Background Paper

Secondary Education in Sub-Saharan Africa
Teacher Preparation and Support

Case study: South Africa

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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 Education in Sub-Saharan Africa
Teacher Preparation and Support

Case study: South Africa

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JET EDUCATION SERVICES

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CONTENTS

List of Tables

Acronyms and abbreviations

A levels	Advanced levels
ACE – SML	Advanced Certificate in Education – School Management and Leadership
ADEA	Association for the Development of Education in Africa
B Ed	Bachelor of Education
BPM	best practice model
C2005	Curriculum 2005
CHE	Council on Higher Education
CPD	continuing professional development
CPTD	continuing professional teacher development
CSI	corporate social investment
DEO	district education officers
DBE	Department of Basic Education
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
FLBP	*Funza Lushaka* bursary programme
GDP	gross domestic product
HEI	higher education institutions
HEQC	Higher Education Quality Council
HOD	Head of Department
INSET	in-service education and training
IQMS	Integrated Quality Management System
ISASA	Independent Schools Association of South Africa
ISPFTED	Integrated Strategic Planning Framework for Teacher Education and Development in South Africa, 2011-2025
ITE	initial teacher education
MDGs	millennium development goals
M Ed	Masters in Education
MRTEQ	minimum requirements for teacher education qualifications
NBT	national benchmark tests
NEEDU	National Education Evaluation and Development Unit
NGO	non-governmental organisation
NPDE	national professional diploma in education
NPO	non-profit organisation
NQF	national qualifications framework
NQT	newly-qualified teacher
NSC	National Senior Certificate

NSFAS	National Student Financial Aid Scheme
NTCs	national teacher colleges
NTP	national teacher policy
NWU	North-West University
O levels	Ordinary levels
PASEC	Programme for the Analysis of Education Systems
PCK	pedagogic content knowledge
PED	provincial education department
PGCE	postgraduate certificate in education
PGDE	postgraduate diploma in education
PIRLS	Progress in International Reading Literacy Study
REQV	Relative Education Qualification Value
RSA	Republic of South Africa
SACE	South African Council for Educators
SACMEQ	The Southern and Eastern Africa Consortium for Monitoring Educational Quality
SADTU	South African Democratic Teachers' Union
SAQA	South African Qualifications Authority
SASA	South African Schools Act
SEA	secondary education in Africa
SGB	school governing body
SK	subject knowledge
SSA	sub-Saharan Africa
SSL	school subject leader
SBM	school-based mentor
TEACH	TEACH South Africa
TIET	teacher instructor education and training
TIMSS	Trends in International Mathematics and Science Study
TMIS	teacher management information system
TSC	teacher service commission
UCT	University of Cape Town
UIS	UNESCO Institute for Statistics
UN	United Nations
UNESCO	United Nations Educational, Scientific and Cultural Organization
UPE	universal primary education
USE	universal secondary education
Wits	University of Witwatersrand
WDA	Workforce Development Authority

Background

Commissioned by the Varkey Foundation, this report is one component of a wide-ranging study on the education of secondary school teachers in sub-Saharan Africa. It provides information for the larger study, which culminates in an Overview Report. The Overview Report is one of 13 background papers which contribute to a comprehensive study of secondary education in Africa (SEA) coordinated by the Mastercard Foundation and supported by a number of donors. The full set of research products produced is given in Appendix 1.

Methodology

South Africa is one of four case studies selected for this research. The rationale for inclusion was based on both design and practical considerations, weighing up the need to conduct timely, rapid research and an identification of South Africa as a continent leader and number of valuable lessons to add with significant read across for other countries in the region. Alongside in-depth research from Rwanda, Senegal, and Uganda the case studies are designed to inform the development of a best practice model for the continent.

The study's theoretical framework was developed out of the Literature Review, which also produced a set of research questions (detailed in Appendix 2) that guided the work of all components, including this case study. The report is structured according to these questions, and following an outline of the context in which teacher education in the country finds itself.

Data for the case study was derived from academic and other literature, as well as interviews with key role players in the field of teacher education. These role players include government officials responsible for teacher education on a national and/or regional basis, teacher educators responsible for initial teacher education (ITE) and Continuous Professional Development (CPD), and teacher unions. Face-to-face interviews were conducted where possible, but some actors provided information via telephonic or electronic means. The list of interviewees is given in Appendix 3.

