Background Paper

Secondary Level Teacher Education in Sub-Saharan Africa
Teacher Preparation and Support

Overview Report

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Secondary Education in Africa:

PREPARING YOUTH FOR THE FUTURE OF WORK

This paper was prepared for the Mastercard Foundation report, *Secondary Education in Africa: Preparing Youth for the Future of Work.* The opinions, findings, and conclusions stated herein are those of the authors and do not necessarily reflect those of Mastercard Foundation.

SECONDARY LEVEL TEACHER EDUCATION IN SUB-SAHARAN AFRICA

Teacher Preparation and Support

OVERVIEW REPORT

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March 2019

JET EDUCATION SERVICES

VARKEY FOUNDATION
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ACRONYMS AND ABBREVIATIONS

A-levels	Advanced Levels
ADEA	Association for the Development of Education in Africa
B Ed	Bachelor of Education
BPM	Best Practice Model
CK	content knowledge
CDE	Centre for Development and Enterprise
CPD	continuous professional development
DBE	Department of Basic Education and Training
DHET	Department of Higher Education and training
DPME	Department of Planning Monitoring and Evaluation
DRC	Democratic Republic of the Congo
EAC	East African Community
ECOWAS	Economic Community of West African States
GCE	General Certificate of Education
GCSE	General Certificate of Secondary Education
GDP	gross domestic product
IEMS	Inspecteur de l'Enseignement moyen secondaire
ITE	initial teacher education
MDGs	Millennium Development Goals
NEEDU	National Education Evaluation and Development Unit
NGO	non-governmental organisation
NTCs	national teacher colleges
NTP	National Teacher Policy
O-levels	Ordinary Levels
PASEC	Programme for the Analysis of Education Systems
PCK	pedagogic content knowledge
RSA	Republic of South Africa
SACE	South African A Council for Educators
SACMEQ	The Southern and Eastern Africa Consortium for Monitoring Educational Quality
SEA	Secondary Education in Africa
SK	subject knowledge
SSA	Sub-Saharan Africa
TIET	Teacher Instructor Education and Training
TIMSS	Trends in International Mathematics and Science Study
TMIS	Teacher Management Information System
UIS	UNESCO Institute for Statistics
UN	United Nations
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNITE	Uganda National Institute for Teacher Education
UPE	Universal Primary Education
US	United States of America
USE	Universal Secondary Education

BACKGROUND

This Overview Report draws together the findings of a study on the education of secondary school teachers in sub-Saharan Africa (SSA) commissioned by the Varkey Foundation. The study comprised: a review of the international literature on teacher education, both initial (ITE) and continuing (CPD), a market scan of practices in the 48 SSA countries, four country case studies, and the present Overview Report. The full set of research products is listed in Appendix 1.

The review of teacher education reflected in the present report, in turn, is one of 13 background papers which contribute to a wide-ranging review of secondary education in Africa (SEA) coordinated by the Mastercard Foundation and supported by a number of donors.

The research occurs against the background of two related developments in schooling in SSA. First, regarding progress against Millennium Development Goal 2 - achieving universal primary schooling – major progress strides has been made in the last two decades. Thus, the United Nations 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 to 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.

The second important contextual factor framing the present study concerns 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, the United Nations Educational, Scientific and Cultural Organization (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 has 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, 2018a).

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, which is 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.

What these two contextual factors point to is the simultaneous rapid growth of enrolment in primary schools across Africa and alarming signs of a decline in the quality of teacher education. The situation is

likely to be exacerbated in the next decade as school systems come under increasing pressure to accommodate growing numbers of learners exiting primary and lower secondary schools. Not only must additional funds be found to support further expansion of school systems across the region, but a better balance needs to be achieved between quantity and quality in equipping learners for active participation in society and the economy. This report is concerned with how SSA countries should best address the twin challenges of increasing both the quantity and quality of secondary school teachers over the next two decades and beyond.

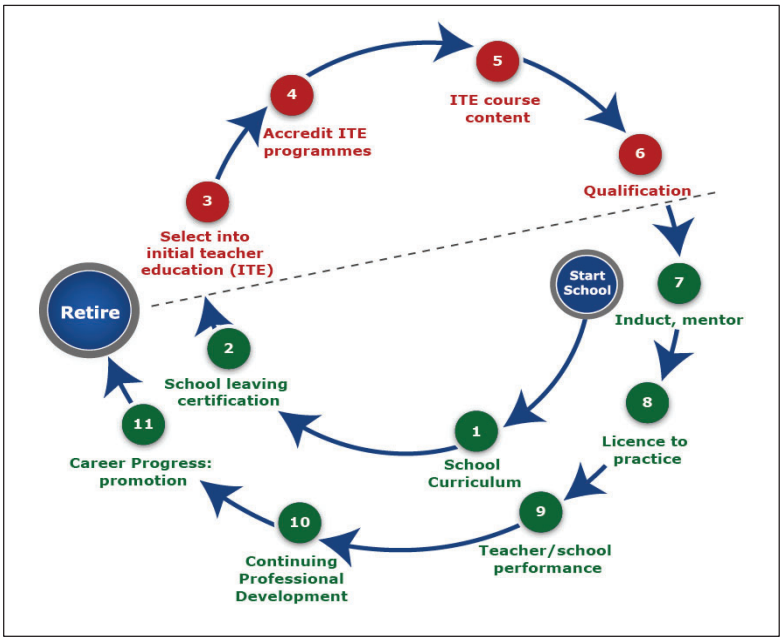
METHOD

Assumptions

In its narrowest sense, teacher education may be viewed as consisting of a period of initial teacher education (ITE) followed by employment during which periodic episodes of in-service training (or continuous professional development, CPD) are provided, while the management and promotion of educators are considered to be separate issues. In contrast, the present research study is framed by a more comprehensive view in which ITE and CPD are seen as complementary. From this perspective, CPD is viewed as being integral to the daily work of teams of educators in schools, where school leaders and teachers collaborate in achieving the highest levels of education for all their learners, and where on-going professional development is central to the deployment, assessment and promotion of educators throughout their careers.

The present report 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 (Figure 1).

Figure 1: The School Cycle



Source: CDE, 2017

This broad conception of schooling as a cyclical set of processes emphasises the fact that the end of school is the beginning of higher education; we cannot divorce the quality of a nation's teachers from the quality of its school graduates. The quality of entrants into ITE is dependent on the quality of matriculants exiting schools; the quality of entrants places limits on the quality of education they are able to absorb during ITE; and in turn the quality of ITE gives shape to the quality of instruction newly qualified teachers are able to bring to bear in their classrooms, and which experienced teachers are able to offer to new teachers once they are promoted into positions of curriculum leadership, administration, policy making and quality assurance.

This Overview Report condenses the findings of the six research reports which precede it: a Literature Review of the field of teacher education for secondary schooling, both internationally and within the SSA region; a Market Scan of secondary teacher education in 48 SSA countries on some 70 indicators; and Case Studies on the education of secondary teachers in Senegal, Uganda, Rwanda and South Africa. Case Study schools were selected so as to illustrate similarities and differences in policy and practice in countries which differ markedly in geographical location, wealth, history and language.

The framework driving the Market Scan and Case Studies focused an examination of the preparation, deployment and support of secondary school teachers across SSA under the key areas identified in the Literature Review: institutions which deliver initial teacher education; the programmes they offer and selection criteria applied on entry; the induction, mentoring and certification of new teachers; continuing professional development; performance management; and promotion and career pathing (Figure 1).

The conclusion assesses the extent to which the policies and practices in SSA countries accord with the ways in which teachers are educated and managed in countries which maintain highly successful school

systems, and speculates on the implications of these trends for the future of schooling in the region. The various data sets utilised by the study indicate that, while many SSA countries are beginning to adopt best practice policies, the implementation of these good intentions is a far more difficult matter. The central argument driving our conclusions is that the tendency to deal with a rapid rise in demand for teachers by reducing training and salaries, in the hope that CPD can make up for poor quality ITE, is a major factor in trapping many school systems in a vicious cycle of high access and low quality. Building a virtuous cycle system starts with selecting the best students into ITE and providing them with the best education and training possible for 3-4 years; then supporting them to exercise high quality pedagogical practices in their classrooms; and identifying and developing the best leadership skills to take the system to higher levels of performance. High performing school systems teach us that these goals take decades to achieve, within an environment of policy consistency and sound governance.

Literature Review

The purpose of the Literature Review was to find examples of best practice and innovative approaches to providing the best teacher education within current resource parameters. The preparation of teachers requires an understanding of what it is that teachers of the future need to know and be able to do. This, in turn, requires us to understand the role of secondary education in preparing African youth for the future of work and for helping youth to acquire the skills, knowledge and behaviours necessary to personal fulfilment, and to compete and succeed in society and the job market as responsible citizens.

A survey of the international theoretical and empirical literature on the preparation, deployment and support of teachers was done, focusing on both those countries generally regarded as maintaining excellent school systems and on SSA countries. This produced a framework for systematically examining the eight key aspects of teacher education listed above. A set of research questions was developed which drove the work in all subsequent components of the study (Appendix 2).

A Best Practice Model (BPM) was derived, detailing the policies and practices of well-performing countries in each of the eight key nodes of the school system (Figure 2).

Figure 2: Summary of the best practice model (BPM)

1. Selection of the best graduates from the school system into ITE programmes;
2. intensive pre-service education in disciplinary and pedagogic knowledge accompanied by extensive in-school work under experienced mentors;
3. a focus on continuous in-service education which is linked to teachers' daily work, and coordinated by curriculum leaders within the school; and
4. a management and promotion regime which systematically identifies, nurtures and rewards talent in the allocation of leadership responsibilities.

We appreciate the objections to this kind of 'best practicology' approach, and in particular we appreciate that country specificities undermine the validity of cross-country comparisons. Nevertheless, it is hard to come up with a rational argument against the idea that aspiring to the four points in Figure 2, consistently over decades, provides a feasible strategy for lifting the quality of schooling. Even financial objections to this strategy can be countered by highlighting sources of efficiency savings engendered by faster progress of learners through the system[1].

The factors listed in Figure 2 are not all of the same status, with the latter two being path dependent on the first two. Therefore, the first priority must be to improve the quality of ITE, through a combination of points 1 and 2 above. This is because subsequent steps are dependent on the existence of well-educated and 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, taking several decades to achieve, as a critical mass of competent educators builds up in the system.

Market Scan

A Market Scan of teacher preparation, deployment and support was compiled by a team of research analysts guided by the research questions. An online matrix was created using Google Sheets, in which 48 SSA countries[2] were listed (Y-axis) and data entered under the relevant research questions (Y-axis) (The questions are listed in Appendix 2). The Market Scan was initially conducted via desktop research. Although published material on broad conceptual and policy-related issues in SSA is relatively abundant, there is very little available in terms of the sort of data on programmes and practices required by the study. Because of the difficulties encountered in sourcing data via the internet, the team began systematically approaching officials by email and telephone. This strategy also proved to be disappointing, with very low to non-existent response rates, although it did yield important data in the case of a few countries such as Ghana and Ethiopia.

The difficulties experienced in sourcing the data are discussed at greater length in the Market Scan Report, together with several factors which undermine confidence in the validity of some of the data. The incomplete nature of the dataset, on its own, precludes the possibility of undertaking a model-building

[1] Faster throughput lowers enrolment, hence fewer schools, classrooms, teachers and books are required. Longer term benefits are: better teaching leads to higher skills among learners able to take on more challenging professional courses in higher education and providing the human resources essential to building a growing economy.
[2] Angola, Benin, Botswana, Burkina Faso, Burundi, Cabo Verde, Cameroon, Central African Republic, Chad, Comoros, Congo, Côte d'Ivoire, Democratic Republic of the Congo, Djibouti, Equatorial Guinea, Eritrea, Ethiopia, Gabon, Gambia, Ghana, Guinea, Guinea-Bissau, Kenya, Lesotho, Liberia, Madagascar, Malawi, Mali, Mauritania, Mauritius, Mozambique, Namibia, Niger, Nigeria, Rwanda, Sao Tome and Principe, Senegal, Seychelles, Sierra Leone, Somalia, South Africa, South Sudan, Swaziland, Togo, Uganda, United Republic of Tanzania, Zambia, Zimbabwe (as listed by UNESCO, 2017).

exercise. Thus, the research findings are largely of a descriptive nature, within the framework of the best practice model derived from the literature.

