Teacher Quality: The Preparation, and Utilization of Teachers in Sub-Saharan Africa

Nick Taylor

Contents

Abstract

This entry occurs against the background of two related developments in schooling. First, regarding progress toward universal primary schooling, the United Nations has reported that the net enrolment rate in the developing regions of the world had reached 91% in 2015. In parallel with the expansion of access, there is a general disappointment in learning attainment.

N. Taylor (✉)
JET Education Services, Johannesburg, South Africa
e-mail: ntaylor@jet.org.za

© The Author(s), under exclusive licence to Springer Nature Switzerland AG 2022

I. Menter (ed.), *The Palgrave Handbook of Teacher Education Research*,
https://doi.org/10.1007/978-3-030-59533-3_1-1

This simultaneous growth in numbers and weak learning outcomes has led to an increased focus on teacher selection, preparation, deployment, and management. Thus, Sustainable Development Goal 4 targets a substantial increase in the supply of qualified teachers by 2030. Measuring the situation with respect to this goal in 2018, UNESCO (SDG 4 data book: Global education indicators 2018) predicted that by 2030, less than half of Africa's primary and lower secondary teachers will be adequately qualified.

Ostensibly, planning the supply of teachers is a matter of economic modeling, where the temptation is to maximize outputs and minimize cost. Thus, countries may opt for shorter initial teacher education (ITE), with the to intention supplement ITE through in-service training. Studies of high-performing systems, however, reveal this to be a strategy which traps school systems in a high-access/poor-quality vicious cycle.

The argument that follows starts from the position that in order to optimize teacher capacity – a key determinant of school performance – the entire life cycle of the teacher should be considered, and the specificities of key nodes in the cycle elucidated in order to customize appropriate policies for each domain.

Keywords

Initial teacher education · Continuing professional development · Practicum · Sub-Saharan Africa · Teacher knowledge · Teacher quality · School performance

Introduction

This chapter draws on a previous research project on teacher education in sub-Saharan countries conducted in 2018 (Taylor et al., 2019), and examines the economics of teacher supply in term of policy drivers. Three such drivers stand out: the need to improve teachers' understanding of the subjects they teach, to sharpen their expertise in conveying that knowledge to their learners, and the need to make teaching an attractive profession in order to attract and retain the most motivated and able young people.

In what follows, a model is outlined which identifies key nodes in the life cycle of a teacher, from the time he/she enters formal schooling, progresses through the grades, is selected into ITE and prepared for teaching, and then emerges into the world of work and embarks on a 40-year career path.

This model provides a framework for describing the policies and intended practices in 48 sub-Saharan African (SSA) countries. A survey was conducted and the results collated into a sketch of the spectrum of choices made by countries at each of these nodes. Four country case studies provide interesting insights into typical slippages between policies and practices.

The chapter ends with recommendations for a hypothetical school system, in which practices in successive domains are integrated into those occurring at other points in the cycle, each contributing to building teacher capacity.

But first a brief look at the context of teacher capacity in SSA is presented.

Background: Access, Quality, and Teachers

Regarding progress against Millennium Development Goal 2 – achieving universal primary schooling – major progress has been made in the last two decades. Thus, the United Nation was able to report that the net enrolment rate in the developing regions of the world had reached 91% in 2015, up from 83% in 2000; the literacy rate among youth aged 15–24 had increased globally from 83% to 91% between 1990 and 2015; and the gap between women and men had narrowed (UN, 2015a). Furthermore, the number of out-of-school children of primary school age worldwide had fallen by almost half, to an estimated 57 million in 2015, down from 100 million in 2000. SSA has had the best record of improvement in primary education of any region since the Millennium Development Goals were established, achieving a 20 percentage point increase in the net enrolment rate from 2000 to 2015.

In parallel with expanding access, there is a general disappointment at the lack of progress in learning the foundation skills of reading and mathematics. UNESCO's International Institute for Capacity Building in Africa notes that national monitoring reports, and regional and international assessments confirm significant gaps in learning achievements within and across countries – with large numbers of learners in the early primary grades lacking in foundational reading and mathematics skills, primary level dropout rates still high across SSA, and many children reaching adolescence without basic numeracy skills (IICBA, 2016).

This simultaneous growth in numbers and concerns about quality in developing countries has led to an increased focus on teacher production and quality, with the global and regional literature pointing to the paramount importance of teacher quality in assisting students to learn (Barber & Mourshead, 2007; IICBA, 2016). This concern finds expression in Sustainable Development Goal 4, and in particular Target 4c:

> By 2030, substantially increase the supply of qualified teachers, including through international cooperation for teacher training in developing countries, especially least developed countries and small island developing States. (UN, 2015b)

Measuring the situation with respect to this goal in 2018, UNESCO could find data in only 55% of SSA countries, and what this data reveals is not encouraging: The proportion of trained primary and lower secondary teachers had declined to the point where, by 2030, less than half of Africa's primary and lower secondary teachers will have the training they need to do their jobs (UNESCO, 2018).

The Atlantis Group, a group of former ministers of education and heads of government from 25 countries across six continents, using data from the UNESCO Institute for Statistics (UIS), predicts that, should this trend continue, it will spell disaster for pupils in the SSA region, already home to over half of the world's out-of-school children of primary school age, and where 202 million children currently are not meeting the minimum proficiencies for reading and mathematics (Atlantis Group, 2018). Without international assistance, the Atlantis Group predicts, it will be next to impossible for many African states to recruit and adequately train the

17 million more teachers UNESCO estimates will be needed across the region in the next 12 years.

New and more effective approaches to the preparation, deployment, utilization, compensation, and conditions of service for teachers, accompanied by more effective school leadership, are needed to achieve higher standards of education in SSA. This implies an education system that attracts, and retains, a well-trained, motivated, and effective teaching staff. It also implies a system that supports teachers in the classroom as well as in their continued professional development (CPD). These are the issues addressed below, in the interest of maximising returns on investment.

The Life Cycle of a Teacher

The present paper understands schooling to be a cyclical process during which successive cohorts of learners progress through school, enter university as student teachers, and graduate as teachers into the world of work where they nurture the next cohort through the cycle (Fig. 1).

From the birds-eye perspective afforded by Fig. 1, it is clear that the teacher cycle is 60 years long, from birth to retirement, and the policies and practices required to raise the standards of education are likely to require around a 30-year cycle to achieve significant systemic effects. Long-term policy consistency, in turn, implies budget predictability over the same period. The economics of teacher supply is not only about an annual budget, but it needs to factor in medium- to long-term efficiency gains likely to be effected by moving toward a high-performing system.

At various stages of the school cycle, leverage points for quality assurance occur. For example, high school graduates must reach certain levels of attainment to enter into an initial teacher education (ITE) program (point 3 in Fig. 1), students must reach a certain standard to graduate as certified teachers (point 6), and teachers are often held to specific standards in order to retain their teaching certification (point 8) or to enjoy progress and promotion throughout their careers (point 11).