Document Overview

We commence this report with a description of the context in which the country finds itself at present: historical trends, socio-economic climate and an overview of schooling and teacher education.

This is followed by an examination of the preparation, deployment and support of secondary school teachers in the country under the key areas identified in the Literature Review and listed in Appendix 2: 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 paths.

The conclusion assesses the extent to which the policies and practices described above accord with the ways in which teachers are treated in countries which maintain highly successful school systems, and speculates on the implications of these trends for the future of schooling in the country.

Country context

After the transition to democracy in 1994, the post-apartheid government began reforming the deeply flawed education system it had inherited. This included modifying the structure, governance and curricula of teacher education, developing a new qualifications structure, and preparing teachers – especially in-service teachers (the vast majority of whom were black) – to implement South Africa's first post-apartheid school curriculum (Chisholm, 2004).

A two-tier education system

Before 1994, there were two ways of becoming a teacher: one could obtain an undergraduate university degree and 'cap' it with a one-year postgraduate teaching diploma, or one could complete a two- or three-year teaching diploma at a teacher training college or university. The majority of black teachers qualified through the state-controlled teacher college diploma route (Ben-Peretz & Feiman-Nemser, 2017).

University and college qualifications differed markedly in their curriculum emphases. Universities were characterised by curriculum autonomy, and the foregrounding of a strong knowledge base, while teacher colleges emphasised practice and an induction into the profession (CHE, 2010). Furthermore, the entrance requirements and length of training were uneven and racially defined. For example, white students needed to have graduated (that is, passed grade 12 of formal schooling) before training as a teacher while it was possible for black students to train as teachers with a standard 9 (grade 10) school-leaving certificate. As a result, the qualifications of black teachers were generally of poor quality, and the quality of instruction they offered of lower quality than from trainee teachers with higher entry requirements (CHE, 2010).

In 1995, in order to take stock of the highly varied system which perpetuated inequalities, a National Teacher Education Audit was undertaken (CHE, 2010), revealing that 36% of teachers were either unqualified or underqualified, and that there was an uneven spread of newly-qualified teachers produced each year across the nine provinces (CHE, 2010). This created a huge demand for in-service teacher professional development programmes which would rapidly bridge the teaching capacity gaps in the system.

In order to address the uneven spread of teachers across South Africa, a Teacher Rationalisation Policy was introduced in 1996. This resulted in about 30 000 teachers being redeployed to schools that did not meet the teacher-pupil ratio norm. The policy unintentionally resulted first in a loss of highly-skilled and experienced teachers (many of them opted to take severance packages rather than be redeployed), and second, a rise in the number of teachers paid by school governing bodies (SGBs) of more affluent schools (Jansen & Taylor, 2003) – thus reinforcing the uneven spread of teachers.

The National Teacher Education Audit also identified the poor quality of teacher education programmes, particularly the colleges which were not cost-effective (CHE, 2010). Instability in teacher education was aggravated by the state's decision in 1997 to close down 120 teacher colleges and locate teacher education with in the higher education sector. By doing so, it was assumed that equity and efficiency could be achieved, and a single coordinated system created.

Towards an integrated system of teacher education: destabilisation and low morale

By the end of 2003, 104 state-funded teacher colleges had closed or been incorporated into universities, in line with the objectives of the 2001 National Plan for Higher Education (Ben-Peretz & Feiman-Nemser, 2017). Consequently, South Africa now has one system of teacher education which is funded and regulated by the Department of Higher Education and Training (DHET), and offered by accredited higher education institutions (HEIs), which include 24 public universities and a few private higher education institutions. Teaching is a graduate profession with two pathways for becoming a qualified teacher: a four-year, full-time bachelor of education degree, or an appropriate undergraduate degree or diploma followed by a one-year, full-time postgraduate certificate in education (PGCE).

However, the unevenness, inefficiencies and mergers in higher education in the early 2000s destabilised teacher education. Teacher morale declined, enrolment in ITE programmes dropped, and the profession was no longer seen as one of choice. The 2001 National Plan for Higher Education noted "a significant drop in enrolments in pre-service teacher training programmes, which has major implications for the human resource requirements of the education system." The Ministry committed to developing a national teacher development plan, which would identify the requirements in pre-service training, the upgrading of unqualified and under-qualified teachers, as well as in-service training in line with the new curriculum and school improvement policies.