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 came to be populated by the end of the search, providing a rich source for descriptive analysis. However, we would advise that the dataset would benefit from an update before being subjected to more sophisticated analysis than the one reflected in the Market Scan Report, given the significant gaps and questionable validity in a some cases.

Case Studies

Four countries were selected for more detailed study: Senegal, Rwanda, Uganda and South Africa. The purpose of selecting such widely different countries – in terms of their histories and geographies – is to understand to what extent teacher education policies and practices are similar or different across the continent, and to search for lessons for other countries which share similarities with one or other of the Case Study countries. The set of Cases Study can in no way be considered as representative of the sub-continent; rather, such selections are intended to be illustrative of practices across diverse borders of language, economic opportunity, cultural diversity and emerging history.

Rwanda and South Africa were chosen as countries emerging from deeply traumatic histories, the first with Francophone roots and the second with a largely Anglophone school system. On an East-West dimension, Senegal has a long history of stability on the largely Francophone West coast and is a participant in the Programme for the Analysis of Education Systems (PASEC)[3] , while Uganda is a member of the East African Community (EAC)[4] (as is recent member Rwanda) and participates in The Southern and Eastern Africa Consortium for Monitoring Educational Quality (SACMEQ)[5] , a feature it shares with South Africa. The Anglo-/Franco-phone divide may reflect very different approaches, given the diverse histories of the English and French approaches to their colonial territories and the extent to which they imprinted their own school systems onto Africa. The East/West divide also offers countries very different regional contexts, reflected in economic opportunities such as proximity to trade routes and access to markets.

A consultant resident in each country was commissioned to address the set of questions listed in Appendix 2 by means of documentary and interview sources. The picture which emerged was examined against the parameters of the BPM derived from the Literature Review.

[3] PASEC is the CONFEMEN Programme for the Analysis of Education Systems; CONFEMEN is the Conference of Ministers of Education of French-Speaking Countries. Ten countries participate in PASEC: Benin, Burkina Faso, Burundi, Cameroon, Chad, Congo, Côte d'Ivoire, Niger, Senegal and Togo.

[4] The East African Community (EAC) is an intergovernmental organisation composed of six countries in the African Great Lakes region in eastern Africa: Burundi, Kenya, Rwanda, South Sudan, Tanzania, and Uganda.

[5] SACMEQ is the Southern and Eastern African Consortium for Monitoring Education Quality, in which 14 countries participate: Botswana, Kenya, Lesotho, Malawi, Mauritius, Mozambique, Namibia, Seychelles, South Africa, Swaziland, Tanzania (Zanzibar), Tanzania (Mainland), Uganda, Zambia and Zimbabwe.

WHAT DOES THE LITERATURE SAY?

Theoretical considerations

Schooling has been described as a cyclical process during which successive cohorts of learners progress through school, enter university and emerge as skilled graduates into the worlds of social engagement and work. In the case of teachers, they enter university as student teachers and graduate as teachers who nurture the next cohort through the cycle (CDE, 2017). At various stages of this cycle, teachers and ITE students are held to a set of standards and assessment criteria. For example, high school graduates must reach certain selection criteria to enter into an ITE programme, pre-service teachers must reach a certain standard to graduate as certified teachers, and teachers are often held to specific standards in order to retain their teaching certification or to enjoy progress and promotion throughout their careers.

The decisions that are made at various key points in this cycle can contribute towards a vicious or virtuous cycle: one in which education quality and teacher morale either rise or fall. A virtuous schooling cycle is characterised by high standards of entry into ITE, which enables a rigorous and challenging ITE programme and a strong and supportive system of continuous development for teachers linked to well-established career paths. However, in order to make high standards of entry into ITE feasible, there needs to be a large pool of high quality school graduates who wish to become teachers. High quality graduates are predicated on high quality basic education, and their teaching aspirations are dependent on the perceived status of teachers in the eyes of secondary school graduates. A country with competitive and challenging ITE programmes will produce well educated teachers who contribute to a higher quality of schooling, and this in turn leads to teaching being perceived as having a high status. It will therefore be more desirable for the top school students to enter ITE. A further layer of complexity is added to the cycle by the influence of conditions of service for educators and the working environment on teacher motivation, which in turn influences school performance and teacher status.

A number of countries and smaller school jurisdictions exhibit characteristics of what we have called a virtuous schooling cycle, including Singapore, South Korea, Finland, Japan, Ontario, Boston and Shanghai (Barber and Mourshed, 2007; Barber et al, 2010; Tucker, 2011; Darling-Hammond, 2017; Schleicher, 2018). These common features include selection of students into ITE programmes according to a rigorous process which screens for both academic ability and motivation; the education of candidate teachers is similarly thoroughgoing, involving intensive theoretical study and practical classroom experience, culminating in a degree with a strong research focus.

The virtuous cycle exemplified by the countries above can be contrasted to the vicious cycle which characterises large parts of the schooling sector in the United States, the United Kingdom and South Africa (CDE, 2017). In a vicious schooling cycle, ITE programmes are unable to attract high quality graduates due to the low status of teaching in the public eye, constraining teacher education institutions to recruit student teachers from among academically less successful matriculants which, in turn, requires a reduction in the rigour of their training. A less well-prepared teacher is then deployed into schools, contributing both

to the overall reduction in the quality of schooling and decreasing the perceived status of a teaching career. The cycle reproduces itself in its inability to recruit quality pre-service teachers.

There are four common features of a vicious cycle. The first is the emergence of alternative teacher accreditation schemes which purport to fast-track students through an ITE programme and to offer teacher certification without the lengthy three- to five-year course some systems require. In many parts of the world, particularly in developing countries, there has been a proliferation of such emergency programmes since the 1990s.

The second common feature of vicious cycle systems is that unqualified teachers are hired in order to fill the demand. According to UNESCO, less than one half of the teachers in Angola, Benin, Equatorial Guinea, Guinea-Bissau, Madagascar, Niger, Senegal and South Sudan (UNESCO, 2015a) are adequately trained.

The third feature is the apparent need for tighter regulation and 'standardisation' at the school level. Since ITE programmes are in a weaker position to ensure that their graduates are high quality teachers, governments often take it upon themselves to hold teachers accountable, at times through punishing, or threatening to punish, teachers whose students do not perform well. However, these performance management measures cannot solve the problem of disappointing school performance, as the failure of the No Child Left Behind programme in the US demonstrates. As Richard Elmore (2004: 280) asks: "Is it ethical to hold individuals—in this case, educators— accountable for doing things they don't know how to do and can't be expected to do without considerable increase in their own knowledge and skill?"

The fourth feature of many vicious cycle systems, most notably seen in SSA, is that teacher loads are increased in order to compensate for the lack of teachers. This increases the pupil-teacher ratio, which in turn reduces teacher effectiveness. Teacher job satisfaction falls, morale is lowered, and teaching becomes a less attractive career, further entrenching the vicious cycle.

For much of SSA, how to attract and especially 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); but this is more easily said than implemented. According to Moon (2007: 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".

Our virtuous cycle model emphasises the dependence of teacher status on effective pedagogy and the quality of and selection into ITE. However, conditions of service, and salary levels in particular, also 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 programmes 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 and Mourshed, 2007). 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, prioritising education above competing fiscal demands requires a long-tern vision,

driven by an unshakable belief that quality teachers are essential to building the kind of caring, well educated and skilled citizens of a prosperous nation, and holding that belief for two or three decades.

The above theoretical framework encourages us to look at schooling in its entirety and be wary of the idea that examining one element of such a vastly complex set of processes can be undertaken in isolation from a number of related elements. As noted by McMahon, Forde and Dickson (2015), governments and policy-makers should have four main concerns regarding the teaching profession: preparation; retention; quality; and progression. These authors see strong theoretical knowledge as foundational to this enterprise:

> *…we need to see teaching as theoretically informed activities and that a strong theoretical base is the foundation of decisions about the learning needs of individual pupils and groups of pupils and the ways of creating contexts in which learners can flourish* (McMahon et al, 2015: 173).

At the same time, McMahon and her colleagues see teacher education as a career-long pathway, a professional continuum which can be viewed as a development tool for professional learning and progression. The cyclical model of schooling outlined above distinguishes eight key focal points occurring along this continuum, as listed below under the findings of the Market Scan.

Best practices

From the perspective outlined above, the features of the school systems which perform best in the world, as revealed in the literature, are not surprising. Countries with high-performing education systems prioritise education and have high expectations of their teachers and their learners. Their curricula at both school level and when it comes to training teachers are rigorous and often cross-curricular, with limited variation in how curricula are delivered by different institutions. These countries have a long-term vision and implement their teacher education policies and practices in a sustained and consistent manner; and they focus both on *how much* they spend on all this but, of equal importance, on *how* they spend it (Schleicher, 2018).

The best-performing school systems in the world also “get the right people to become teachers”, “develop these people into effective instructors” and “ensure that every child is able to benefit from effective instruction” (Barber & Mourshed, 2007: 13). The 'right people' are those who have performed well at school and ideally were ranked among the top third of school-leavers. But while scholastic ability is necessary – and teachers need to be experts in subject and pedagogical knowledge as well as in how children learn – it is not enough: teachers must also be passionate, compassionate, thoughtful, encouraging and responsive, and able to work with and learn from other teachers. Hence the recruitment, selection, education, development and retention of prospective and current teachers requires close attention to their levels of literacy, numeracy and general knowledge, their interpersonal and communication skills, their motivations to teach and their interest in working with children (Sahlberg, 2012; Schleicher, 2018).

It follows that international best practice in teacher education is highly selective of would-be teachers (observing, screening, testing and interviewing them) and then rigorously training those who have been selected in institutions with high quality teacher educators, high standards and high status.

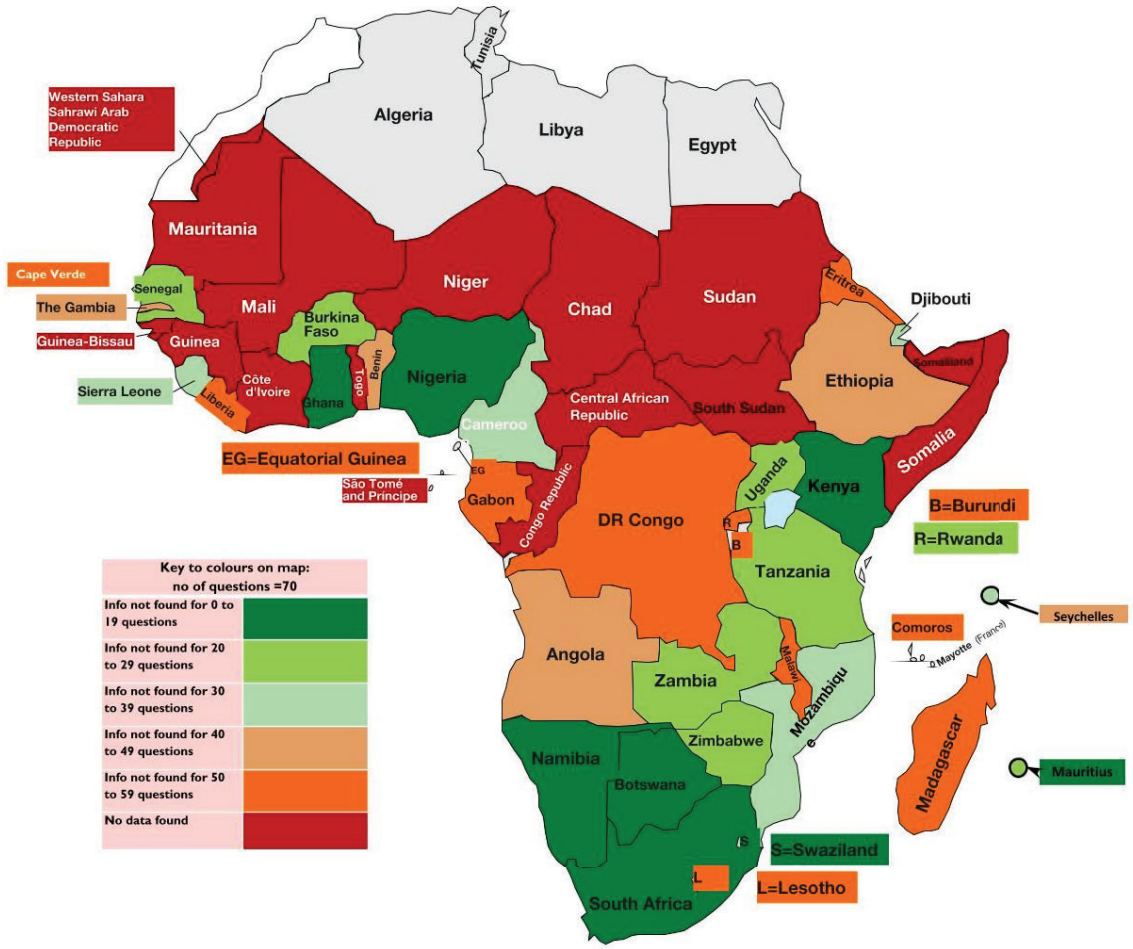
Best practice gives student teachers experience of school settings as early as possible and lets the time they spend there and the time they spend studying feed off each other as often and as much as possible; this process makes it possible for them to become responsible professionals and then treats them as such. Their professional development is linked to clear career paths and supports and incentivises them to learn from each other (Schleicher, 2018).