If the quality of schooling is understood as nurturing academic excellence in children (along with many other habits, qualities, and skills), and if it is assumed that the more knowledgeable teachers are about the subject(s) they are responsible for, and the more skilled they are at sharing this knowledge with their learners, then school performance will be optimized. It follows from this proposition that two key questions at each point in the cycle is: *How to exert maximum leverage on teacher knowledge and skill?* and *What resources are required to exercise these in classrooms?*

One set of answers might be to select students into ITE programs according to a rigorous process which screens for both academic ability and motivation; the education of candidate teachers is similarly thoroughgoing, involving intensive disciplinary study and practical classroom experience, culminating in a degree with a strong research focus. In addition, the management of educators in high-performing systems is focused on supporting and further educating teachers, and the systematic development and promotion of leadership. In Table 1 these leverage

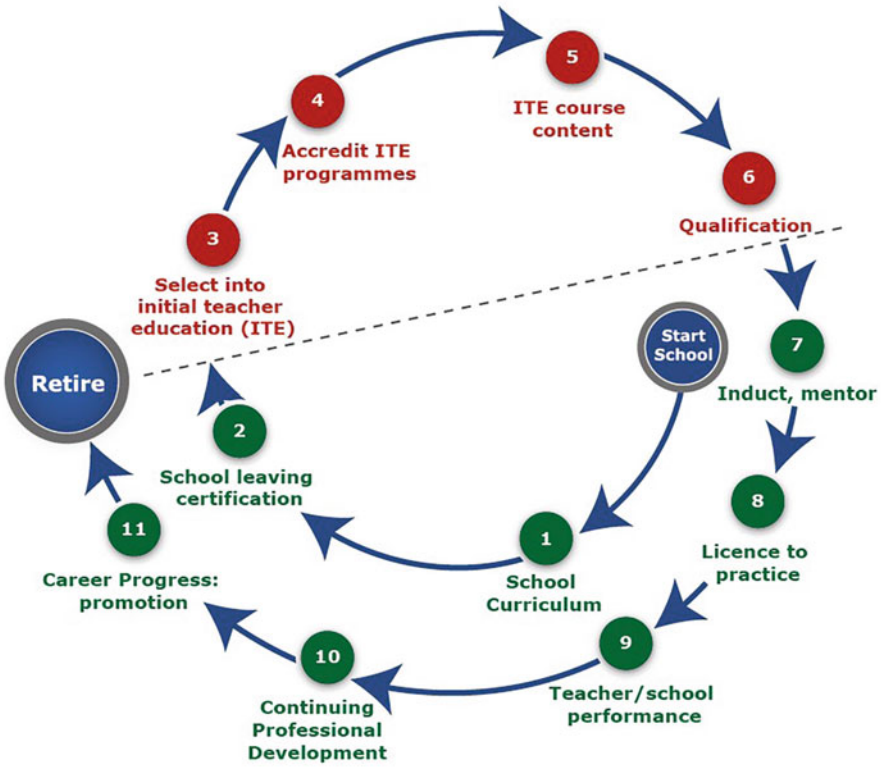

Fig. 1 Potential points for quality qssurance in the preparation, deployment, and support of teachers. (Source: Taylor et al., 2019)

points are listed, against a set of policy choices which, logically, might be exercised in pursuit of quality.

These policy choices have in fact been identified in certain high-performing systems, including Singapore, South Korea, Finland, Japan, Ontario, Boston, and Shanghai (Darling-Hammond et al., 2017). These are either developed Western countries or they are situated in the "Far East." No African or South American jurisdiction has achieved the kind of rapid growth in quality exhibited by these countries over two to three decades. Explanations for these differences are generally vague, gesturing to the deep-seated influence of culture and a traditional reverence for book learning.

The Politics of School Reform

What the kind of "best-practicology" implied in Table 1 does not list are the reasons why, for example, Uganda can never "become Finland," through policy decisions alone. In addition to the kind of policy recommendations shown in Table 1, an

Table 1 Predicted "best practices" for teacher supply and utilization

Policy terrain	QA opportunities (Fig. 1)	Logical "best practice"
Preparation	Selection (3)	1. Selection of the best graduates from the school system into ITE programs 2. Intensive preservice education in disciplinary and pedagogic knowledge accompanied by extensive in-school work under experienced mentors
	Education (4–6)	
	Teaching practice (5)	
Deployment, accountability, and management	Induction (6, 7)	3. A management and promotion regime which systematically identifies, nurtures, and rewards talent in the allocation of leadership responsibilities
	Management (9, 11)	
Support	CPD (10)	4. A focus on in-school CPD which is linked to teachers' daily work, and led by curriculum leaders within the school

Source: Adapted from Taylor et al., (2019)

analysis of the political economy (PE) is required in order to understand the possibilities for reform. This is the view of Pritchett (2018, p. 36) who declares that: "The differential cost effectiveness of schools across countries is a *political,* not primarily economic, question," and implores policy researchers to stop devoting themselves to producing results about reforms that are politically impossible.

The disappointing figures regarding outcomes in many developing countries do not pertain ubiquitously: a few standout examples achieve high growth rates simultaneously in enrolment and learning outcomes. Vietnam is a case in point, with poor Vietnamese children having much higher scores than rich children in Peru, despite Vietnam starting its upward trajectory with relatively low levels of per capita income (Pritchett, 2018; London, 2021). Examples such as these beg two questions: What can be learnt from countries like Vietnam about improving learning outcomes under conditions of underdevelopment? And: How much of the Vietnamese miracle is due to wise policy choices and adequate resourcing and how much is due to what London (2021, p. 2) terms ". . . the manner in which education systems are embedded in and entangled with social relational, institutional, and normative features of their social environment"?

Following the PE approach, Levy et al. (2018) classify political settlements according to whether their configuration of power is dominant or competitive, and whether institutional rules are personalized or impersonal, resulting in a two-by-two typology. In this regard, South Africa practices what Pritchett (2018) has called "isomorphic mimicry" on a grand scale: Designed as a standard Weberian bureaucracy, with hierarchical institutional arrangements and rule-bound behavior, in reality the situation far more closely resembles that of a clientelist state: institutional arrangements are fragmented and constantly negotiated, and principal/agency interactions are personalized and frequently corrupt. Under such circumstances public governance and the political system are based more on deals than on rules.

The result in South Africa's case is a highly inefficient state characterized by widespread incompetence, corruption, and questionable ideological decisions: The country delivers most services (electricity, water and sanitation, and public transport) poorly, and one would not expect education to fare any better (Mboweni, 2021). At point 11 in Fig. 1, for example, promotions frequently occur through nepotism and bribery (DBE, 2016) rather than through the reward of expertise. And because leaders at school and district level are responsible for executing the functions at points 9 and 10, one would expect these functions to be poorly performed, expectations which are frequently borne out in the research literature (DPME/DBE, 2017).

Logic, supported by the research evidence, suggests that the four sets of policy choices shown in Fig. 2 would be best for any system. But the question is: How to give effect to such choices in the specific political context of any particular country? Making the choice is not enough: All countries express intentions to improve learning, but for most these goals are not achieved. To illustrate these conclusions, the data drawn from a study on secondary education on the continent is used to illuminate policies and practices in SSA countries around the key leverage points shown in Fig. 2.

Practices in SSA

Method

Two sources of data inform what follows: a market scan of 48 SSA countries using a desktop search, email, and telephone requests, and four country (Rwanda, Uganda, Senegal, and South Africa) case studies conducted by means of interviews and a literature search (Taylor et al., 2019). A detailed set of 70 research questions guided the collection of data on policies and practices at each of the nodal points shown in Fig. 1, from point 3.