This prompted the Council on Higher Education (CHE), the quality assurance body for higher education in South Africa, to undertake a national review of professional qualifications between 2005 and 2007. The review resulted in teacher education programmes in several institutions not being accredited, or being given provisional accreditation subject to their programmes being strengthened. In the end the impact of the review was minimal: the largest institutions, delivering

the worst quality education, could not be disaccredited without seriously jeopardising teacher supply. Subsequent research reveals very little progress in raising the quality of ITE (Deacon, 2016a; 2016b).

Instability was further exacerbated by the parallel 'curriculum revolution' taking place in schools (Jansen & Taylor, 2003:45). Curriculum 2005 (C2005) was implemented in compulsory schooling (grades 1 to 9) from 1998 to 2003 (DoE, 1996, 1997). Celebrated as the most significant reform in South African education in the 20th century, C2005 was in fact characterised by tensions and contradictions, as well as a disjuncture between what was intended and what was attained (Wilmot, 2005:2, see also Christie, 1999; Jansen, 1998, 1999, 2001; Taylor & Vinjevold, 1999). The curriculum's focus on skills at the expense of content knowledge served to worsen South Africa's learning inequalities, demotivating the teacher workforce and reducing the pool of qualified graduates from which future teachers could be recruited further.

Major challenges in teacher education

These concerns were also noted during the 2009 teacher development summit, which identified a number of challenges facing teacher education (South Africa, Department of Basic Education and Department of Higher Education and Training, 2011). South Africa's Department of Basic Education (DBE) and Department of Higher Education and Training (DHET) responded with the Integrated Strategic Planning Framework for Teacher Education and Development in South Africa, 2011-2025 (ISPFTED) which sets out the priorities, time frames, and deliverables for a 15-year period (DBE & DHET, 2011). The primary outcome of the plan is "to improve the quality of teacher education and development in order to improve the quality of teachers and teaching" (DBE & DHET, 2011, p. 1). Teachers' poor content knowledge is being addressed through a new policy framework entitled Minimum Requirements for Teacher Education Qualifications (MRTEQ), which sets out the knowledge standards for teachers (DHET, 2011, 2015). Universities are at various stages of re-curriculating their teacher education qualifications, which have to be approved by the DHET and accredited by the CHE and the South African Qualifications Authority (SAQA) before 2019.

Progress has been made in achieving the short-to-medium-term goals of the ISPFTED. The enrolment in ITE programmes increased from 35 275 in 2008 to 116 701 in 2015, and there has been an increase in the number of teachers who graduated between 2008 and 2013 (from 5 939 to 20 738 in 2015) (DHET, 2013; 2018b). The DHET's projections are that teacher demand and the supply needs of the national school system will be met until 2025. Key to the increase in popularity of ITE was the introduction of a generous bursary programme, known as Funza Lushaka, for student teachers (this will be discussed in more depth later in the report).

However, there is a difference between initial teacher education graduates and teachers entering the workforce, and it is apparent that many students see ITE as a way into higher education, fully

subsidised by the state, rather than exhibiting a commitment to becoming a teacher (Deacon, 2016a). Furthermore, while the overall numbers of new teachers produced by the system is closer to projected needs, shortages in key areas remain, including teachers of maths, science and African languages at all levels, and teachers for the foundation phase (grades 1-3) (van Broekhuizen, 2015). The situation is particularly complicated in rural areas, which struggle to recruit high-quality teachers. This results in significantly higher rates of unqualified teachers in rural areas, as well as the necessity of multi-grade classes.

Teacher churn and attrition are another challenge to teacher deployment and recruitment. Many teachers resign but return to teaching after some time. The average join rate as a proportion of employed educators in 2017 was 6,94% and the average leave rate (through retirement, death or career move) was 5,37% per annum between 2004 and 2012. However, many of the leavers are qualified and experienced teachers who will return to the system, mostly within two to four years. Half of all individuals entering teaching in recent years come from a "reserve stock of potential teachers" (Van Broekhuizen, 2015).