We turn now to an examination of how these features of excellent school systems are manifest in SSA, first from our Market Scan, which broadly captures data available for all 48 SSA countries, and then in more detail in the four Case Study country reports.

FINDINGS FROM THE MARKET SCAN

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 under-represented, 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 total of 48 SSA 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, Western Sahara. The details are shown in Appendix 3. The density of data for each country is shown in Figure 3, showing a dearth of data across the Sahel and a good density of data available in Southern Africa.

Figure 3: Data density map



Selection into ITE

With regard to ITE admission criteria, information was found 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 General Certificate of Education, 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's former General Certificate of Secondary Education, GCSE, or Ordinary Levels, O-levels) but only into programmes which prepare teachers for lower secondary schools. On the other hand, Burkina Faso appears to allow a prospective secondary school teacher, at any level, to have only a lower secondary school leaving certificate.

Almost as many countries (20) select applicants into teacher education programmes 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.

Finally, of those 14 countries which examine candidates before entry into ITE, the main focus is on applicants' scholastic abilities in particular subjects (such as 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).

This 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; in this regard the low entrance requirements set by Burkina Faso appears atypical.

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.

ITE institutions

In some 20 countries, ITE is provided by universities and colleges, with the latter likely to be dedicated teacher training institutions. Tuition is predominantly face-to-face, but at least eight countries – Botswana, Eritrea, Madagascar, Namibia, Sierra Leone, South Africa, Gambia and Uganda – also offer some form of distance education.

A similar number of countries (21) offer financial support to student teachers in the form of public grants, scholarships, loans and bursaries, ranging from those which cover only tuition fees to those which cover all costs (including accommodation, food, transport and other living expenses), and which may be repayable, in full or in part, over time or through a certain number of years of service.

Not enough information was found to support any conclusions with regard to: the average number of enrolments in teacher education programmes; throughput, dropout and graduation rates; expenditure; or in-country regional differences in teacher training provision.

The nature and content of ITE programmes

With regard to the types and nature of ITE qualifications, of the 29 countries for which information was available, 14 offer diploma and degree qualifications, while an additional three (Nigeria, Sierra Leone and South Africa) offer these as well as certificate qualifications. Four countries offer degrees only (Gabon, Eritrea, Comoros and Madagascar); three offer diplomas only (the Democratic Republic of the Congo (DRC), Mozambique and Seychelles); and three offer certificates only (Burkina Faso, Liberia and Gambia). Lesotho and Malawi offer certificates and diplomas. The problem with taking statistics such as these at face value and using them to trace patterns of behaviour across countries, is that the existence of degree-awarding programmes, for example, needs to be tempered against other considerations, such as the proportion of

teachers who qualify according to the degree route and, in particular, the most difficult factor to measure, the quality of the degree.

While ITE degrees commonly consist of four years of study (in 14 of the 21 countries offering degrees), in a few countries, teaching degrees are awarded after two or three years (Gabon, Mauritius, Madagascar and Uganda). Teaching diplomas range between two years (Ghana) and four years (Lesotho) in duration. Certificate study is usually two to three years in length, except in Burkina Faso where it is an eighteen-month course. (Several countries also offer one-year certificates in education, but these are at postgraduate level.)

For purposes of assessment, written assessments preponderate in the form of assignments, essays, exercises, reports, coursework, projects, portfolios, tests and examinations. There were occasional references to audio-visual assessments like presentations and micro-teaching. Only one country, Nigeria, referred explicitly to research projects, but it is possible that some assessments in other countries also involve research.

Almost all countries 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; however, it is known from other research that in South Africa and elsewhere, training institutions often lack capacity to adequately assess all students' classroom abilities (Deacon, 2016).

Unfortunately, the information sourced or responses received with regard to the nature and content of ITE programmes was inadequate. In some cases, the term 'courses' was interpreted as 'qualifications' or 'programmes'; in other instances course content was described in so general a manner ('education courses' or 'academic subjects') as to preclude further analysis. Nevertheless, where the information was more detailed – as in Botswana, Burkina Faso, Kenya, Lesotho, Mauritius, Namibia, Nigeria, Tanzania, Gambia, Lesotho, South Africa and Zambia – it is clear that one or more teaching subjects are core elements of ITE programmes, and these are often accompanied by methodology or pedagogical courses together with a practicum or internship element. A research component was mentioned in a few instances (Mauritius, Nigeria and Zambia).

Information provided on the length of study per course referred mainly to the time required to complete a programme or qualification, rather than an individual course component thereof. Qualifications were said to range from one through four years in duration, depending on whether the qualification is a certificate, a diploma or a degree, or whether it follows a prior period of study or depends on a prior qualification. All except one (Kenya) of 19 countries for which information was found indicated that programmes leading to qualification to teach in upper or lower secondary schools differ in duration (usually a year or more longer for upper secondary qualifications) and hence in extent, if not necessarily depth, of content.

Insufficient information was found to support any conclusions with regard to the relative weighting of theoretical and practical components of ITE programmes or the nature, content or effectiveness of academic support (if any) provided to student teachers who may have had poor schooling results. However,

15 countries indicated that student teachers have access to supervisors, mentoring and workshops, with seven countries also mentioning peer support; only four (Namibia, Nigeria, South Africa and Zambia) indicated that academic assistance is offered online.

Induction

Over two-thirds of the 23 countries for which this information was found to provide formal induction programmes: Botswana, Cameroon, Cape Verde, Djibouti, Eritrea, Ethiopia, Ghana, Kenya, Lesotho, Mauritius, Namibia, Nigeria, Senegal, Swaziland, Tanzania and Uganda. Induction is usually school-based and conducted by school leaders, experienced teachers and education officials, sometimes in conjunction with university or college staff. Among the seven countries that have no formal induction programmes, Sierra Leone and South Africa are planning to introduce them. However, the extent to which induction programmes are fully implemented and procedures followed varies, and desk-based research is unable to uncover all the nuances associated with this.

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: Angola, Botswana, Cameroon, Kenya, Mauritius, Namibia, Nigeria, Seychelles, South Africa, Swaziland and Zimbabwe. Almost all of this information appeared in academic journal articles and theses; only in Botswana did it appear that education officials collect such data in the form of inspection reports. New teachers' experiences were invariably described in terms such as 'shock', 'battle' and 'challenge', and reference was made to perceived gaps between theory (and what they were taught) and practice (and 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.

The early work experiences of new teachers, both those who undergo formal induction and those who do not, can be greatly enhanced by the work of experienced in-school mentors. 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, 16 have a formal teacher licensing process: Benin, Cameroon, Djibouti, DRC, Ethiopia, Kenya, Madagascar, Mauritius, Mozambique, Namibia, Nigeria, Sierra Leone, South Africa, Tanzania, Uganda and Zambia. 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. The process is similar in Liberia, except that an assessment by a district education official also takes place. In Djibouti, however, a formal probationary period must first be completed, while in Mauritius, the Educator's Licence is a 15 week (including two weeks in a school), three module, fee-paying course, to which only those with the required motivation and commitment to be teachers are expected to apply.

In seven countries, teacher licenses are renewable: after five years in Namibia; three years in Zambia; one year in Nigeria; and after unknown periods in Ethiopia, Swaziland, Tanzania and Zimbabwe. In three countries (Djibouti, South Africa and Uganda), licenses are permanent. However, the South African Council for Educators (SACE) is in the process of setting up a formal licensing system, where the license to teach will depend on a professional qualification, followed by a one-year induction and an assessment of competence, and then periodic relicensing dependent on the accumulation of CPD points.

Performance management of teachers

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 Benin, Burundi, Equatorial Guinea, Sierra Leone and Swaziland, an inspectorate conducts performance assessments; in Botswana, Kenya, Mauritius, South Africa, Tanzania and Zambia, appraisals are the responsibility of school managers and/or local education officials.

The frequency of assessment ranges from quarterly in Botswana, to annually in Burundi, Namibia, Tanzania, Zambia and Uganda and every three years in Nigeria. Djibouti stands out for the comprehensiveness of its biennial approach, which involves at once school, local and external assessors, self-assessments, classroom observations and parental feedback and pays explicit attention (as Namibia does too) to teachers' subject knowledge and classroom performance.

Continuous Professional Development

Formal CPD programmes are available in 16 out of 22 countries for which information was found. In a few countries (Burundi, Cameroon, Nigeria and South Africa), teachers are expected to acquire a certain number of CPD points over time, which translates into 80 hours every three years in places like Burundi and South Africa. Djibouti, which does not seem to require points, nevertheless expects teachers to devote 32 hours per year to professional development activities. In the remaining 11 countries, CPD appears to be ad hoc. Any link between CPD and salary progression is equivocal at this stage: in nine out of 17 countries there is no link whereas in the other eight there is.

Half of all CPD programmes are offered both in- and out-of-school and offered in-school only in just two countries (Tanzania and Zambia). The length of CPD programmes varies widely, from a few days, weeks or months up to two or three years; the programmes tend to focus on upgrading qualifications (in Botswana and Mauritius), on familiarising teachers with curriculum developments (in Burundi), and most frequently, on improving subject content and pedagogical knowledge (in Benin, Botswana, Swaziland, Tanzania, Namibia, South Africa, Zambia and Ethiopia). In Ethiopia, CPD for in-service teachers consists of a three-year long programme of self-study, two three-day tutorials and one six-week residential training component annually during summer vacations.

Promotion

In 11 out of 18 countries, the promotion of teachers to senior positions depends on further training, and in most cases such training is associated with obtaining a higher qualification, like a degree or postgraduate qualification. In the other seven countries for which information was obtained (Botswana, Burundi,

Cameroon, Djibouti, Equatorial Guinea, Senegal and South Africa), promotion depends instead on experience or duration of service and/or performance, although higher 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.

Reflection on the market scan findings

Before drawing conclusions about the substance of data derived from the Market Scan two important methodological points need reiteration. First, while the Matrix is a useful scanning device which may reveal interesting policies or practices, it is very difficult to draw general inferences from it, because no information at all was found from one quarter of countries, and on average for each question there was information found for 31 of the 48 countries. Moreover, the responses were skewed towards eastern and southern Africa, which is likely to under-represent the Francophone countries, and their distinctive systems. A second shortcoming of the desk-based scan of practices is that it tends to capture official policy statements, rather than actual practices. Our 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.

The Market Scan Report ends with a set of recommendations arising from these methodological considerations and aimed at the systematic collection and dissemination of data which will provide the basis for managing national school systems more effectively and comparing systems cross-nationally. It is clear that, in general, the state of policy-relevant data in SSA is not in a strong state in more than a handful of countries. In order to address this situation, the following general approach is recommended:

- Data is systematically collected at national level in the eight areas investigated in this report.
- Data collection and analysis at the country level should be guided by standardised protocols in order to enable comparison across time and between countries.
- It is important that datasets include indicators of quality – and in particular on levels of learning achieved by students.

These developments will require financial assistance and, even more important, technical advice and capacity building. This is a key area in which donor support could exert maximal leverage. Encouragingly, the establishment of a continental Education Management Information System is one component of the Continental Education Strategy for Africa adopted by the African Union Heads of State and Government in 2016 as the framework for transforming education and training systems in Africa (CESA, 2019). The process involves the strengthening of national EMIS systems and has already reached a pilot stage

At a substantive level, and notwithstanding the limitations of the Market Scan exercise discussed above, sufficient data is available to provide a description of 'average conditions' across the region, even though sub-regional differences are not distinguishable. First, it is clear that, at several levels, ITE in many SSA countries at least formally approximates international best practice. It seems that most countries are aware

of the importance of educating teachers and the management systems that go with this, of the poor quality of their own teacher education systems, and of the need for reform.