Information gathered through the market scan is skewed in that most countries in Southern and Eastern Africa are fairly well accounted for, whereas Central and West Africa is underrepresented, with the main exceptions being Nigeria and Burkina Faso. Answers to most of the questions (i.e., to 35 or more of the 70 questions) were obtained for 16 (33%) of the countries, aside from the four country case studies. No data was found at all for the following 12 countries: Central African Republic, Chad, Côte d'Ivoire, Guinea, Guinea-Bissau, Mali, Mauritania, Niger, Sao Tome and Principe, Sudan, Togo, and Western Sahara.

Despite the difficulties encountered by the study, the data derived from various avenues accumulated to the point where well over half the cells in the matrix (research question x country) came to be populated by the end of the search, providing a rich source for descriptive analysis. Nevertheless, it would be risky to draw general inferences from the scan because little information was found from one quarter of SSA countries, a limitation compounded by the fact that a desk-based scan of practices tends to capture official policy statements, rather than actual practices. With some notable exceptions – Uganda, Rwanda, and South Africa – many

Ministries of Education, if not the majority in SSA, do not maintain websites, and this places a severe limitation on obtaining government reports, which should be a primary source of the kinds of information sought by the study.

The case studies point out that in some countries there is a significant gap between the stated policies and actual practice, but the market scan methodology makes it difficult to assess the scale of this gap. For example, the policy may require that every teacher have a satisfactory assessment each year, but if the assessment is cursory and all teachers are rated as satisfactory, this is unlikely to have any real impact on quality. Similarly, it is difficult to assess the coverage or quality of CPD, or the actual quality of ITE from published documents. However, notwithstanding these limitations, sufficient data is available to provide a description of typical practices across the region, even though subregional differences are not distinguishable.

Percentage of the Education Budget Allocated to Teacher Education

Most of the data derived from the scan referred to total education budgets and not teacher education as a discreet category. It may be interesting to review countries' education budgets in terms of the UNESCO benchmarks for education spending as a whole: 20% of total government budget or 6% of gross national product (GNP) UNESCO (2015). The scan revealed a wide variation in the proportion of the national budget allocated to education. In Angola, for example, teacher education received 6% of the total budgetary allocation for education, while the Seychelles allocated 22% of its education budget to education development, which includes teacher education and a range of other development activities. In Swaziland, teacher training programs were allocated 2.6% of the education budget; Uganda spent 0.4% of its total education budget on teacher education; and Zimbabwe 18.8%.

While the quantum of funding is important, its effects are determined not only by how much is spent, but critically also on the prioritization and management of the spend. The point is most powerfully illustrated by comparing Uganda to South Africa (SA) (Taylor et al., 2019). SA spends something in the order of 20 times as much per primary school child than Uganda does (UNESCO 2017) but the SACMEQ test scores on Grade 6 maths and reading have been tracking each other closely over the last decade. Part of the inefficiency in the SA system is that consumption spending (principally on civil servant salaries) has been dominating investment (in teacher education, schools, and books) for more than two decades (Spaull et al., 2020).

Financial Support to Student Teachers

The literature indicates a number of examples of ITE students receiving funding, including Botswana and Gambia, where all students have their tuition, teaching practice, and personal upkeep paid for. In Namibia, funding is offered in the form of

a loan, while bursaries and scholarships are available from the private sector and the University of Namibia. Various kinds of support to student teachers are offered by countries as widely dispersed as Swaziland, Nigeria, Sierra Leone, Mauritius, Seychelles Tanzania, Zambia, Zimbabwe, Kenya and Mozambique Uganda, Ghana, and Benin.

In South Africa, some 14% of Bachelor of Education (BEd) students are awarded a Department of Basic Education bursary. Students who do not succeed in acquiring this bursary are able to access financial support through the National Student Financial Aid Scheme (NSFAS), available to all students who meet a very low means test. Started as a loan scheme, under pressure from students, this has essentially become a grant system. Unfortunately, the NSFAS is chronically inefficient in managing and disbursing the large fund available; in all likelihood this is due, at least in part, to the incompetence, nepotism, and corruption endemic to the SA state.

Selection into ITE

Teacher status and working conditions are inextricably linked with the recruitment, training, salaries, and management. There are two aspects to selecting trainee teachers. The first relates to selecting the right number of teacher trainees, which involves forecasting the needs of the country, taking into consideration the increase or decrease in student numbers, teacher attrition, and specific subject needs.

The second issue in the admission of students into ITE relates to selecting the right type of candidate. This is important as the candidates selected will in part determine the quality and level of the content of the ITE. The first of two McKinsey reports on the world's best performing school systems (Barber & Mourshead, 2007) found that the most effective mechanisms for selecting candidates for ITE acknowledge that, for a person to become an effective teacher, they need to possess a high overall level of literacy and numeracy, strong interpersonal and communication skills, a willingness to learn, and the motivation to teach.

In many countries these conditions are not met, as shown in the results of the SACMEQ teacher tests. In SA, students entering the Bachelor of Education (BEd), a four-year degree which culminates in a qualification to teach, enter with weak disciplinary knowledge in languages and mathematics. A Ministerial Task Team into the quality of the National Senior Certificate, taken at the end of 12 years of school, determined that:

> The level of most learners and teachers' proficiency in English is too low to use English as LoLT [the language of teaching and learning] optimally, and so to realise their potential. (DBE, 2014, p. 76)

In addition to leaving school with poor academic literacy, in SA the weakest of school leavers entering higher education go into education or nursing (CETAP, 2020, p. 18).

The competencies of the students recruited into ITE programs will influence course content: The more highly educated students are on entry, the higher the level of content they will be able to engage with during ITE. During the long process required to raise the performance of a school system, selecting more academically able students will, at the start of the process, not alter skill levels much, given the quality of applicants and the poor status of teaching, but as the system slowly starts to rachet up through a combination of practices at points 1–11 (Fig. 1), so the quality of entrants will rise, speeding up a virtuous cycle.

Who applies to be a teacher is to a considerable extent dependent on the status of the profession. Ways of raising the status – advertising, salaries, management, physical conditions, and resources – are all important. In many countries, a decline in prestige, poorer working conditions, and relatively low salaries has not helped to attract the best candidates into the profession (OECD, 2018). Schleicher (2018) calls for improvement in the profession's general status and competitive position in the job market. But this cannot be achieved by fiat, or advertising. In the long term, the performance of the system determines the public view of schooling: The better the performance, the more satisfied public perception is about schools and teachers, and teaching becomes an attractive profession for school leavers.

The market scan found information on teacher recruitment for 28 countries. Of these, the large majority (26) require a prospective secondary school teacher to hold an upper secondary school leaving certificate or its equivalent (corresponding to the United Kingdom's GCE or Advanced Levels (A levels)). Nine of these 26 countries (Angola, Burundi, Madagascar, Rwanda, Senegal, Swaziland, Tanzania, Zambia, and Zimbabwe) will also accept holders of lower secondary school leaving certificates (corresponding to the UK former General Certificate of Secondary Education [GCSE]) but only into programs which prepare teachers for lower secondary schools. On the other hand, Burkina Faso appears to allow a prospective secondary school teacher to have only a lower secondary school leaving certificate.

