11 Sub-Saharan*

African countries. United States Agency for International Development.

O'Sullivan, M. (2003). The development of effective strategies to teach reading among unqualified primary teachers in a developing country context. *International Journal of Early Years Education, 11*(2), 129–140.

Piper, B. (2010). *Ethiopia early grade reading assessment. Data analysis report: Language and early reading.* RTI International.

Read, T. (2010). *The future of our children's education*. United Kingdom International Education Partners.

Read, T. (2015). *Where have all the textbooks gone?: Toward sustainable provision of teaching and learning materials in Sub-Saharan Africa.* World Bank Publications.

Read, T., & Ibale, A. (2007). *Zanzibar textbook policy and financing study. A world bank study.* World Bank for MOEVT.

Read, T., & Hicks, R. (2004). *Uganda primary curriculum review.* Royal Netherlands Embassy for MOES.

Republic of Benin Ministry of Education. (2013). *Plan decennal de developpement du secteur de l'education actualise phase 3 / 2013-2015. Sector Plan.* Cotonou: Government of Benin.

Ribeiro. (1989). *Content analysis of reading and maths textbooks in fifteen developing countries.* Book Development Council for the World Bank.

RTI International. (2012). *The Primary Math and Reading (PRIMR) initiative: Baseline report.* RTI International.

RTI International. (2013). *Results of the 2013 Early Grade Reading and Early Grade Mathematics Assessments (EGRA and EGMA) in Bauchi State.* RTI International.

Sabarwal, S., Evans, D., & Marshak, A. (2012). *Textbook provision and student outcomes— the devil in the details.* World Bank.

SIDA. (Swedish International Development Agency). (2000). *Textbook usage in Tanzanian schools: The results of a national survey.* Pilot Project for Publishing.

South African Council for Educators. (2013). *The CPTD management system handbook. Centurion: South African Council for Educators.* https://sace.org.za/assets/documents/uploads/sace_30373-2016-08-31-CPTD%20Handbook.pdf

South African Ministry of Basic Education. (2013). *Quality Management System (QMS) for school based educators.* Collective Agreement Annex, Pretoria: Ministry of Basic Education.

Spaull, N. (2012). *SACMEQ at a glance series. Stellenbosch: Research on Socio-Economic Policy (RESEP).* University of Stellenbosch.

Thomas, H. G. (2011). *Study of teacher management and deployment.* Education Sector Support Programme in Nigeria (ESSPIN). Report Number: Report 328. ESSPIN/UKAID.

Umubeyi, M., & Bontoux, V. (2007). *Research study into primary textbook availability in Rwanda.* IE Partners, funded by DFID on behalf of MINEDUC.

UNAIDS. (2021). *Unaids data 2021.* https://www.unaids.org/sites/default/files/media_asset/JC3032_AIDS_Data_book_2021_En.pdf

UNESCO Institute for Statistics. (2011). *Financing education in Sub-Saharan Africa: Meeting the challenges of expansion, equity and quality.* UNESCO Institute for Statistics.

UNESCO. (2014). T*eaching and learning: Achieving quality for all*. Education for All Global Monitoring Report.

UNESCO. (2017). Accountability in education: Meeting our commitments. *Global education monitoring report*. https://unesdoc.unesco.org/ark:/48223/pf0000259338

UNESCO. (2019). *Meeting commitments: Are countries on track to achieve SDG4?*

Vere, J. (1993). *Zanzibar primary school curriculum review.* UNICEF for the Ministry of Education.

Wane, W., & Martin, G. H. (2013). *Education and health services in Uganda: Data for results and accountability. A world bank study.* World Bank and African Economic Research Consortium.

Wane, W., & Martin, G. H. (2016). *Education and health services in Tanzania: Service delivery indicators. A world bank study.* World Bank and African Economic Research Consortium

Werning, R., Artiles, A. J., Engelbrecht, P., Hummel, M., Caballeros, M., & Rothe, A. (2016). *Keeping the promise? Contextualizing inclusive education in developing countries.* Verlag Julius Klinkhardt.

Winkler, D., & Sondergaard, L. (2008). *Uganda-the efficiency of public education in Uganda* (No. 70388, pp. 1-136).

The World Bank. World Bank, World Development Indicators. (2019a). *Population growth (annual %) - Sub-Saharan Africa, World, Middle East & North Africa, East Asia & Pacific, Latin America & Caribbean, North America, Europe & Central Asia, South Asia.* [https://api.worldbank.org/v2/en/indicator/SP.POP.GROW?downloadformat=excel]. https://data.worldbank.org/indicator/SP.POP.GROW?locations=ZG-1W-ZQ-Z4-ZJ-XU-Z7-8S]

World Bank, World Development Indicators. (2019b). *Population ages 0-14, total - Sub-Saharan Africa, World, Middle East & North Africa, East Asia & Pacific, Latin America & Caribbean, North America, Europe & Central Asia, South Asia.* https://data.worldbank.org/indicator/SP.POP.0014.TO?contextual=region&end=2020&locations=ZG-8S-1A-XU-ZJ-Z7-ZQ-Z4&name_desc=true&start=1960&view=chart

World Bank. (2003). *World development report 2004: Making services work for poor people*. The World Bank.