Across the world, prospective teachers are required to undergo prescribed training lasting several years at institutions dedicated to that purpose, and African countries are no exception. While it must be acknowledged that rapidly expanding enrolments in African schools and the hiring of unqualified personnel as teachers have led to a proportionate decline in teacher quality, the findings of the Market Scan suggest that in most African countries, newly qualified teachers emerge with tertiary-level (and, within that, often four-year degree-level) knowledge and skills built on a foundation of fully completed secondary schooling. Moreover, and more often than not, a simple school-leaving certificate is necessary but not sufficient in order to be selected into a teacher education programme, and the existence of further and especially rigorous selection processes in places as far apart as Djibouti and Namibia is very promising, although still far too rare.

As in other parts of the world, all of the main elements of quality ITE programmes are present in many SSA countries, encompassing who is to be taught what and how, both theoretically and in practice. An emphasis on research and critical reflection locates some SSA programmes firmly within the bounds of international best practice, and most are explicit about the importance of supervision, mentoring and in-school observation. Besides, is there anywhere in the world where the first year experiences of new teachers are not difficult and where they would not benefit from greater encouragement and support?

Many countries and programmes in SSA suffer from a lack of capacity and skills at both university and school levels, and among teacher educators, mentor teachers and education officials. African student teachers are perhaps more likely than many of their international counterparts to require financial support in order to complete their studies, but a modicum of such support is available in most cases.

Teacher support and appraisal systems are in place, but these, along with teacher licensing or registration mechanisms, seem far too perfunctory, with probation rare and induction neither mandatory nor sufficiently supported. The quantity, efficacy, relevance, location and duration of CPD programmes vary widely. Teacher promotion, in many instances, depends on further training and qualifications, but perhaps too often on mere length of service and not often enough on confirmed ability; for example, in South Africa nepotism and corruption are rife (DBE, 2016; NEEDU, 2017), and it is suspected that these factors may be widespread in the region (Taylor and Keevy, 2018), as reported in all four Case Studies.

More questions than answers are raised by this research. For instance, Djibouti's selection processes have already received positive mention above; so why is South Africa, with its relatively greater resources, so complacent as to permit its least successful school graduates to train the next generation? Separately, is there something to be learnt from the finding that Kenya, apparently, entertains no differences in duration and depth of studies for its prospective secondary school teachers, regardless of whether they will be teaching at the more junior or more senior levels of such schools?

While the Market Scan data is useful, both for highlighting data gaps and showing broad patterns in policies and practices across the continent, it lacks detail. Hence its utility in providing lessons for countries looking to improve education provision is limited. In this regard, the Case Study data is more insightful.

LESSONS FROM THE CASE STUDIES

Overview

Aside from their respective geographic situations, regional associations and language similarities, the four case study countries exhibit distinct trajectories with respect to national wealth, spending on schooling, enrolment patterns and test performance. The UNESCO Institute for Statistics (UIS) database was used to access information on the factors shown in Table 1 and Table 2.

Table 1: Spending on education (USD)

Country	Popln (mil) (2018)	GDP per capita	Spend on ed as % of GDP	Spend on ed as % total govt spend	Govt spend per Prim student	Govt spend per Low Sec student	Govt spend per Up Sec student	Govt spend per Sec stud	Govt spend per Tert stud	Spend on Sec as % of govt ed spend
Rwanda	12.5	702.8	3.5	12.3	39.8	219.1	349.4	No data	60.0	52.8
Senegal	16.3	952.8	7.5	23.8	167.5	249.5	252.4	No data	2149.4	29.4
South Africa	56.0	5284.6	5.9*	18.1	1218.2	No data	No data	1689.7	2609.9	30.7
Uganda	44.2	580.4	2.2	10.9	38.7	No data	No data	No data	551.1	24.6
SSA average			4.1	16.9						
Low income countries			3.7	17.0						

Sources: http://data.uis.unesco.org/, UNESCO (2017) and https://idea.usaid.gov/cd/south-africa?comparisonGroup=region

Table 1 shows that, in terms of population, South Africa and Uganda are relatively large countries, while Senegal and Rwanda are considerably smaller. In terms of national wealth, South Africa stands out from the other three[6]: while Senegal is nearly twice as wealthy as Uganda, with Rwanda somewhere in between, South Africa's gross domestic product (GDP) per capita dwarfs that of Senegal by a factor of 5.5. In addition, South Africa spends 18% of government expenditure on education in comparison to 11% spent by Uganda and 12% by Rwanda; at 24%, Senegal has obviously decided to prioritise education. As a consequence of these two factors – GDP and budget allocation to education – Senegal spends four times the amount on primary schooling per child as both Uganda and Rwanda, while South Africa outspends Senegal by a factor of 7. These patterns broadly hold at secondary and tertiary levels.

[6] While South Africa is classified as an Upper Middle Income country, the other three are all Low Income countries (UNESCO, 2017). At the same time, South Africa exhibits vast inequalities, a fact masked by the 'average' wealth of the country reflected in this classification.

In terms of spending on education the Education 2030 Framework for Action (UNESCO, 2015) recommends two key targets for the public financing of education: allocating at least 4% to 6% of gross domestic product (GDP) to education, and/or allocating at least 15% to 20% of public expenditure to education. According to the Global Monitoring Report (UNESCO, 2017) in 2013–16 one in four countries failed to meet these targets. Figures on these measures for the Case Study countries, compared with those for low-income and SSA countries, are shown in Table 1.

The spending patterns shown in Table 1 are broadly correlated with enrolment trends shown in Table 2, with South Africa exhibiting significantly higher participation rates in secondary and tertiary education than the other three case study countries. Somewhat surprisingly, Senegal does not have a higher tertiary participation rate than Rwanda, despite spending significantly more at this level; it may be that Senegal's decision to prioritise tertiary education is a recent phenomenon which has not yet begun to manifest significantly in the form of increased enrolment. South Africa is the only country in which females outnumber males at the tertiary level.

Table 2: Enrolment rates (per cent) 2016, except where noted

Country	Prim	Lower secondary		Upper secondary			Tertiary	
	Net enrol rate	Gross enrol rate	Net enrol rate	Gross enrol rate	Net enrol rate	% female	Gross enrol rate	% female
Rwanda	95.8	42.7	21.7	30.1	14.0	51.0	8.0	44.5
Senegal	72.3	55.9	No data	36.7	No data	46.7	10.6	37.5
South Africa	80.0 (2015)	98.8 (2015)	43.8 (2015)	105.4 (2015)	No data	48.9* (2015)	19.8 (2014)	58.2 (2015)
Uganda	90.9 (2013)	No data	No data	No data	No data	No data	4.6 (2014)	43.6 (2014)

In South African female school students progress through the system faster than their male counterparts, and hence constitute a minority in the secondary school population
Source: http://data.uis.unesco.org/Index.aspx?DataSetCode=edulit_ds#

The large gap between gross and net enrolment rates in secondary schools reflects the presence of significant numbers of overage learners resulting from grade repetition and a 'revolving door' effect whereby learners drop out for a while and then return to school. These are sources of great inefficiency throughout education systems; in South Africa, fewer than half of all students entering tertiary education acquire any qualification from the years spent studying (CHE, 2013). If these inefficiencies could be reduced, budget savings would be effected and more could be achieved with the same resources. The BPM derived above strongly suggests that the key to achieving this goal is to improve the education of teachers so that they are more effective in facilitating learning and promoting throughput.

While enrolment broadly reflects expenditure, higher expenditure and enrolment are no guarantees of quality. This conclusion is clearly shown in the very similar respective performances of South Africa and Uganda on the SACMEQ test scores (Table 3). Both countries sit in the lower half of the rankings of the 15 countries which participated in 2011, with South Africa ranked 10th in reading and 8th in mathematics, and Uganda 11th in both subjects. South Africa is outranked by many much poorer countries, including Kenya, Swaziland, Tanzania and Zimbabwe. Table 3 also shows Senegal to be the leading performer among the 10 Francophone countries which subscribe to PASEC, but PISA-D shows the country to be performing poorly against other low- and middle-income countries.

Table 3: School performance

Country	Literacy Rate (%)	SACMEQ Grade 6[7]		PASEC Upper Prim[8]		PISA – D Grade 7[9]		TIMSS[10] Grade 8	
		Read	Math	Read	Math	Read	Math	Science	Math
Rwanda	68.33 (2012)								
Senegal	48.82 (2013)			61.1	58.8	9	8		
South Africa	94.37 (2015)	495	495					358	372
Uganda	70.20 (2012)	479	482						
Mean				42.7	41.0	23	12		

TIMSS G8: Science – South Africa was 39th out of 39 countries; the only other SSA country to participate was Botswana, which scored 392 and was placed 37th.
TIMSS G8: Mathematics – South Africa was 38th of 39 countries; Botswana scored 391 and was placed 35th.

Profiling teacher education and support policy and practice

In order to bring out any patterns of behaviour discernible across the case study countries, each country was rated according to how closely it approximated best practice in each of 10 of the research questions shown in Appendix 3: 1) Selection into ITE; 2) Financial support to students; 3) Nature of ITE qualifications; 4) Duration; 5) Content; 6) Extent of post-qualification induction; 7) Certification; 8) Quality and extent of CPD; 9) Performance Management; and 10) Quality of promotion procedures. In addition to these 10 factors, case study countries were rated according to whether they have a strategy which prioritises teacher education and support, and according to the extent to which the various components of teacher education and support are aligned with one another. Countries were rated on a 4-point scale on each of these 12 indicators: high (H), moderate/high (M/H), moderate (M) and low (L); the criteria used to award these ratings are detailed in Appendix 3. This is obviously a crude metric, and the results are open to review. Nevertheless it is a useful mechanism for highlighting trends within and between these four countries.

Rwanda

Following the genocide and rebirth of the country in 1994, Rwanda has embarked on a programme of integration into the East African Community, which includes a change in the national *lingua franca* from

[7] SACMEQ III (2011) from http://www.sacmeq.org/?q=ReadingMathScores
[8] PASEC 2014: percent late primary learners above 'sufficient competency threshold' (PASEC, 2015).
[9] PISA-D (Programme for International Student Assessment) tests reading and maths scores for Grade 7 learners; scores indicate percentage of students achieving minimum proficiency. Eight countries participate: Cambodia, Ecuador, Guatemala, Honduras, Panama, Paraguay, Senegal and Zambia (Kaffenberger, 2019).
[10] TIMSS is the Trends in International Mathematics and Science Study, a large-scale, international assessment of learning in mathematics and science.

French to English, which was introduced as the medium of instruction in schools in 2008. The move to make English more central to the educational and economic spheres is driven by the government's emphasis on the development of human capital with the necessary knowledge and skills as vehicles for socio-economic development. This has placed huge pressure on the rapid upskilling of the English language learning needs of more than 85 000 teachers.

In terms of the intentions of education policy and programme statements, Rwanda rates H or M/H on all but one of the indicators used to compare the Case Study countries (Table 4).

Table 4: Profile of teacher education and support systems and practices, Rwanda

Strategy	Initial Teacher Education					Post-qualification		Deployment			Alignment
	Selection	Finance	Qualification	Duration	Content	Induction	Certification	CPD	Performance Management	Promotion	
H	M/H	M/H	M	M/H	M	L	H	M/H	M/H	M/H	H

Key: H – high; M/H – moderate to high; M – moderate; L – low

In 2007, the Ministry of Education, recognising that "the teacher is the main instrument for bringing about desired improvements in learning" (Republic of Rwanda, 2007: 4), issued a comprehensive policy for teacher preparation and management which contained: plans to reorganise the financing of teacher training; criteria for the equitable placement of teachers by District Education Officers; a framework for teacher motivation, including defined career guidelines and promotion based on performance criteria; a structured programme of CPD, including school-based training through on-the-job mentoring; and a teacher appraisal scheme to streamline the licence renewal system.