Almost as many countries (20) select applicants into teacher education programs on the basis of additional entrance examinations and/or interviews, in conjunction with a certain minimum level of academic achievement as indicated on their school leaving qualifications. Nine countries examine applicants, six interview them, and another five do both. Just three of the 20 countries for which information was found, namely Kenya, Madagascar, and South Africa, accept prospective secondary school teachers solely on the basis of their being secondary school graduates.

Of the 14 countries which examine candidates, the main focus is on applicants' scholastic abilities in mathematics and languages, coupled with critical thinking, problem-solving, and communication skills. Importantly, two countries go beyond applicants' academic qualifications and proficiency to consider more personal or socio-psychological aptitudes: applicants' attitude to education (Namibia) and motivation to teach (Djibouti). In SA, students applying for the Department of Education bursary are interviewed and required to show commitment to a teaching career, including an interest in working with young people, enthusiasm for a professional career in teaching, and readiness to face and surmount difficult challenges and

personal integrity. They must furthermore be committed to teach in any school in which they are placed by a provincial education department.

The market scan data suggests, from the information available, that in the majority of cases, African countries require the same or a better level of education from those permitted to teach in secondary schools than they do for primary level teachers. In this regard, Kenya, Madagascar, and South Africa could be said to be at one end of the ITE selection spectrum, being relatively unselective of prospective teachers (although they do require upper secondary school leaving certificates), with Namibia and especially Djibouti at the opposite end, in that they appear to apply the most rigorous selection criteria.

Qualifications

Lewin (1999) has devised a typology of preservice teacher programs that identifies four main pathways to becoming a teacher. The scheme takes into consideration their duration, entry requirements, curriculum, teaching practice, teaching styles, and certification requirements. Essentially, these reduce to two types: those requiring a degree before entering schools and those that entail some or other placement before training, with or without accompanying study.

A major part of the reason for the existence of the large numbers of unqualified teachers found in many SSA countries is the tendency to adopt the latter approach, in order to cater for the increased demand for teachers under the pressure of expanded primary and secondary schooling across the continent. Cost considerations are also motivating experiments with teacher preparation and deployment moving away from longer, more rigorous preservice training. Our model predicts that this is a short-sighted practice, given that ITE provides a critically important time to address the poor academic literacy and weak subject knowledge which many students bring to their post-school studies, a point elaborated below.

The market scan provided information on the types and nature of ITE qualifications in 29 SSA countries. Of these, 14 offer diploma and degree qualifications, and 3 offer these as well as certificate qualifications. Four countries offer degrees only; three offer diplomas only and three offer certificates only (Burkina Faso, Liberia and Gambia). Lesotho and Malawi offer certificates and diplomas. While ITE degrees commonly consist of 4 years of study (in 14 of the 21 countries offering degrees), in a few countries, teaching degrees are awarded after 2 or 3 years. Teaching diplomas range between 2 and 4 years, while certificate study is usually 2–3 years.

Course Content

It has been noted above that in many SSA countries students in colleges of education and universities may have poor knowledge of the subjects they are expected to teach, especially where the status of teaching is low and the educational standards of entrants to teacher preparation courses are poor. In some cases, subject content

takes up to 80% of the teacher preparation time (Lewin, 2000). Even where trainees had completed senior secondary school, studies have found that the curriculum they were faced with in the colleges involved repeating most aspects of the secondary school curriculum in an attempt to improve their subject knowledge base. This leaves little time for considering how to teach the concepts and skills needed by early learners in mathematics and reading, or in the intensive and extensive engagement with children, and how they learn that this would require. Even worse, too little time may be spent teaching prospective teachers the subject content they will be expected to teach when qualified, as is the case in SA (Taylor, 2021).

Ultimately primary school teachers' skills in delivering reading pedagogy and language development for their learners are inextricably linked to the cognitive sophistication of their own language proficiencies. How literate should primary school teachers be? The SACMEQ teacher test in English comprehension indicate that around a quarter of Grade 6 language teachers are struggling to complete simple retrieval tasks, and around half score poorly on tasks requiring inferential reasonings, while only one-third are relatively skilled at completing interpretive or evaluative tasks (Taylor & Taylor, 2013). It would seem logical that if the country is to get increasing numbers of children scoring in the upper bands of the Progress in International Reading Literacy Study (PIRLS) comprehension ladder, then all teachers should themselves exhibit proficiency in these higher order skills.

To quote an aphorism coined in one of the earliest canonical texts in the study of "high-performing" school systems: "The quality of an education system cannot exceed the quality of its teachers" (Barber & Mourshead, 2007, p. 19).

The Practicum

The opportunity for prospective teachers to gain practical teaching experience in a classroom is a critical component of any ITE program. Such hands-on experience not only prepares prospective teachers for the classroom, but also enables them to apply the content and pedagogical elements of their training to the reality of the school environment. For instance, Darling-Hammond's (2014) review reveals that teaching practice with coursework is helpful for teacher candidates to understand the knowledge and apply concepts they are learning in the course.

Liu et al. (2017, p. 175) describe Singapore's approach to the practicum as follows:

> . . .the practicum. . . is conceptualised as the spine of the teacher education programmes. It provides shape and support to the programmes and helps frame the courses.

Akyeampong et al. (2013) found that trainee teachers in a number of East and Central African countries might be visited once or twice during their practicum by college staff but often this was jeopardized through lack of funds or the distance from the college. Ghana was exceptional in that there is a formal mentoring system to enrich trainee knowledge and skills (Akyeampong & Asante, 2005). In no other

country did tutors draw on the practicum as a learning opportunity back at the college. Indeed, tutors in Mali and Tanzania noted that trainees on the practicum revert to the way they were taught to read rather than adopting the new practices they learnt at college. Without specific guidance from experienced teachers or consistent supervision from tutors, problems encountered by trainees in class (such as whether their pupils learn what was intended or not and how to understand and interpret the school curriculum) remain unsolved or are not experienced as being problematic by trainees (Akeampong et al., 2013).

These examples make it clear that more intensive in-school work, under expert mentors, is what is needed during ITE, in order to prepare the teacher for what is to follow and to set them on the path to being effective teachers.

Almost all countries in the market scan stated that the teaching practice or practicum component of ITE qualifications is assessed through summative (usually preceded by formative) in-school lesson observations, which may be undertaken not only by teacher educators but also by school mentors and leaders, as in Cameroon, Nigeria, South Africa, and Zimbabwe. Only Sierra Leone indicated that there may be insufficient capacity to test whether students have acquired the necessary practical skills, although it is known from other research that training institutions often lack capacity to adequately assess all students' classroom abilities.

Early Work Experience and Induction

According to Maciejewski (2007), a decade ago the dominant trend in education, as relates to the socialization of new teachers, remained one of a sink or swim mentality, where new teachers assume the complete duties of a veteran teacher. New teachers' experiences were invariably described in terms such as "shock," "battle," and "challenge," and reference was made to perceived gaps between theory (what they were taught) and practice (what the actual school situation requires); a lack of support from school leaders, fellow teachers, and education officials; and heavy workloads, difficult working conditions, stress, and high attrition rates.