A further complicating factor is the contentious relationship between the government and teacher unions in South Africa, which frequently sets teachers in conflict with those who seek to regulate and improve the quality of the teaching workforce. The South African Democratic Teachers' Union (SADTU) has a tradition of militancy and overt political activity that impacts negatively on schooling (Wilmot, 2017). SADTU teachers attend meetings during school hours as matter of course (Taylor, 2011; NEEDU, 2013; DPME/DBE, 2017), and the union has been implicated in a 'jobs for cash' scandal that government seems unable to address (DBE, 2016a). These factors have all contributed to the marked deterioration of the image of the teaching profession over the last 15 years.

Selection into ITE

There are two routes to qualifying as a teacher in South Africa. The first is a four-year Bachelor of Education degree (B Ed), from which the candidate can select which level they wish to teach (the general demarcation is: Foundation, Senior Primary, or Secondary), and the second is a three-or four-year bachelor's degree in the arts, sciences or commerce, followed by a year-long PGCE (DHET, 2015).

The BEd and PGCE are generally offered by the same institutions (see below). Once completed, both routes lead to classification as a professionally qualified teacher. Upon qualifying, a teacher is required to register with the South African Council for Educators (SACE), and this is currently an automatic process for those with the required qualifications. However, plans are afoot for SACE to institute a certification process which follows graduation.

Within these routes to teacher qualification, there are a number of specialisations which determine the requirements for selection. The three examples (Box (from two of the country's most prestigious universities and the largest provider of ITE) indicate that South Africa has low and non-selective entry requirements into ITE programmes. Not only are the academic requirements minimal, but there is no screening process (such as an interview or personal statement), which would determine whether an applicant is personally suited or motivated to become a teacher.

Despite these relatively low entry requirements, South Africa has trouble attracting quality students into teacher education programmes. Although all students enrolling for degree study are required to pass the NSC at 'bachelor level', results of the national benchmark tests (NBT) 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.

Box 1: Examples from three leading universities

At the **University of Cape Town (UCT**) there are four PGCEs: Foundation Phase (Primary School Grade 1-3), Intermediate Phase (grades 4-7), Senior Phase – Further Education and Training (FET) (grades 8-10) and FET (grades 10-12). The academic criteria for admission to each specialisation are slightly different. An interview to assess motivation or personal suitability is not currently part of the University of Cape Town PGCE selection process. Applications are considered in order of receipt, and admission to any PGCE is closed when the available places have been filled.

The **University of Witwatersrand (Wits)** has similar specialisations within their Bachelor of Education. Admission to the degree depends on the applicant's National Senior Certificate (NSC) results. Unlike UCT, applicants may be invited to write selection tests at the discretion of the School of Education. All applicants must have a rating of at least 5 for English home language or English first additional language. Applicants who wish to study mathematics or physical science must have scored at least 65% for core mathematics. There is no interview aspect to the selection process.

Requirements for entry into the B Ed at the **University of South Africa (UNISA**), a distance education institution which graduates over 40% of the country's teachers, are more flexible and less stringent than UCT or Wits. An applicant who wishes to complete a B Ed within three years must hold an NSC as well as a National N-Diploma in Educare. However, an applicant who has completed Grade 12 without an exemption, but who is older than 23, is eligible to be admitted to a four-year B Ed programme.

At the same time as the low achievement of candidates, most institutions make no effort to screen applicants or to select those with higher NSC scores. Furthermore, not only are ITE programmes not selecting the most promising applicants from the thousands who apply, but many universities do not adhere to the minimum requirements, which stipulate that applicants must have a bachelor-level pass in the NSC (see Deacon, 2016a). These practices persist despite government's injunction that universities should undertake better "professional screening of applicants prior to admission," to be "more selective during admissions processes" and to "give more support once students have been admitted and are in the system" (DHET 2011, p. 6). The policy prescribes that efforts should be

made to support student teachers most at risk of withdrawing from the programmes, especially at times when withdrawal is most likely.

ITE institutions

Non-graduate and both undergraduate and postgraduate education programmes are offered by education faculties at 24 of the country's 26 public HEIs and a number of the 123 registered private HEIs (Table 1) (DHET, 2018). The majority of public universities offer both BEd and PGCE programmes.