There are many ways in which teacher education in Rwanda accords with international best practice. The Rwanda education authorities have a defined vision for teacher education and clearly-articulated teacher education policies. Although admission criteria into teacher education institutions vary, the selection of prospective teachers takes into account their school-leaving academic results as well as their general communication skills. Once admitted, there is strong financial support for student teachers in need. The BA Honours degree in Education at INES-Ruhengeri is equivalent in duration to teacher education programmes in many other countries around the world and has a strong emphasis on subject content knowledge.

The allocation of an entire quarter of the degree and the diploma (in terms of both time and credits) to the teaching practice component bodes well for bridging the theory/practice divide; and the requirement for both the degree and diploma to include a research component is in line with the highest-performing education systems globally. There is a formal teacher licensing process with a renewal period, accompanied by developmental support and incentives. A formal appraisal and performance management system is in place, with incentives, and these appraisals take into account teachers' general communication skills. School-based mentors are accorded release time from their other duties, allowing them to give appropriate attention to supporting other teachers; and incentives for good teacher performance are in place. The existence of peer mentoring is a sign that collaboration between teachers is taking place, and that teacher professional learning communities exist either in embryo or in fact.

There are also several ways Rwanda could achieve further excellence with respect to the preparation and management of its teachers. Admission criteria to ITE programmes could be standardised across institutions and include the assessment of motivation to become a teacher on the part of applicants. A test of basic literacy and numeracy could assist teacher educators in determining whether remediation is required. A test would also encourage schools as well as individual candidates to raise their expectations and their preparedness. While a degree is required to teach at upper secondary school level in Rwanda, only a diploma is needed for lower secondary school. This suggests that lower grades are less important in the bigger scheme of things, and that teachers of such grades are not as vital to the future of the country.

The apparent lack of mentoring of student teachers is a significant gap in comparison with international best practice, as is the apparently limited amount of feedback and of time for reflection; these are crucial elements in quality teacher development. Provision also needs to be made for specific academic support programmes for students with poor schooling results. There appears to be no formal induction process; not only can proper induction help to improve the quality of education, it can also limit the replication of bad practice by adequately supporting and incentivising teachers.

Formal CPD appears to have been discontinued in favour of a more localised form of mentoring. This is an interesting development, embedding professional development into the daily work of teachers working as teams under the guidance of instructional leaders located in the school. This is an approach advocated by leading school change theorists (City, Elmore, Fiarman & Teitel, 2009) and should be researched in order to assess the impact and improve implementation of the model.

Performance appraisal could be further strengthened by involving external, independent assessors. Career pathways have been laid out, which is an important mechanism for keeping good practitioners in the classroom and enabling those seeking leadership positions (such as school principal) to work towards career goals. However, it seems that appropriate training is not required for promotion to specialist positions, and instituting such training provides another opportunity to further strengthen the quality of leadership throughout the system.

Two important lessons are highlighted by Rwanda's experience with language policy and the use of ICT: these lessons reflect difficulties which are apparent in a number of SSA countries, but which stand out most saliently in Rwanda, given the country's prioritisation of these two key policy issues in its school reform programme. First Rwanda has placed ICTs at the centre of its drive towards achieving middle income status by 2020. Within the framework of the Vision 2020 and the national strategy on ICT, the Ministry of Education has issued an ICT in Education Policy (Harrison, 2015; MINEDUC, 2016b). As part of the latter, a number of partnership projects between the Ministry, donors and NGOs have been working in the country's schools in the last fifteen years and as a result the ratio of users per computer is high by Sub-Saharan African 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 realised by the mere introduction of computers and ICT infrastructure (Rubagiza et al, 2011). 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. These conclusions accord with those of a major review of ICT in schools published by the OECD in 2015, which was unequivocal about the dangers of investing in technology under conditions of poor teaching:

> *In the end technology can amplify great teaching, but great technology cannot replace poor teaching. (OECD, 2015: 17)*

Under such conditions, the OECD authors conclude that:

> *…to reduce inequities in the ability to benefit from digital tools, countries need to improve equity in education first. Ensuring that every child attains a baseline level of proficiency in reading and mathematics will do more to create equal opportunities in a digital world than can be achieved by expanding or subsidising access to high tech devices and services. (ibid: 16)*

In view of these strong findings, it would be advisable for countries to evaluate the implementation and impact of pilot ICT initiatives in the interests of improving their effectiveness and, where conditions are not conducive to success, to focus rather on the more fundamental needs of teachers and schools, such as the strengthening of teachers' disciplinary and pedagogical knowledge and skills, and the provision of readers and textbooks.

A second lesson, present in many countries in the region but highlighted in Rwanda because of the country's radical shift in recent decades, relates to language policy and practice. A review of the literature on the use of English as medium of instruction in SSA countries concludes that many learners in primary school and beyond do not have sufficient ability in English to achieve grade-appropriate subject knowledge, which restricts their access to effective classroom practice and thus to the curriculum (Clegg and Simpson, 2016); this is a particular problem in Rwanda (Milligan et al, 2016).

Clegg and Simpson (ibid) note that pedagogical and organisational expertise appropriate to education for learners working in a second language is available both in Africa and other parts of the world, but rarely widely applied. Strategies to effect 'language supportive learning' under such conditions include strategies for easing the transition from early years education in an African language, multilingual classroom practice, the pedagogy of language-supportive subject teaching, accessible textbook design, appropriate curriculum for learners working in a second language, language-appropriate assessment and the management of multilingual education. It is recommended that all SSA countries experiment with these ideas, particularly in the early years, but also at secondary level, given the fact that many children do not master the medium of instruction at the appropriate level by the end of primary and continue to experience be handicapped throughout high school.

A third feature of the Rwandan school environment relates to the marginalisation of certain communities, particularly very poor communities, whether they are living in rural areas or in urban slums. Thus, the research on the use of ICT and of English as medium of instruction in Rwanda, indicates that with respect to both issues, rural communities are significantly more disadvantaged than their urban counterparts. These inequities within national schooling systems are present in all SSA countries, and we turn to a discussion of how they may be mitigated in our Conclusion below.

South Africa

South Africa also scores highly on a number of the key dimensions of teacher education and support (Table 5).

Table 5: Profile of teacher education and support systems and practices, South Africa

Strategy	Initial Teacher Education					Post qualification		Deployment			Alignment
	Selection	Finance	Qualification	Duration	Content	Induction	Certification	CPD	Performance Management	Promotion	
H	M	H	H	H	M/H	L	M	M/H	M/H	M	L

Key: H – high; M/H – moderate to high; M – moderate; L – low

The country's school system, including the education of teachers, has been undergoing reform for nearly two decades, initiated by the radical reorganisation of teacher education institutions in the early 2000s. Reforms have included the formulation of an integrated strategic planning framework for teacher education and development, the promulgation of policy regarding ITE programmes and the performance management of teachers, and the emergence of a system for inducting and certifying teachers and linking the latter to CPD (SACE, 2018).

However, implementation of these various components has been slow and, spread across two government departments and three statutory bodies, their alignment is far from perfect. In addition, while South Africa ticks a number of high score boxes on the BPM, some of these reflect what Pritchett, Woolcock and Andrews (2010: 2) have called "isomorphic mimicry", i.e. going through the motions without achieving significant traction. Thus, ITE programmes tick the 'Content' box (and indeed 4 of the 5 components of ITE score highly) in terms of structure, but have been shown by numerous research studies to be very low in quality, to the extent that students learn very little in the way of literacy and numeracy knowledge over the four years of the Bachelor of Education (B Ed) degree (Fonseca, Maseko and Roberts, 2018; Bowie, 2019). The paucity of disciplinary knowledge (eg subject content knowledge of English language and Mathematics) in BEd programmes (Reed, 2016; Bowie, 2016) indicate that the designers of B Ed programmes seem to be unaware of neither how poorly prepared their students are for university study, nor what they need to know in order to teach the school curriculum. Although all students enrolling for degree study are required to pass the NSC at 'bachelor level', results of the national benchmark tests (NBT)[11] indicate that those applying to education faculties achieved the lowest scores of all students applying for university studies, except for those entering nursing and allied health education programmes (Prince, 2018). The NBT scores indicate that 30% of B Ed applicants are not suitable for degree level study, while a further 40% would require an extended programme if they are to meet the requirements.

The quality of the practicum experience is highly variable across institutions and, in many cases, quite inadequate (Rusznyak & Bertram, 2015; Deacon, 2016). Performance management is systematically done, but in large parts of the country it is ineffectual and not linked to CPD or promotion (DPME/DBE, 2017; NEEDU, 2017).

[11] Written by some 80 000 university applicants annually

The subject knowledge of Grade 6 mathematics and language teachers has been found to be very low and considerably lower than that of teachers in a number of other SSA countries, including Kenya, despite significant efforts in CPD from both the public and private sectors (Venkat and Spaull, 2015; Taylor, forthcoming). It is therefore not surprising that the country's performance on international comparative tests is mediocre by any measure (see Table 3) (Spaull, 2011; Taylor, 2009). Nowhere is the adage that money may be necessary but is by no means sufficient to achieve a certain degree of quality more starkly illustrated.

South Africa cannot hope to improve the quality of knowledge and skills conveyed to the next generation without significantly improving the education of its teachers. The primary responsibility for this task lies with university education faculties. Currently, the Department of Higher Education and Training (DHET) is leading an initiative aimed at improving the ITE curriculum for primary school teachers.

Regarding in-service training, there is evidence to indicate that the considerable resources spent on programmes for educators are not achieving impact in terms of increasing capacity, let alone resulting in more effective pedagogy (NEEDU, 2013). The large majority of CPD programmes continue to lack an evidence base, and if progress is to be made in improving the traction achieved by CPD initiatives, then a research-focused approach needs to be adopted. On a more promising note, the Department of Basic Education (DBE) is forging what looks like a promising programme for early grade reading (Fleisch et al., 2016; Taylor et al., 2017) and beginning to investigate an analogous programme for mathematics in the first three grades. These are promising developments, but they need to be supplemented by a significant improvement in ITE, otherwise the school system is condemned to repeating these CPD initiatives *ad infinitum* in an attempt to do the job that universities are failing to do. In any event, no matter how effective CPD programmes are, the gap between beginning teacher knowledge and the demands of the curriculum are too great make up through CPD workshops (Musset, 2010; Taylor, forthcoming).

A number of features of South African schooling indicate that good policy is nowhere near a sufficient condition for education quality. One of these is poor time management in schools, with teachers frequently out of class for a variety of reasons (Hoadley, 2012; NEEDU, 2013; 2017; DPME/DBE, 2017). Under these circumstances, no curriculum is implementable. It is clear that school principals as well as district, provincial and national officials are not only aware of this practice but frequently complain about it, yet exhibit a curious lack of responsibility in holding teachers accountable for this behaviour. In addition, the system does not make the best use of the human resources at its disposal. Thus, instructional leaders (school principals and heads of departments and district level subject advisors) are generally appointed according to seniority, nepotism, manipulation or bribery, rather than their expertise with respect to curriculum matters (DBE, 2016). Curriculum implementation is an expert task, requiring high levels of skill in subject knowledge, pedagogical content knowledge and practical classroom expertise. These considerations underline the need to appoint educators with the strongest knowledge resources and track records of effective teaching into positions of instructional leadership at all levels of the system.

Uganda

Uganda is unusual in that it is one of the few low-income countries to produce annual education monitoring reports (although the incidence even in high income countries is only around one in six

(UNESCO, 2017)). Performance from early childhood through to tertiary education is assessed against policies and objectives to inform the annual sector review, which seeks to identify priority areas for the coming year. The review gives an account of ministry actions and their results at the input, process and outcome levels, offers some analysis of challenges, and discusses factors affecting the achievement of goals. It also contains budget performance information (Republic of Uganda, 2017).

As is the case in the other case study countries, teacher preparation and support in Uganda is in a state of flux. The Ministry of Education and Sports issued *The Uganda National Teacher Policy* in 2017, a comprehensive document dealing, inter alia, with: the country context including the legal and policy framework, a situational analysis describing the factors shaping teacher issues in Uganda; an overview of teacher education in Uganda, including proposals for a Teacher Qualification Framework, teacher training pathways, CPD, pre-service and in-service training programmes and teacher competences and standards; a policy vision, mission, and objectives, guiding principles and expected impact; an overview of Policy positions, expected outcomes and strategies; the implementation of the policy with a focus on partnerships, roles and responsibilities of various stakeholders, resources needed and co-ordination mechanisms; and finally an outline of an envisaged M&E framework, including the key players and their roles, policy environment and expected outputs and outcomes (Ministry of Education and Sports, 2017).