In the face of such experiences, the Teaching and Learning International Survey (TALIS) (OECD, 2008) found that, in developed countries, there is a growing trend toward the development of teacher induction programs as a way to support new teachers. Teacher induction is a professional development program that incorporates mentoring and is designed to offer support, guidance, and orientation for new teachers during the transition into their first teaching jobs. These programs help teachers through their first year of teaching by supporting ongoing dialogue and collaboration among teachers. However, the survey found that the quality of these programs varies considerably: Some are administrative introductions while others are year-long partnership programs, and such variation probably accounts for the fact that the TALIS study could not find a relationship between the presence of induction programs and new teachers receiving useful feedback on their teaching.

In the market scan, over two-thirds of the 23 countries for which information was found on these practices provide formal induction programs, which is usually school

based and conducted by education officials, sometimes in conjunction with university or college staff. Among the seven countries that have no formal induction programs, Sierra Leone and South Africa are planning to introduce them.

The need for a formal induction period is underlined by the difficulties encountered by many newly qualified teachers during their first year of teaching. Information on these experiences was found for 11 countries. In 12 countries, senior teachers are specifically tasked with mentoring student teachers, and in five of these – all from Southern and Eastern Africa: Lesotho, Namibia, South Africa, Swaziland, and Tanzania – these mentor teachers work together with university lecturers (who may or may not be subject experts). In Ghana, district officials work alongside mentor teachers, while in Kenya county education officials appear to do this job alone. In a couple of instances (Burkina Faso and Lesotho), "specialists" or "consultants" are involved.

License to Practice

Of 21 countries for which data was found on this issue, 16 have a formal teacher licensing process. Information on the nature of the licensing process was available for only seven countries: In most of these, application to the appropriate licensing body and provision of evidence that an ITE qualification has been awarded is sufficient for registration as a teacher. In other words, it is a bureaucratic function, with no QA role.

Performance Management

Teacher performance management is a continuous process for evaluating and supporting the work of teachers, so that the goals and objectives of the school are more effectively achieved, while at the same time benefiting teachers in terms of recognition of performance, professional development, and career guidance. The objectives of implementing teacher performance management systems fall into three categories: accountability, staff motivation, and teacher professional development. It is considered best practice to have a formal appraisal and performance management system in place to aid in transparency and establish clear expectations for teachers and their managers, particularly as regard the standards that teachers must comply with.

Teacher absenteeism, late coming and leaving early, and being frequently "missing" from classes even when at school are common problems in SSA countries (Bonga, 2005; DPME/DBE, 2017). Bonga (ibid.) attributes this partly to weaknesses in management and inspectorate systems, and low teacher morale resulting from heavy workloads and poor incentive structures.

Teachers are usually not sanctioned by school leaders or school inspectors for not being on duty. In fact, inspectors rarely visit schools in the rural areas of some African countries where inspector-teacher ratios can be as high as 1:700 (Mulkeen,

2010). Those who do visit, seldom use centralized or standardized systems to report weaknesses in schools or individual teachers. As Akyeampong and Asante (2005) have stated: School visits often focus on factors like the number of books and quality of facilities, not pedagogical issues. Consequently, vices such as lateness, absenteeism, drunkenness, etc. abound, while circuit supervisors do relatively little – just check staff numbers and enrolments rather than offer professional advice and support to teachers.

In South Africa a Ministerial Committee (DOE, 2009) examined the anomaly between poor school performance and high teacher ratings on the performance appraisal system (the Integrated Quality Management System, IQMS) and came to three conclusions. First, most teachers do not know how to conduct an effective analysis of teacher performance, neither do they know how to prioritize teacher development needs. Second, the criteria for evaluating teacher performance do not include measures identified in the research literature as constituting effective teaching, such as time on task, appropriate use of textbooks and materials, good communication, motivation, and the importance of positive feedback. Third, the intentions of using IQMS to identify and remediate gaps in teachers' knowledge and skills are not met, due to a preponderant focus on the other intention of the IQMS, which is to approve a salary notch increase.

Many of the conclusions regarding performance appraisal reached by the South African ministerial committee were replicated by a study commissioned by the African Union (African Union, 2017). This study looked at whether school teachers are appraised or evaluated on a regular basis, how information is gathered to assess teachers' performance, and what the results of teacher performance evaluations are used for. The study found that assessment of teachers is not a common or transparent practice in SSA, and where it is carried out, little sensitization is offered to the teachers as to how they will be appraised or what indicators will be used to determine performance. In some countries, appraisal is not carried out for pedagogic feedback or support purposes, but mainly for purposes of administration or discipline. This means that teachers' performance is separated from rewards and career opportunities as well as their own personal growth, and teachers work without a clear plan or goals to achieve.

In the market scan formal appraisal and performance management systems were found to be in place in 15 countries, although lack of capacity, inadequate enforcement, and limited effectiveness are common complaints. In five countries, an inspectorate conducts performance assessments; in another six appraisals are the responsibility of school managers and/or local education officials. In SA, the IQMS outcomes tend to be dominated by a friendly peer review component (DOE, 2009).

Continuous Professional Development (CPD)

For Musset (2010) ITE and CPD serve complementary but different purposes and cannot substitute for each other. ITE provides teachers with a solid base of the knowledge and the skills that they will need for their task. For primary school

teachers, this entails high proficiency in both languages and mathematics, with a good understanding of one or two other disciplinary fields, in addition. For secondary school teachers the base is a degree in one or two of the subjects they will be teaching. Three or four years of full-time study in a degree program should, at the very least, produce teachers who have mastered the subject content they will be teaching. In addition, intense practice in classrooms should lay the foundation for effective teaching. CPD, on the other hand, provides opportunities for teachers to update their knowledge and skills, and to adapt these to changes in the teaching environment.

This is a fundamental distinction and failure to take sufficient account of it enables policymakers to adopt Lewin's (1999) Type 4 approach to teacher preparation, where teachers are employed in schools with little or no training, on the assumption that their competence will be built through CPD activities. In the face of financial constraints, countries continue to attempt to use CPD to upskill or qualify teachers hired with few or no qualifications. It seems that the pattern of recruiting unqualified primary teachers locally, then providing opportunities for upgrading to qualified status through in-service training, has become a second path into the profession in much of sub-Saharan Africa. Thus, according to the UIS, less than half of the teachers in classrooms in Angola, Benin, Equatorial Guinea, Guinea-Bissau, Madagascar, Niger, Senegal, and South Sudan are trained (UNESCO, 2015). In terms of ensuring that teachers are adequately equipped with the knowledge resources required to teach effectively, alternate pathways such as these must be considered to be a poor substitute for degree study prior to practice.

If Musset's distinction between ITE and CPD is taken seriously then this approach should be recognized as a false hope: CPD cannot make up for weak skills in literacy and/or mathematics resulting from 12 years of poor schooling. For a start, there is simply not enough time available in a teacher's life – perhaps around two afternoons per term – to bridge the large knowledge gaps revealed, for example, in the SACMEQ teacher test results. Second, teachers are busy people – children, parents, and spouses – and devoting time to the hard work of disciplinary study is tough.

The point is emphasized by research findings regarding the efficacy of CPD, which conclude that professional development in the form of short workshops has little effect on teaching practice, and that an effective program should last at least for several days, must be subject matter specific in its content and emphasis, and must take into account the instructional goals and the challenges faced by the school in which the teacher is working (McCutchen et al., 2002).