Table 1: Enrolment and graduation from teacher education programmes in 2016

	Education		Total	
	Public	Private	Public	Private
Enrolment (headcount)*	176 986	13 082	975 838	167 408
Graduation	42 107		160 969	39 686

The headcount figures are total numbers enrolled (i.e. across all years), which include those registered for one or more courses towards a degree. When these are reduced to full-time equivalent numbers, the total public enrolment in education faculties reduces to 100 942 – of which 46 764 were distance-learning candidates and 54 178 studying by contact mode. Education represents one-fifth of overall enrolments: the majority of 2016 graduates from public HEIs were in the science, engineering and technology (29,1% or 59 125) field, followed by business and management (27,8% or 56 364), all other humanities (22,4% or 45 480) and education (20,7% or 42 107).

While only a third of all students were studying through distance mode overall, nearly half of education students were doing so. Overall enrolments in public institutions have doubled since the advent of democratic government in 1994, with the proportion of black students increasing from 50% to 72%, and women students now outnumbering men. Research conducted by van Broekhuizen (2015) shows that new ITE graduates are made up of three groups. For every 10 ITE graduates produced in 2013, approximately four were black females, two were black males, and two were white females.

In terms of new teachers produced in 2016, the universities graduated 15 778 B Eds and 8 040 PGCEs (Table 2). The contribution of the private higher education sector represents only a small proportion of graduates.

Table 2: Number of enrolments and graduates in Bachelor of Education (B Ed) and postgraduate certificate in education (PGCE) in 2016

	B Ed HC	PGCE HC	B Ed FTE	PGCE FTE	B ED Grads	PGCE Grads	Foreign
Public	105 135	16 508	86 548	10 820	15 666	8 040	513

Private	593	0	512	0	112	0	0
Total	**105 728**	**16 508**	**87 060**	**10 820**	**15 778**	**8 040**	**513**

Key: HC – Total headcount; FTE – Full-time equivalent
Source: DBE, 2018

UNISA graduated 5 437 (34%) of all B Eds and 4 145 (52%) of all PGCEs in 2016. Since the senior phase spans both primary and secondary schooling, three specialisations enable teachers to teach in secondary schools: Senior Phase (SP) (grades 7-9), Further Education and Training Phase (FET) (grades 10-12) and SP/FET. The total number of secondary school teachers graduating in 2016 is shown in Table 3.

Table 3: Secondary school teachers graduating in 2016

		SP	SP/FET	FET	Total	%
B Ed	Public	405	2 582	4 381		
	Private	0	0	0		
	Total	405	2 582	4 381	7 368	47% of all B Ed graduates
PGCE	Public	361	4061	1 999		
	Private	0	0	0		
	Total	361	4 061	1 999	6 421	80% of all PGCE graduates

NGOs are involved in ITE. A number of innovative approaches have been developed, generally in partnership with one or more HEIs, the national DBE and/or one of the provincial departments of education (CDE, 2015). Of particular interest in this regard is the internship model through which some 20 NGOs offer over 500 student teachers the opportunity to study toward a B Ed degree via distance learning, while enjoying full-time placement in a public or independent school (Taylor, forthcoming).

Low graduation rates

Student progress through both contact and distance ITE programmes is poor, and the outputs low. It is estimated that some 55% of all students entering HEIs will never graduate (CHE, 2013).

Low graduation rates are particularly severe in the case of B Ed degrees, and particularly in the case of the UNISA B Ed that many students study on a part-time basis. In 2012, the ITE graduation rate[1] for the four-year B Ed programme was 9,8%, and for the one-year PGCE programme it was

[1] The graduation rate is a proxy for the throughput rate of a programme (which is not available), and refers to the number of students who graduate from a programme in a particular year. It is expressed as a percentage of the total number of students enrolled in that programme in the same year. In the case of a four-year qualification with a constant intake, the maximum possible graduation rate is 25%. For a one-year qualification, the maximum rate would be 100%.

46,3%. In the case of the UNISA B Ed, the graduation rate drops to 2,4%. This inefficiency increases the cost of producing new teachers, and the long turnaround time between enrolment and graduation complicates planning for the required number of new teachers.