While many good policies are in place, it is too soon to assess the extent to which they are being implemented, let alone gauging their impact. As a result, the judgements reflected in Table 6 are of a single-source, self-report nature, albeit from key actors in government and teacher education institutions.

Table 6: Profile of teacher education and support systems and practices, Uganda

Strategy	Initial Teacher Education					Post qualification		Deployment			Alignment
	Selection	Finance	Qualification	Duration	Content	Induction	Certification	CPD	Performance Management	Promotion	
H	M/H	M	M	M	M	M	M/H	M	M	M/H	M

Key: H – high; M/H – moderate to high; M – moderate; L – low.

The initiation of drives to Universal Primary Education (UPE) in 1997 and Universal Secondary Education (USE) in 2006 brought into sharp focus the need for more teachers in Uganda. In 2014, it was shown that the number of secondary school teachers required in the system would have to increase from 67 168 in 2013 to 166 060 in 2025 (UNESCO & Republic of Uganda, 2014).

Apart from a shortage of qualified teachers, Uganda faces several other challenges in teacher education: a lack of quality teacher educators; competency gaps in current teachers' subject content knowledge; variable quality and duration of teacher education, with little time devoted to pedagogical and professional training and mentoring; un-institutionalised continuous professional development; and no agreed basic standards for teachers and teacher educators. Teacher training remains very weak, and efforts are fragmented between pre-service and in-service training. Of most concern is the fact that the overall quality of instruction is often inadequate (World Bank, 2012).

Many ITE candidates possess low quality literacy and numeracy skills; many applied for but failed to be selected into other, more desirable, university academic programmes. Anecdotal evidence gathered during a 2012 World Bank study suggested that “many of those who go into education programmes at university or NTCs do so because they do not have the required number of points in the joint admissions systems to higher education institutions to be admitted to a more prestigious course of studies (such as accounting or law)” (World Bank, 2012: 2). However, the draft National Teacher Policy (NTP) proposes a pre-entry assessment of prospective teachers to be undertaken by the Education Service Commission, the Ministry of Education and the Directorate of Education Standards.

A principal of one of the teacher training institutions acknowledged the poor subject knowledge of most students: "When the teacher students are admitted to the colleges and they are found to be lacking in subject content and knowledge, the teaching changes to remedial in order to improve subject knowledge before embarking on the curriculum". Yet the content of both the degrees awarded by Makerere University and the diplomas offered by the national teacher colleges (NTCs) appear not to pay sufficient attention to the subject-content needs of students. However, the NTCs do offer remedial programmes for poorly prepared entrants to ITE. Students are supported financially while studying, but the grants are insufficient to support the poorest students.

Guidelines for performance management of teachers are in place, but while appraisal does take place, it is perceived to be ritualistic and ineffective. Similarly, there is policy regarding CPD, whereby teachers are expected to accumulate points for courses attended; however, interviewees in the Case Study reported that coverage is patchy and CPD is not linked to relicensing or promotion. Sometimes promotion depends on further training, through CPD, but respondents indicated that this is mostly *ad hoc*, and prospects for advancement are limited until someone retires or dies (UNESCO and Republic of Uganda, 2014). There is also a lot of what was referred by one respondent as ‘lobbying’ in the system, implying the undue influence of vested interest groups.

In the past five years, the Ministry of Education and Sports has taken a number of steps to address these challenges, according to a Teacher Instructor Education and Training (TIET) official: a Teacher Management Information System (TMIS) has been developed, albeit not yet publicly accessible; frameworks for ITE, CPD and teachers’ incentives/motivation have been developed; and teacher, tutor and instructor competency profiles have been established. In particular, a draft National Teacher Plan (NTP), intended to raise the teaching profession to a level comparable with the medical, engineering, legal and accounting professions, is pending approval by Cabinet and Parliament (Republic of Uganda, 2017).

In addition, the proposed new Harmonised Framework for ITE will require all secondary school teachers (i.e. in both lower and upper secondary schools) to obtain at least a Bachelor’s degree; the framework contains one module out of 14 on Subject Content and will require the supervisors of student teachers, inter alia, to assess the extent to which aspirant teachers have competencies in facilitating student learning; understanding and organising subject matter for learning; and assessing and reporting student learning outcomes. Improvements are also in the pipeline regarding CPD, where a new framework for teacher policy recommends the establishment of the Uganda National Institute for Teacher Education (UNITE) as an autonomous institution to be responsible for spearheading the training of tutors and the

delivery of CPD activities. Through UNITE, teacher training institutions will be linked to the CPD implementation framework.

A final issue with which the country is grappling concerns private schooling. Government has instituted an public-private partnership (PPP) programme through which poor children are supported to attend private schools. This is an innovative way of increasing access for secondary school learners, where the programme has had demonstrable success (Barrera-Osorio et al, 2016). However, it has two unintended negative consequences. First, quality is more difficult to assure in the private sector, where the tendency to maximise profit by cutting costs is an ever-present temptation, and employing less qualified teachers, which are inevitably cheaper, presents a relatively easy cost-cutting measure. That this tendency is happening is suggested by the fact that 86% of unqualified teachers work in the private sector. This situation must be of concern to government, particularly so given that 69% of all secondary schools are private (UNESCO, 2017).

The second downside of the PPP programme is that secondary schooling is becoming increasingly privatised, which places an additional financial on poor families, undermining the potential of schooling to provide an escape from poverty and widening socio-economic inequities.

Senegal

Senegal differs from the other three case study countries in having a more highly structured school system which reflects an important characteristic of the French civil service. However, despite this important difference, the country shares many of the policies and practices with respect to teacher preparation and deployment exhibited by Rwanda, South Africa and Uganda, as reflected in Table 7.

Table 7: Profile of teacher education and support systems and practices, Senegal

Strategy	Initial Teacher Education					Post qualification		Deployment			Alignment
	Selection	Finance	Qualification	Duration	Content	Induction	Certification	CPD	Performance Management	Promotion	
M	M/H	H	H	H	M/H	M/H	M/H	M	M	M/H	M/H

Key: H – high; M/H – moderate to high; M – moderate; L – low.

The country has a relatively highly structured school system, in which the bureaucracy contains Regional Centres for the Training of Educational Personnel (CRFPE in French), each staffed by a regional inspectorate, district-level inspectorates and subject matter inspectors for lower and upper general education. The establishment of this structure was motivated largely by the exponential growth in the number of learners and schools in the last decade or more, the recruitment of thousands of contract teachers without initial training or career prospects and the need to upgrade the qualifications of these teachers by means of CPD. Currently, less than one-half of the teachers in classrooms have received ITE (UNESCO, 2018a). In addition to the official in-service up-grading programmes offered by the bureaucracy, a number of CPD initiatives are in operation, supported by UNESCO, other donor agencies and NGOs.

Where ITE is provided, the education of secondary school teachers for both upper and lower levels is all at post-graduate level. Students with Bachelor's degrees are typically lower secondary education teachers and have mostly recently graduated with their Bachelor's degrees in Arts or Sciences. Those intending to teach at upper secondary level are required to hold a Master's degree.

However, only 26% of secondary school teachers currently hold the full professional qualification. While those receiving ITE appear to be relatively well educated, many contract teachers bring poor academic subject knowledge from their secondary education backgrounds. Throughput in ITE programmes is high, which is perhaps to be expected from students with at least a Bachelor's degree. Concerning teaching practice during ITE, although there are formal and compulsory induction packages based on in-school mentoring and supervision by university staff, the implementation of this system appears, in the view of our respondents, to be inconsistent across schools, mentors and supervisors.

There is no specialist licence to teach, although prospective teachers must pass the test required by all civil servants. Once they pass the test, they are allowed to practice. However, there are currently discussions among countries in the Economic Community of West African States (ECOWAS) to agree on set prerequisites for the employment of teachers. Among them are teacher qualifications frameworks and regulatory bodies. It is expected that a licence to practice system will be included in these prospective reforms.

As outlined above, specialty lower and upper education inspectors (*Inspecteur de l'Enseignement moyen secondaire* - IEMS) are commissioned to offer CPD activities through supervision and feedback to serving teachers. Yet, in the absence of mechanisms for the analysis of teacher needs and formative assessment data provided by specialists in the subjects being taught, CPD is – in the view of somel respondents – ineffective, and formal support courses are not planned. They come rather as ad hoc responses to perceived teachers' needs. By and large, CPD activities are currently implemented through ''mixed pedagogic clusters'', coached by the IEMS. They mainly address contract teachers' difficulties. The frequency of cluster meetings varies according to topics and the dynamism of the team members, and sometimes the availability of technical support. At the beginning of the year, clusters define an action plan and select teachers willing to make presentations. The themes generally deal with methodology, assessment, classroom management and pedagogical innovations. Public funding of CPD in Senegal is largely provided by civil society organisations and donor agencies, and the elaborate structures set up to deliver and monitor CPD, in the view of case study respondents, do not always function as planned.

Senegal does conduct evaluations of teachers, although this is inconsistently applied, according to interviewees. The most common assessment consists of classroom observations by the head teacher and the regional and local education authorities. Four criteria are used in assessing lessons: knowledge of subject matter, teaching methods, methods of assessing learners and school performance.

Teacher appointments are open-ended, and once appointed, teachers are promoted every two years, subject to criteria for their advancement in terms of career ladder and salary scale. Promotion to leadership positions within a school requires demonstration of teaching skills, and when the positions are available, they are open to competition. Selection is done using a software application, which has aroused interest in

other West African Francophone countries, although not much is known about this system apart from a verbal report from one interviewee.

The Case Studies compared

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 and support: they are attempting to provide high quality ITE, to induct newly qualified teachers by means of in-school mentoring and supervision, and to link CPD systematically to performance management, on the one hand, and to teacher needs and well defined career pathways, on the other. These patterns are clearly illustrated in the four Case Study countries (Table 8). 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. We discuss the factors which could be responsible for this gap between policy intentions and practices on the ground below.

Table 8: Comparison of the Case Study countries on elements of best practice

Country	Strategy	Initial Teacher Education					Post-qualification		Deployment			Alignment
		Selection	Finance	Qualification	Duration	Content	Induction	Certification	CPD	Performance Management	Promotion	
Rwanda	H	M/H	M/H	M	M/H	M	L	H	M/H	M/H	M/H	H
South Africa	H	M	H	H	H	M/H	L	M	M/H	M/H	M	L
Uganda	H	M/H	M	M	M	M	M	M/H	M	M	M/H	M
Senegal	M	M/H	H	H	H	M/H	M/H	M/H	M	M	M/H	M/H

CONCLUSION

Before drawing general conclusions from the six reports which precede the present Overview Report, it is well to remind the reader of the types and strengths of evidence on which the following recommendations are based. Data from the Market Scan is, first, inconsistent it its coverage of SSA countries, and biased in favour of SADC countries for which there is relatively more information available. Under such restrictions, generalisations are not widely applicable.

Second, this data is likely to reflect official policies and the optimistic views of policy makers in favour of practices in operation in educational institutions. Data from the Case Studies provides a closer look at the relationship between policy, practice and outcomes, thus affording valuable insights into actual practices and their impact. However, here too the descriptions are often based on the self-interested perceptions of a limited number of interviewees, albeit key actors involved in practice. However, it should be noted that these perceptions concerning, for example, a slippage between policy intentions and institutional functioning, accord with the conclusions reached by several more rigorously recorded in some situations, concerning the poor implementation of sound policies, notably in South Africa (high ideals expressed in government regulations vs the poor content of ITE programmes; going through the motions on teacher performance management; fine human resource management legislation vs rampant nepotism and corruption in staff recruitment and promotion), Rwanda (the difficulties involved in introducing electronic devices into schools, and in maintaining medium of instruction policies in a language not widely spoken in large sections of the population), Uganda (the unintended consequences of public/private partnerships) and Senegal (the slippage between elaborate CPD structures and the limited and uneven impact of CPD programmes). Whether these examples provide a suitable template from which to deduce what happens in other SSA countries is, of course, open to question. At the same time it would be irresponsible to ignore the probability that a gap – or very loose coupling – between intentions and practices in many SSA countries is a serious inhibition to effecting school reform.