The African Union (2017) study found the provision of CPD is not well grounded on the continent, and the resources needed to establish high-quality training and support frameworks are generally lacking within the ministry budget allocations. The process of professional development is carried out through ad hoc, in-service programs mounted by ministries of education and other development partners at country level. Thus, where CPD is practiced, infrequent, poor-quality programs heighten the sense of neglect felt by teachers (Bennell & Akyeampong, 2007). On a more positive note, Darling-Hammond et al. (2017) report that the idea of learning

communities, in which teachers meet with other teachers to discuss ideas and issues in their practice, is the most effective form of CPD.

In the market scan, formal CPD programs were found to be available in 16 out of 22 countries for which information on this practice was found. In a few countries, teachers are expected to acquire a certain number of CPD "points" over time, which translates into 80 h every 3 years in places like Burundi and South Africa. Djibouti, which does not seem to require "points," nevertheless expects teachers to devote 32 h per year to professional development activities. In 11 countries, CPD appears to be ad hoc. Half of all CPD programs are offered both in and out of school and offered in school only in just two countries. The programs tend to focus on upgrading, on familiarizing teachers with curriculum developments, and, most frequently, on improving subject content and pedagogical knowledge.

One CPD model has demonstrated significant effects on early grade reading, which is a type of structured pedagogy (Kim & Davidson, 2019), involving lesson plans issued to teachers, reading materials for learners, and in-school coaching of teachers by external coaches. This program model has been particularly successful in Kenya: Following the success of a pilot, the Tusome program was successfully implemented in all primary schools in the country, resulting in a marked improvement in a range of indicators, letter/sound fluency, oral reading fluency, comprehension, and emergent reading (Piper et al., 2018).

A very similar model has been piloted in South Africa: While the Early Grade Reading Study (EGRS) has shown promise in two pilots, one in EFAL (Taylor et al., 2018) and the other in HL (Kotze et al., 2020), it has yet to demonstrate efficacy under "normal" conditions of district management. This is what is left when the benefits bestowed by EGRS – additional funding and management, reading and teaching materials, regular visits by coaches an intense public gaze – are removed. Will teachers continue with the program or will they revert to what they were doing before the EGRS arrived? Until external validity can be demonstrated policy recommendations based on this model are premature.

The systemic success of Tusome in achieving national rollout is a very significant advance in the field of CPD. However, it is pertinent to ask how far interventions based on a structured pedagogy approach can get in advancing teacher proficiency up the ladder of the PIRLS processes of reading comprehension, and hence of moving a significant proportion of children in the same direction. Learning any knowledge discipline is both a continuous and discontinuous process. Continuous in the sense that the progress of any learner through something like the PIRLS benchmarks (Mullis et al., 2009) rises relatively smoothly, as reflected in test scores.

On the other hand, a child scoring in the middle reaches of the Intermediate PIRLS International Benchmark (IB) performs qualitatively differently from one performing in the middle of the Low IB. Thus, the former is able only to "*understand the plot at a literal level and to make some inferences and connections across texts*," while the latter rarely, if at all, gets beyond being "*... able to recognise, locate and reproduce information that is explicitly stated in texts, and make straightforward inferences.*" It is reasonable to assume that a teacher who is herself performing at the Intermediate IB, as most SACMEQ Grade 6 teachers appear to be (Taylor & Taylor,

2013), would be unable to assist learners to perform at the Advanced IB. It seems unlikely that a structured pedagogy intervention would succeed in ratcheting up teachers' knowledge and skills to the extent that they are able to perform at least at the highest (or at least the penultimate) PIRLS benchmark.

Is ITE capable of doing this? Surely, with so much more time available, working with 19-year-old plastic minds, full of youthful idealism, the chances are that this is the point of maximum leverage for upgrading teachers' disciplinary knowledge. Note that this should not be taken as an either/or choice between ITE and CPD: Both modalities of teacher development have their place and optimal benefit should be sought from both.

Promotion

The promotion of teachers is essential not only to having quality teachers in leadership positions, but also to teacher motivation and a sense of professional development. According to Cordeiro (2009), successful organizations promote CPD throughout employees' careers to achieve intended organizational and individual goals. As in many other professions, promotion of teachers is often directly linked to an incremental remuneration structure based on hierarchical job groups which determine upward mobility. A career path should provide meaningful rewards and financial and nonfinancial incentives to motivate teachers to progress, be linked to significant CPD options, and be equitable, allowing equal opportunities in career progression.

Systems of promotion must be well designed if they are not to have an adverse effect on teacher motivation and retention. According to Saha and Dworkin (2009), if rewards are allocated only on nonperformance factors, such as seniority, job title, or across-the-board pay raises, employees are likely to reduce their efforts. Worse still is the exercise of corrupt practices, the likes of which are apparently operating on a widespread scale in South Africa – including "buying" posts and manipulating appointments and procedures to favor certain candidates (DBE, 2016).

In Africa, a perennial complaint is that career progression opportunities are limited, are unlinked to professional development, and that salaries increase slowly over time. Promotion to school leadership positions is not typically based on performance and merit, rather on years of service and other nonprofessional factors, including nepotism and corruption. As a result, not many teachers and school leaders perceive a correlation between teaching effort and attractive career outcomes. An earlier study focusing on teacher motivation and incentives conducted in SSA (Bennell & Akyeampong, 2007) found that teachers were facing a motivation crisis and, as a result, learners were not taught properly due to low job satisfaction and motivation levels among teachers. One of the reasons cited was apparent irregular promotions, particularly in rural schools.

In the market scan, 11 out of 18 countries with information on this issue reported that the promotion of teachers to senior positions depends on further training, and in most cases such training is associated with obtaining a higher qualification such as a

degree or postgraduate qualification. In the other seven countries for which information was obtained qualifications may also play a role. Whether or not further training is required, in some instances (such as Senegal and Uganda) the possibility of promotion also depends on the existence of a vacancy.

Conclusion

If the proposition is taken seriously that one of the main goals of schooling is to nurture in children a love of and proficiency in literacy, numeracy, and certain specialist subjects, then it would seem to follow that, in order for learners to attain the highest levels of academic achievement, their teachers should show at least equal proficiency. This is not the case currently: SACMEQ teacher tests reveal that the majority of Grade 6 teachers in the region exhibit lower levels of proficiency in reading and maths than those required of their learners by the curriculum (Taylor & Taylor, 2013). This paper accepts the logic of this proposition, and in Fig. 1 identifies a number of key points in the school system at which leverage can be applied in building teachers' knowledge and skills.

It has been argued above that the manner in which teachers are deployed and managed is dependent on the political economy (PE) of the country, but without well-educated teachers to promote into positions of leadership, the system loses efficiency whatever the state of the political economy. Under a well-managed system, well-educated teachers grow into experienced curriculum leaders and administrators in schools and higher levels of the system, able and willing to mentor and guide younger teachers, coordinate meaningful CPD within and across schools, and identify and develop the best candidates as future leaders. Building a high-performing system is a slow process, as a critical mass of competent educators builds up in the system. It requires steady policy choices and dedication to a high degree of meritocracy at every point in the school cycle over decades.

For much of SSA, how to attract and retain talented individuals in the teaching profession remains an issue. Enhancing the status, morale, and professionalism of teachers was adopted as one of the 12 main strategies for achieving the objectives set by the Dakar Summit (UNESCO, 2000). However, this is more easily said than implemented: According to Moon (2007, p. 1):

> . . . millions of teachers, particularly in Africa and parts of Asia continue to live and work in conditions of poverty. In this respect the vision set out in the 1966 Declaration remains unfulfilled.

Conditions of service and salary levels play an important part in establishing the status of teaching. Thus, while the first McKinsey report found no correlation between teacher pay and school performance, this occurs under conditions in which a minimum threshold of service conditions are met: Unless school systems offer salaries which are in line with other graduate starting salaries, many potential applicants to ITE programs would choose a career path other than teachings, no

matter how idealistic they may be about the key role played by teachers in building society (Barber & Mourshead, 2007). However, because of the large numbers of teachers required, and the many competing demands on the fiscus, this threshold is difficult to sustain in many poor SSA countries.

Under these conditions, prioritizing education above competing fiscal demands requires a long-term vision, driven by an unshakable belief that quality teachers are essential to building the kind of caring, well-educated and skilled citizens of a prospering nation, and holding that belief for two or three decades. The budget required to achieve these policy goals can be justified in terms of the efficiency gains likely to be achieved with stronger teacher knowledge and skill: faster throughput rate of learners, higher cognitive skills attained, and contribution to knowledge generation and utilization.

The market scan indicates that many SSA countries have adopted, or are in the process of adopting, a number of key elements of best practice with respect to teacher education, deployment, and support: Several are attempting to select more academically able students into ITE, provide high-quality degree courses, induct newly qualified teachers by means of in-school mentoring and supervision, and to link CPD systematically to performance management and to well-defined career pathways. In addition, the case studies, undertaken in countries which differ widely in geographic location, political history, and resource availability, tell a more nuanced story, indicating that the positive signs identified by the market scan often exist more in the intention than the practice.

Data from the four case studies provides a closer look at the relationship between policy, practice, and outcomes, thus affording insights into actual practices and their impact. The Rwandan study, for example, concluded that the country's policymakers in education are targeting most of the "best practices" described in Fig. 2 (Taylor et al., 2019). In addition, the country has placed ICTs at the center of its drive toward achieving middle-income status by 2020, and developed an education policy, within the framework of the Vision 2020 and the national strategy on ICT. A number of partnership projects between the ministry, donors, and NGOs have been working in schools in the last 15 years and as a result the ratio of users per computer is high by SSA standards (16:1 in primary schools and 28:1 in secondary schools). However, research on the use of computers in schools concludes that the potential of ICT will not be realized by the mere introduction of computers and ICT infrastructure. This study argues that without a shift in practices of teaching and learning with ICT in schools, young people are not likely to learn how to exploit the capabilities offered by access to electronic tools and media.

The case studies were conducted as descriptions of policy and practice, and not as PE analyses. In the case of SA, the PE analysis conducted by Levy et al. (2018) complement the case study in revealing that, under the conditions of incompetence (a consequence of nepotism) and corruption endemic to the SA state, there can be no commitment to the kind of rational, coherent, and long-term approach to teacher education advocated in Fig. 1, however fervently the best intentions are enshrined in official policy choices.

Nevertheless, further analysis reveals that there may be much that can be done to improve the quality of schooling, even within a poorly functioning state sector. In

SA, for example, those parts of the schooling system responsible for the *production* of teachers (universities and teacher colleges) enjoy relative autonomy from those parts which *deploy and manage* teachers (the state). In such situations policy choices 1 and 2 in Table 1 may be pursued even under a highly corrupt and inefficient state. Indeed, in the strong professions, such as medicine, the SA system for producing excellent doctors and world-class research operates at a high level, under the same corrupt and inefficient government. For this to happen in the education sector would depend on university-based teacher educators adopting a professional approach to teaching, which entails finding a "sufficient consensus" on what teachers should know and be able to do on graduation, and committing to ensuring that their students attain these standards.

Nevertheless, it remains to be seen to what extent a supply side increase in the knowledge, skills, and work ethic of new graduates can have a systemic effect without changes in the political economy. In any event, reform of both domains is essential if an accelerated uptick in learning is to be achieved.

The SA case illustrates two principles with respect to educational change. One, selecting the right policy is not nearly enough. An assessment of the PE of education is necessary to understand inhibitions to and facilitating factors for success of the policy in practice. Two, the PE of any country is unique and gaps need to be found of circumventing, or transcending, political obstacles to change. At the end of the day, however, no country that has not pursued a long-term national development plan, within which a plan for school reform is closely integrated, has seen the kind of spectacular fall in poverty rates in countries which maintain high-performing school systems.

Cross-References

- ▶ Issues Related to Teacher Preparation in Southern Africa
- ▶ Navigating the Competing Discourses of Quality, Evidence and Equity in Teacher Education
- ▶ Standardised Testing as a Gatekeeping Mechanism for Teacher Quality
- ▶ Teacher Professionalism
- ▶ The Global Development Discourse on 'Teacher Quality' and Implications for Teacher Professional Development
- ▶ Towards Internationally Shared Principles of Quality Teacher Education across Finland, Hong Kong and the United States

References

African Union. (2017). *AU study on teacher training, working and living conditions in member states*. African Union.

Akyeampong, K., & Asante, K. (2005). *Teacher motivation and incentives: A profile of Ghana*. Centre for International Education; University of Sussex.

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

Atlantis Group. (2018). *Collapse of teacher training across Africa demands global leadership*. Statement issued by the Atlantis Group, 6 June 2018. Downloaded on 26 July 2018 from https://www.varkeyfoundation.org/opinion/collapse-of-teacher-training-across-africa-demands-global-leadership#.W1Ys3xcxahI.twitter

Barber, M. & Mourshead, M. (2007). How the world's best-performing school systems come out on top. McKinsey & Company. Downloaded on 25 March 2019 from https://www.mckinsey.com/industries/social-sector/our-insights/how-the-worlds-best-performing-school-systems-come-out-on-top

Bennell, P. & Akyeampong, K. (2007). *Teacher motivation in Sub-Saharan Africa and South Asia* (DFID educational paper no. 71). Department for International Development.

Bonga. (2005). Disciplinary issues in the Malawi School System. *Paper presented at the National Education Conference.* MIM.

CETAP. (2020). *The national benchmark tests. National report: 2019 intake cycle*, Centre for Educational Testing for Access and Placement, University of Cape Town, viewed 18 May 2020, from https://nbt.uct.ac.za/sites/default/files/NBT%20National%20Report%202019.pdf

Cordeiro, C. (2009). *Educational leadership: A bridge to improved practice*. Pearson.

Darling-Hammond, L. (2014). Want to close the achievement gap? *American Educator*, *Winter* 2014–2015*:* 14–18.

Darling-Hammond, L., Burns, D., Campbell, C., Goodwin, A., Hammerness, K., & Low, E. (2017). *Empowered educators: How high-performing systems shape teaching quality around the world*. Jossey-Bass.

DBE. (2014). *Ministerial task team report on the National Senior Certificate (NSC)*. Department of Basic Education.

DBE. (2016). *Report of the ministerial task team appointed by Minister Angie Motshekga to investigate allegations into the selling of posts of educators by members of teachers unions and departmental officials in provincial education departments*. Department of Basic Education.

DOE.(2009). Ministerial committee on a National Education Evaluation and Development Unit. Final Report.*Government gazette no. 32133, 17 April 2009*. Government Printer.