The large majority of SSA states are classified as low income countries, and limited resources have to be stretched over the many needs for social and economic services in these societies. In this regard, it is instructive to note that a number of countries and provincial or city jurisdictions currently recognised as maintaining excellent school systems were in similar undeveloped, poverty-stricken situations when thy commenced reforming their education systems as part of comprehensive economic and social renewal programmes, three or four decades ago.

Policy makers should be circumspect about attempting to transplant policies and practices which work in one set of circumstances to their own, very different situations. Yet there is an inexorable logic underlying the best practice model outlined above: educating teachers very well – in terms of subject knowledge, pedagogical content knowledge and practical pedagogy – equips them to teach more effectively, thus reducing grade retention and dropout among learners, which in turn brings about efficiency savings, recouping some of the initial investment required for high quality ITE. Furthermore, a more effective school system raises the status of teaching, thus attracting better prepared school leavers into ITE, which in turn further enhances the quality of teacher education.

We suggest that there are three main areas of focus which, our theory predicts, are likely to exert maximal leverage in effecting a sea change in low-performing school systems: strengthening ITE

through better selection of student teachers and more intensive education in both disciplinary and pedagogical knowledge; supplementing the focus of ITE with a vision of teaching as a life-long career which requires continuous and effective professional development; and building career paths which make optimal use of talented educators in leadership and support positions.

Improving the quality of ITE candidates and programme content

The quality of ITE candidates shapes a lot of what teacher educators can achieve, and the types of teachers that eventually end up in classrooms and leadership positions in the system. It is, therefore, important that sufficient numbers of teachers are trained, that those teachers have strong literacy skills in the language of teaching and learning as well as a solid foundation at least in the subject matter that they will be expected to teach. Where teacher subject knowledge of teachers is assessed, as for example in the 14 participants in SAMEQ, it is found to be severely wanting (Taylor and Taylor, 2013; Venkat and Spaull, 2015; see also Taylor, forthcoming), and anecdotal evidence from our case studies indicate that this is also the case in these four countries. Improving the content knowledge, including proficiency in the medium of instruction, must be the first focus of ITE. In this regard it is better to have a teacher with a deep understanding and mastery of school level mathematics, than a bare level of competency in university level mathematics. These are foundation skills, and without proficiency in them talk of strategies for raising the numbers of graduates in the sciences and engineering, or preparing schools for Twenty-first Century skills or the Fourth Industrial Revolution are castles in the sky.

Pedagogical content knowledge (PCK) – research findings and practical experience on how to teach a subject, how best to represent concepts, common errors made by students and how to remediate them, etc (Shulman, 1986) – can only be built on sound subject content knowledge. PCK is best taught through a combination of theoretical study and practical work in classrooms and should run throughout the training programme alongside deep study of subject content. Regarding the content of ITE programmes, there is strong evidence that teacher development is more likely to improve student learning outcomes if it increases teachers' understanding of the content they teach, how students learn that content and how to represent and convey that content in meaningful ways (Darling-Hammond, 1998; 2017).

Selecting students into ITE programmes on the basis of academic skills and motivation is a very important starting point for improving the quality of ITE. In some African countries, there may simply not be enough qualified graduates to merit entry into ITE. Here too, where the entry level subject knowledge is tested, as is the case in South Africa (Prince, 2018) it is found to be sadly lacking, and it is important to tailor the content of ITE programmes to the real standard of entry of students. We suggest that student knowledge in both the subject(s) they are to teach and in the medium of instruction, be assessed and provision be made to build foundational content knowledge and academic literacy among prospective teacher trainees before they progress to teacher training: evidence shows that the content of ITE will have limited effect if subject matter has not previously been acquired.

The inter-relationships between a number of factors - including teacher salary, quality of ITE, subject specialisation and the supply and deployment of teachers – need to be taken account of in selecting

students into ITE programmes. For example, in countries in which high levels of inequality exist, which is the case in the large majority if not all SSA countries, one important factor is a willingness of students to teach in rural areas, since most teachers would prefer to live and work in urban settings. To counter this problem South Africa, for example, reserves a quota of places for students selected through rural districts which struggle to attract qualified teachers. On the other hand, increasing the academic standard of teacher education may increase the quality of teacher knowledge and skills, but increasing the entry standard may exclude people from the regions of poorest education, thus exacerbating the deployment challenges. However, it is a *sine qua non* that students selected with this factor in mind should meet minimum requirements regarding the foundation knowledge discussed above: if they are selected according to lower benchmarks then inferior teaching becomes a factor in reproducing rural disadvantage.

Another factor to be taken account of in selecting ITE students concerns subject specialisation, which is important, particularly at secondary school level, for a number of reasons. First, it complicates the planning for teacher supply, and in this regard the broader the curriculum, the easier it is to manage teacher supply and deployment. For example, if science is taught as a general subject, it is easier to manage than if it is taught as separate subjects of Biology, Chemistry and Physics, with separate specialist teachers for each. However from a teacher training viewpoint, the more teachers specialise in a narrow field of knowledge, the easier it is to ensure adequate content knowledge. Deciding on the range of subjects to be taught, and the extent of teacher specialisation is one of the key areas for policy decision.

The second aspect of teacher specialisation that is worth mentioning teacher supply. It is common to have an over-supply of teachers for some subjects, and a shortage in others. If the quality of secondary education is poor, this is often felt most acutely in mathematical and scientific subjects. The school leavers with good results in these subjects are then in short supply and therefore attract higher salaries in the private sector. This can result in a shortage of teachers in these areas, or poorly equipped teachers in these subjects. Under these circumstances incentives for school leavers to specialise in Maths, Science and Accounting.

A number of approaches can be taken to improve the number and quality of ITE applicants. At the most basic level, teaching conditions can be improved. This would involve increasing teacher salaries, reducing class sizes, improving teacher housing etc. However, we recognise that these are structural issues which require large amounts of financing, and which may not be realistic at this stage in the development of many SSA education systems. A number of SSA countries struggle to pay teachers a living wage, let alone finance their education and promotions. Targeted donor support is making a difference but sustainability can only be achieved by a growing fiscus.

While a certain threshold of funds is necessary to achieving an acceptable standard, research evidence indicates that the availability of funds does not guarantee success, and that teacher salaries in high-performing countries, while comfortable, are not elevated compared with professionals at a similar level of education and responsibility. It seems that a successful school system is a necessary but insufficient condition for national development and must be accompanied by and support an economic strategy tailored to optimising the natural and strategic resources of the country (Barber et al, 2010; van der Berg et al, 2017; Mlachila & Moeletsi, 2019. Most important, once the economy picks up, it generates additional funds for social spending, and in particular for education. Success breeds success in a virtuous cycle.

Once students have been selected into ITE, it is important to provide them with the highest quality of disciplinary studies, familiarity with the research literature on teaching and extensive school experience under the mentorship of experienced and dedicated teachers. Although the latter aspect is generally neglected in the research literature, what little is known indicates that it is not optimally planned and executed (Rusznyak & Bertram, 2015; Deacon, 2016). The selection and development of in-school mentors, together with the selection of suitable placement schools, are key aspects of ITE. If supervisors are too embedded in theoretical ideals the may be seen as irrelevant or out of touch. On the other hand if supervision is done by existing teachers with poor practices, it will do little to instil good practices in new teachers. For supervised practice to be of the most benefit, there is a need for placement conditions where there are good practices in place, that are both realistic and pedagogically effective. If standards are to be raised through improved teaching practices, some consideration must therefore be given to the quality of the school placement. The question of mentorship during ITE is closely connected to the question of in-school CPD, since the best placed teachers to undertake the former should also play an important part in leadership of the latter.

Continuous Professional Development as standard practice

Regarding CPD, there is wide agreement in the research literature that ITE and CPD should be integrated into a continuum which supports teachers' capacity throughout their careers. However, the two serve different purposes and are not interchangeable: ITE provides teachers with a solid base of the knowledge and the skills that they will need for their task, while CPD allows them to update their knowledge and skills, and to adapt these to changes in the teaching environment (Musset, 2010).

From this perspective, the practice common in SSA countries to press un- or under-qualified teachers into service and then attempt to raise their qualifications through CPD is not only inefficient but, once a poor quality system is established, it is very difficult to escape from the resulting vicious cycle. Nevertheless, CPD aimed at skilling unqualified teachers is commonly required at times of rapid expansion of a system where the time and financial resources required for ITE are not available. While the use of unqualified teachers is not desirable, it may be an effective way to address sudden changes in demand. Again, we emphasise that this is not the approach that we would advocate. However, the number of unqualified teachers is a reality, and it is not a problem that will be solved by simply removing them from the classroom. But upskilling these teachers will require substantive courses, for which teachers could perhaps be given time off to attend, and combine face-to-face instruction and support by distance.

In providing any kind of CPD, whether aimed at qualification upgrading or at the ongoing enhancement of knowledge and skills of qualified teachers, account needs to be taken of the research findings that training in the form of short workshops has little effect on teaching practice, and that an effective programme should last at least for several days, it must be subject-matter specific, and its content and emphasis must be articulated taken into account the instructional goals and the challenges faced by the school in which the teacher is working (Nakabugo et al, 2009; Darling-Hammond, 1998; Cohen & Hill, 2000; Musset, 2010; McMahon et al, 2015). For this reason, all CPD needs to be evaluated in order to assess its impact on the capacity and effectiveness of educators, be they in classrooms or positions of curriculum or institutional leadership. Ethiopia provides an example of a country which has adopted a well-structured form of CPD, consisting of a three-year programme of self-study, two three-day tutorials and one six-week residential

training component annually during summer vacations. A number of countries, including Burundi, Cameroon, Nigeria and South Africa are moving to linking periodic certification to specified CPD requirements, but the proof of the pudding will be in the quality of the training and of the assessment system used to certify teachers.

There is also a growing realisation that, in addition to subject-focused study, an important form of CPD places the work of the school at the centre of the programme and is designed around the challenges teachers face in their classrooms daily. Research indicates that programmes that are linked to specific school needs are more effective, especially activities based on demonstration, peer-review and mentoring. School-focused CPD provides opportunities for synergies to develop among the teachers and the staff of the school (Darling Hammond & Rothman 2011, Darling-Hammond 2010, Levin 2008). Teamwork of this kind has also been found to improve teachers' sense of job satisfaction, which in turn reduces teacher attrition.

Improving the management and support of teachers

In the best performing systems that have a rigorous and lengthy ITE programme, CPD forms an integral part of a teacher's career, and is linked to issues of motivation and career progression. A major source of slippage between policy and practice – ineffectual implementation – is a complex issue comprising a number of factors, including lack of conviction and consistency on the part of leaders, the non-alignment of the many elements of teacher education and support, and weak accountability. In the first instance, education ministries need to articulate a clear strategy, with explicit roles for leaders at every level of the system, and maintain the strategy consistently over long periods of time. Rwanda seems to be setting a benchmark in this regard, although it is early days in the country's efforts to reform its school system. Reforming a system as complex as schooling is a decades-long process, and therefore efforts need to be applied over several successive governments; this is an uncommon situation, since most often new governments set out to establish a unique persona, thus undermining the efforts of their predecessors. Governments which are unable to learn from the successes and failures of their predecessors, and enhance the former, cannot build excellence over time.

One of the most wasteful instances of poor alignment is when the selection of educators into positions of leadership is not based on the requirements of the job, on the one hand, and the experience, knowledge and skill of prospective candidates, on the other. Delivering the curriculum is a highly technical task, best enhanced by promoting people with the best knowledge and skills into positions of instructional leadership. Not only does this make the best use of available human resources, but it sharpens the motivation of young teachers, spurring them on to develop their skills in the interests of gaining promotion. Yet in many countries, these criteria are ignored, with candidates being appointed according to seniority or nepotistic or corrupt procedures. A high-performing school system requires high morale and motivation among educators at all levels. When any teacher sees educators less skilled than herself being promoted, resentment and lack of respect is engendered, creating the worst kind of atmosphere for the teamwork required to deliver the curriculum.