DPME/DBE. (2017). *Implementation evaluation of the National Curriculum Statement Grade R to 12 focusing on the Curriculum and Assessment Policy Statements (CAPS)*. Department of Planning, Monitoring and Evaluation/Department of Basic Education.

IICBA. (2016). *Teaching policies and learning outcomes in sub-Saharan Africa: Issues and options.* United Nations Educational, Scientific and Cultural Organization, International Institute for Capacity Building in Africa.

Kim, Y.-S. G., & Davidson, M. (2019). Promoting successful literacy acquisition through structured pedagogy: Global reading network critical topics series. Prepared by University Research Co., LLC. (URC) under the Reading within REACH (REACH) initiative for USAID's Building Evidence and Supporting Innovation to Improve Primary Grade Assistance for the Office of Education (E3/ED). Available at http://www.edu-links.org.

Kotze, J., Taylor, S., Fleisch, B., Cilliers, J., Mohohlwane, N. & Thulare, T. (2020). *Can virtual coaching improve teaching practice and student learning? Experimental Evidence from South Africa*. Unpublished mimeo.

Levy, B., Cameron, R., Hoadley, U., & Naidoo, V. (Eds.). (2018). *The politics and governance of basic education: A tale of two South African provinces*. Oxford University Press.

Lewin, K. (1999). *Counting the cost of teacher education: Cost and quality issues.* Multi-site teacher education research (MUSTER) project, discussion paper no. 1. University of Sussex.

Lewin, K. (2000). *Mapping science education in developing countries*. The World Bank, Human Development Network.

Liu, W., Koh, C., & Chua, B. (2017). Developing thinking teachers through learning portfolios. In O. Tan, W. Liu, & E. Low (Eds.), *Teacher education in the 21st century: Singapore's evolution and innovation*. Springer.

London, J. (2021). Outlier Vietnam and the problem of embeddedness: Contributions to the political economy of learning. RISE working paper. Downloaded on 16 June 2021 from https://riseprogramme.org/publications/outlier-vietnam-and-problem-embeddedness-contributions-political-economy-learning

Maciejewski, J. (2007). Supporting new teachers: Are induction programs worth the cost? *District Administration, 43*, 48–52.

Mboweni, T. (2021). The pillar of the state. Budget Vote 8 Delivered by Minister of Finance, 20 May 2021. Pretoria: Ministry of Finance, Republic of South Af'rica.

McCutchen, D., Abbott, R. D., Green, L. B., Beretvas, S. N., Cox, S., Potter, N. S., & Gray, A. L. (2002). Beginning literacy: Links among teacher knowledge, teacher practice, and student learning. *Journal of Learning Disabilities, 35*(1), 69–86. https://doi.org/10.1177/002221940203500106

Moon, B. (2007). A global overview of curret policies and programmes for teachers and teacher education. Prepared for the joint ILO/UNESCO Committee of Experts concerning Teaching Personnel. Accessed 15 July 2018 from http://www.ciep.fr/sources/conferences/CD_professionnalisation/bak/pages/docs/pdf_interv/Moon_Bob_en.pdf

Mulkeen, A. (2010). *Teachers in Anglophone Africa: Issues in teacher supply, training, and management*. World Bank.

Mullis, I., Martin, M., Kennedy, A., Trong, K., & Sainsbury, M. (2009). *PIRLS 2011 assessment framework*. International Association for the Evaluation of Educational Achievement.

Musset, P. (2010). *Initial teacher education and continuing training policies in a comparative perspective: Current practices in OECD countries and a literature review on potential effects* (OECD education working papers, no. 48). OECD Publishing. https://doi.org/10.1787/5kmbphh7s47h-en

OECD. (2008). *The experience of new teachers: Results from TALIS 2008*. OECD.

OECD. (2018). *Effective teacher policies: Insights from PISA*. OECD Publishing. https://doi.org/10.1787/9789264301603-en

Piper, B., Destefano, J., Kinyanjui, E., & Ong'ele, S. (2018). Scaling up successfully: Lessons from Kenya's Tusome national literacy program. *Journal of Educational Change, 19*, 293–321. https://doi.org/10.1007/s10833-018-9325-4

Pritchett, L. (2018). The politics of learning: Directions for future research. *RISE-WP-18/020.* Downloaded on 15 March 2021 from https://riseprogramme.org/sites/default/files/publications/RISE_WP-020_Pritchett.pdf

Saha, L., & Dworkin, A. (Eds.). (2009). *International handbook of research on teachers and teaching*. Springer.

Spaull, N., Lilenstein, A., & Carel, D. (2020). *The race between teacher wages and the budget: The case of South Africa 2008–2018*. Research on Socioeconomic Policy (RESEP). Stellenbosch University.

Schleicher, A. (2018). *Valuing our teachers and raising their status. How communities can help*. International Summit on the Teaching Profession. Paris: OECD Publishing. https://doi.org/10.1787/9789264292697-en.

Taylor, N. (2021). The dream of Sisyphus: Mathematics education in South Africa. *South African J Childhood Educ, 11*(1), a911. https://doi.org/10.4102/sajce.v11i1.911

Taylor, N., & Taylor, S. (2013). Teacher knowledge and professional habitus. In N. Taylor, S. Van der Berg & T. Mabogoane (Eds.), *Creating effective schools: Report of South Africa's National School effectiveness study* (pp. 204–233). Cape Town: Pearson.

Taylor, S., Cilliers, J., Prinsloo, C., Fleisch, B., & Reddy, V. (2018). *The early grade reading study sustainability evaluation: Technical report*. Department of Basic Education. Accessed at:https://www.education.gov.za/Portals/0/Documents/Reports/EGRS/EGRS%20I%20Wave%204%20Report%202019.pdf?ver=2019-05-31-111638-587

Taylor, N., Deacon, R. and Robinson, N. (2019). Secondary education in Sub-Saharan Africa: Teacher preparation and support. Overview Report. Available at www.jet.org.za.

Unesco. (2015). *Education 2030: Incheon Declaration and Framework for Action*. http://hdl.handle.net/11162/118764

UN. (2015a). *The millennium development goals report 2015*. United Nations. Downloaded on 6 August 2018 from http://www.un.org/millenniumgoals/pdf/MDG_Gap_2015_E_web.pdf

UN. (2015b). *Transforming our world: the 2030 Agenda for Sustainable Development*. Downloaded on 6 August 2018 from https://sustainabledevelopment.un.org/post2015/transformingourworld

UNESCO. (2015). *Sustainable development goal for education cannot advance without more teachers*. UNESCO.

UNESCO. (2017). *Global education monitoring report 2017/18: Accountability in education*. Paris: UNESCO. Downloaded on 12 August 2018 from http://unesdoc.unesco.org/images/0025/002593/259338e.pdf

UNESCO. (2018). *SDG 4 data book: Global education indicators 2018*. UNESCO Institute for Statistics. Downloaded on 6 August 2018 from http://uis.unesco.org/sites/default/files/documents/sdg4-data-book-2018-en.pdf

UNSESCO. (2000). *The Dakar framework for action. Education for all: Meeting our collective commitments*. Downloaded on 23 August 2018 from https://resourcecentre.savethechildren.net/library/dakar-framework-action-education-all-meeting-our-collective-commitments