The existence in many systems of corrupt practices brings up the issue of accountability: in too many countries, policy transgressions and even egregiously corrupt activity are not met with sanctions (DBE,

2016). In too many countries, teacher absenteeism and staying away from class when at school is rife, and the practice has become 'normalised' to the extent that no one does anything to encourage more efficient time-keeping in schools (DPME/DBE, 2017). Tellingly, although such practices are widespread in SSA countries (UNESCO, 2017), in many countries they co-exist with performance management practices which seem to pay no heed to time management as a key issue in teacher performance. South Africa is case in point, with the management system consuming many hours of educator time but which is widely considered to be ineffective (NEEDU, 2017). In any event, our theory indicates that performance management doesn't work, especially not under conditions of poor initial teacher education. On the other hand, when teachers are well educated before entering schools, there is far less need for performance management, although in Singapore they have both excellent ITE and strong performance management: under these conditions, performance management is best framed as a key step in identifying and addressing teachers' CPD needs.

Any thorough-going reform initiative of the kind envisaged above requires a long-term vision in which the different components of teacher preparation and deployment are carefully aligned and rolled out. It will take time before efficiency gains through better teacher education begin to provide the dividend required to address financial constraints, but in the meantime, much more can be done with what exists. Both the more efficient use of resources and building smart institutional capacity are dependent on good governance, and without the political will to exercise it no reforms are possible.

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APPENDIX 1: Research products

The investigation into the education and support of secondary school teachers in SSA produced seven research products:

1. **Literature Review**

Taylor, N. and Robinson, N. (2019). SECONDARY EDUCATION IN SUB-SAHARAN AFRICA: Teacher Preparation and Support. LITERATURE REVIEW OF BEST PRACTICE

2. **Market Scan Report**

Robinson, N. and Taylor, N. (2019). SECONDARY EDUCATION IN SUB-SAHARAN AFRICA: Teacher Preparation and Support: MARKET SCAN REPORT

3. **Four Case Study Reports:**

Adotavi, J. & Taylor, N. (2019). SECONDARY EDUCATION IN SUB-SAHARAN AFRICA: Teacher Preparation and Support. CASE STUDY: SENEGAL.

Arinaitwe, J., Taylor, N., Broadbent, E., and Oloya, C. (2019). SECONDARY EDUCATION IN SUB-SAHARAN AFRICA: Teacher Preparation and Support: CASE STUDY: UGANDA.

Taylor, N. and Robinson, N. (2019). SECONDARY EDUCATION IN AFRICA: Teacher Preparation and Support. CASE STUDY: SOUTH AFRICA.

Uwase, J. & Taylor, N. (2019). SECONDARY EDUCATION IN AFRICA: Teacher Preparation Support. CASE STUDY: RWANDA.

4. **Overview Report**

Taylor, N., Deacon, R. and Robinson, N. (2019). SECONDARY EDUCATION IN AFRICA: Teacher Preparation Support. OVERVIEW REPORT.

APPENDIX 2: Research questions

A set of research questions was formulated to probe policies and practices in each of the eight areas of interest:

1. **SELECTION INTO ITE:**
   - What criteria are applied in selecting prospective teachers into ITE programmes?
   - What is known about the knowledge and skills they bring from school?

2. **ITE INSTITUTIONS**
   - What kinds of institutions train teachers (colleges/universities/schools)?
   - What are the delivery modalities (face-to-face/distance/mixed)?
   - What is the size and shape of the ITE system in terms of:
     - number of institutions;
     - enrolment numbers, through-put and drop-out rates, number graduating;
     - spend per teacher on teacher training;
     - the nature and extent of financial support offered to students;
     - percentage of the education budget allocated to teacher education; and
     - regional differences in provision and capacity?

3. **THE NATURE AND CONTENT OF ITE PROGRAMMES:**
   - Describe the content of ITE courses in terms of the subject mix, the balance between content and pedagogical knowledge, the breadth and depth of subject content addressed, the pedagogical strategies advocated, and the nature of the teaching practice component.
   - Are there differences between programmes for upper and lower secondary teachers? If so, how do they differ?
   - Describe the content of the various programmes.
   - To what extent are academic support programmes offered to assist learners with poor school results?
   - If these academic support programmes are offered, what is the nature of these programmes and what are their success rates?
   - What kinds of qualifications are offered (degree/diploma, length of study)?
   - How is assessment done?
   - What are the through-put rates and graduation numbers?

4. **INDUCTION**
   - Is there a formal induction process? If so, what is its nature?
   - Are the schools used for induction selected? What about mentors?
   - Do teachers feel they are adequately prepared for teaching in the schools in which they are placed, not only during formal induction (if this exists) but also during their first school placement as a certified teacher?

5. **LICENSE TO PRACTICE**
   - Is there a formal licensing process?
   - If so, who undertakes this?
   - How are prospective teachers assessed?

6. **PERFORMANCE MANAGEMENT OF TEACHERS**

- Is there a formal performance management system?
- If so, how does it work?

7. CONTINUOUS PROFESSIONAL DEVELOPMENT (CPD)

- Is CPD formal (in terms of teachers being required to acquire CPD points over a certain period) or is it ad hoc?
- If CPD is formal, how does it work, and is it linked to re-licensing?
- What types of programmes are typically offered (in-school/out-of-school, length, frequency, content)?
- Are these programmes research-based? If so, describe kinds of research evidence available and the findings.
- Describe the content and duration of the various programmes.

8. PROMOTION

- Does promotion depend on further training?
- If so, what types of training programmes are required (qualification types, content, duration)?If not, how are teachers promoted into leadership positions?

APPENDIX 3: Data density by question

Questions	Number of countries for which data was found
1.1 What admission criteria are applied in selecting prospective teachers into ITE Programmes (e.g. High School Qualifications)	30
1.2 What selection criteria are applied in selecting prospective teachers into ITE programmes? (E.g. Interviews, Entry Exam, Both)	30
1.3 What skills and knowledge areas are tested during entry exams?	31
2.1 What kinds of institutions train teachers (colleges/universities/schools)?	37
2.2 What are the delivery modalities (face-to-face/distance/mixed)?	35
2.3 Give a rough average of the number of enrolments	31
2.4 Give a rough average through-put rate	30
2.5 Give a rough average drop-out rate	30
2.6 Give a rough average number graduating	33
2.7 What is the spend per teacher on teacher training per programme type.	30
2.8 List the financial support offered to students.	32
2.9 How many candidates has access to the financial support offered?	31
2.10 Percentage of the education budget allocated to Teacher Education	32
2.11 Regional differences in provision of teacher training institutes	31
2.12 Regional differences in capacity of institutes	30
3.1 List of core courses	33
3.2 List of optional/further courses	32
3.3 Length of study per course?	33
3.4 Are the courses practice or theory	32
3.5 What is the nature of academic support programmes offered to assist student teachers with poor schooling results? (Scale of 1 – 5, 5 = High and 1=Low)	30
3.6 Do teacher students have access to Supervisors/Management, Work Groups, Mentoring, Workshops, online assistance programmes, Other	33
3.7 Are there differences between programmes for upper and lower secondary teachers? (Y/N)	31
3.8 How do they differ?	32
3.9 Describe the content of the various support programmes	31
3.10 Give a brief summary of the success of the academic support received	31
4.1 What kinds of qualifications are offered (certificate/degree/diploma)	36
4.2 Length of study per qualification?	34
4.3 How is assessment done?	32

Questions	Number of countries for which data was found
4.4 What are the throughput rates?	30
4.5 What are the graduation numbers?	30
5.1 Is there any data collected on teachers' experiences during their first year of service? (Y/N)	31
5.2 How was the data collected? (source)	30
5.3 Experiences of teachers during their first year?	30
6.1 Is there a formal induction process? (Y/N)	32
6.2 Give a brief summary of the process?	31
6.3 Is induction process school based or teacher training institutes based? (School, University, College)	31
7.1 Do student teachers receive mentoring? (Y/N)	31
7.2 Who does the mentoring (e.g. Peer, Mentor Teacher, Specialist, Expert)	31
8.1 Is there a formal licensing process? (Y/N)	31
8.2 Is there a formal qualifications registration process? (Y/N)	31
8.3 Who is the licensing/ registration body?	30
8.4 What is the duration of the licensing/registration process?	30
8.5. What is the validity period for license/registration?	30
8.6 When do teachers renew their licenses? (e.g. license expired, qualifications upgraded, CPD points/credits)	30
8.7 How are prospective teachers assessed?	31
9.1 Is there a formal Appraisal and Performance Management System in place? (Y/N)	31
9.2 If no, What Appraisal and Performance management system is being used.	31
9.3 What are the standards?	30
9.4 Who enforces it?	31
9.5 What is the frequency?	31
9.6 What are the challenges/gaps?	31
10.1 Is CPD formal? (Y/N)	31
10.2 Are teachers required to acquire a number of CPD point over a certain period of time or is it ad hoc?	30
10.3 What types of programmes are typically offered? (In School/Out of School)	31
10.4 Length of Study of various development programmes	30
10.5 Frequency of Programmes	30
10.6 Content of Programmes	31
10.7 List of the modules used	30
10.8 Is professional development linked to salary progression	32
10.9 Is there a once off incentive for upgrading qualifications (Y/N)	32
11.1 Does promotions depend on further training?	32
11.2 What types of training programmes are required?	31

Questions	Number of countries for which data was found
11.3 What qualifications are needed to be promoted to the next level of the profession? (e.g. Teacher to Senior Teacher)	30
11.4 If promotion does not only depend on further training then how are teachers promoted into leadership roles? (e.g. Academic Qualifications, Teacher Performance, Experience)	31
12.1 Do evaluations or reviews on CPD programmes exist? (Y/N)	30
12.2 Who conducts the evaluation/reviews?	30
12.3 Who funds the evaluation/reviews?	30
12.4 When does evaluation/reviews occur?	30
12.5 If there is access to this data, list the evaluation sources.	30
12.6 If there is access to the data, list the review data sources.	30
13.1 Source of Information (Internet Search or Ministry)	37

Data could be found for every one of the 70 questions for at least 30 of the 48 countries (63%).
On the negative side, no data was found at all for the 12 countries listed below:

1. Central African Republic
2. Chad
3. Côte d'Ivoire
4. Guinea
5. Guinea-Bissau
6. Mali
7. Mauritania
8. Niger
9. Sao Tome and Principe,
10. Sudan
11. Togo
12. Western Saharah

APPENDIX 4: Criteria for profiling policy & practice for teacher education & support

Factor	Rating			
	L: Low	M: Moderate	M/H: Mod/High	H: High
Strategy	None	Strategy does not place teachers as essential to educational progress	Strategy places teachers at the centre and the other components aligned, but is not implemented	ITE systematically strengthened; components aligned
Selection into ITE	None	Minimum school qualification	School qualification + tests or interview Future plans to be more selective	School qualification + tests + interview Attempt to select the very best school leavers available
Financial support	No support for students	Some support but inadequate to needs of even the poorest students	Full support for some who need it	Full support provided to all who need
Qualification	School certificate	Diploma or Dipl (Lower Sec), Deg (Upper Sec)	B-degree required for both US and LS	B-degree + professional qualification or M Ed
Duration of ITE	1 year	2y (Diploma) or 3y (Degree)	3y Degree	4 years
Course Content	Some content knowledge (CK) only	At least two of: CK, PCK, Practical present but not integrated	Integrated: CK + PCK + Prac	Integrated CK + PCK + Prac + Research
Induction	None	Less than 6 months, inadequately mentored	1 year, not consistently mentored	1 year, with close and systematic mentoring
Certification	No formal certification	Certification automatic after completing qualification	Requires limited test (e.g. literacy and numeracy skills, and/or qualitative assessment)	Certification occurs after thorough assessment of knowledge and pedagogy
Performance Management	None	Procedures in place but not done systematically	System in place but manipulated	Regular assessment for development and promotion
Continuing Professional Development (CPD)	None	Few opportunities for teachers and these appear to be ad hoc rather than based on priorities.	Lots of CPD, or a well structured system exists, but both are ad hoc, unresearched and unrelated to	Systematic and linked to performance management, teacher needs and promotion

			performance management or promotion	
Promotion	Widespread corruption and nepotism	Some corruption and many promotions appear to be ad hoc	Systems for systematically assessing capacity are in place, but not implemented systematically.	Based on merit, with systematic assessment
Coherence	No alignment	Plans are aligned but implementation is minimal	Plans are comprehensive but implementation is ineffective	All components tightly aligned: ITE => Induction => Certification => Perf management => CPD => promotion

Background Paper

Secondary Level Teacher Education in Sub-Saharan Africa
Teacher Preparation and Support

Overview Report

MARCH 2019

mastercard foundation

Secondary Education in Africa:

PREPARING YOUTH FOR THE FUTURE OF WORK