Financial spend and support for ITE

The average spending on ITE per candidate is R83 799. The country offers a number of financial aid options for education students unable to afford the fees. The aforementioned *Funza Lushaka* bursary programme (FLBP) is a multi-year, service-linked bursary scheme designed to raise the number of newly-qualified teachers entering schools, particularly in poor and rural areas, by offering full-cost bursaries to eligible students who enrol in specific ITE programmes. The stated purpose of the programme is to ensure that the basic education sector responds adequately to the supply-and-demand needs for high-quality teachers in nationally defined priority areas. The programme falls within the mandate of the DBE as a key deliverable as indicated in the *Strategic Plan 2011-2014 and the Action Plan 2009 to 2014*. In 2016, 14 136 students received FLBP grants totalling R1 billion.

Education students may also apply for support from the general National Student Financial Aid Scheme (NSFAS), a loan scheme which provided R12,4 billion in support to 451 507 students in 2016 (DHET, 2018). Finally, towards the end of 2017 soon-to-be-ousted president Zuma announced that, in future, students whose families earned less that R350 000 per annum would receive free higher education (it is not yet clear how this will be financed, though).

The content of ITE programmes

The transition from the situation up until 2001 (largely unchanged since the apartheid era, when ITE was delivered by colleges and universities) to the situation today, where universities are the sole providers of teacher education, has not been easy. The switch is far from achieving the goals of universal quality education provided by qualified and competent teachers for all South African students.

Widespread dissatisfaction with the quality of ITE prompted the Higher Education Quality Council (HEQC), the statutory body responsible for quality assuring ITE, to publish a wide-ranging review of programmes in the sector in 2010. Of the 81 programmes reviewed, only 39 (48%) received full accreditation, with 18 (22%) either not accredited at all, or 'On Notice of Withdrawal', and the remainder conditionally accredited. Thus, fewer than half the programmes were fully accredited, despite the 'developmental' approach adopted by the HEQC (taking due cognisance of the strategic importance of the provision of teacher education and the fact that closing programmes would have had a serious impact on the supply of teachers).

Across all four types of programmes reviewed: Masters in Education (MEd), B Ed, PGCE and Advanced Certificate in Education (ACE), the greatest difficulties lay in programme design raising a critical question for the reviewers, specifically:

> *… the extent to which academics responsible for these programmes understand the nature and purpose of each of them and how they are to respond to South Africa's specific needs in the area of teacher education.* (CHE, 2010, 147)

Subject knowledge in maths and sciences is a challenge

The generally poor state of subject knowledge held by many teachers in primary schools has been in the public eye for some time (see, for example, Taylor & Vinjevold, 1999). More specifically, the results of the 2010 Southern and Eastern African Consortium for Monitoring Education Quality (SACMEQ) tests conducted among Grade 6 mathematics and English teachers reveal a generally poor grasp of the material they are supposed to be teaching (NEEDU, 2013; Taylor, N and Taylor, S, 2013). Most disturbingly, 79% of grade 6 mathematics teachers showed content knowledge levels below the grade 6/7 band (Venkat and Spaull, 2014). In the field of language and literacy, the SACMEQ tests administered to grade 6 indicate low levels of language proficiency among a representative sample of teachers (Taylor, N & Taylor, S, 2013).

However, there is some evidence to suggest that younger teachers who have come through the new university-based system perform significantly better than their older counterparts (Armstrong, 2015), who were largely educated in the colleges. However, it is also clear that universities, including the most prestigious, are not currently educating new teachers well enough in the foundation disciplines of language and mathematics (Deacon, 2016). From such a poor primary school foundation, one would expect learners to struggle with secondary school mathematics, irrespective of the effectiveness of their secondary school teachers.

Secondary school teachers also exhibit significant knowledge gaps. A recent analysis of the scores of grade 12 mathematics teachers in response to items based on the mathematics that they teach has brought closer focus to the proficiency of secondary school teachers (Bansilal, 2015). A sample of 253 teachers' responses to a shortened grade 12 examination was analysed. The teachers' proficiency was located close to the mean of the item locations. Furthermore, the levels of almost one-third of the group were below that of all the Level 3 (complex procedures) and Level 4 (problem solving) items in the test.

Much has happened in the policy field in the last five years, largely as a result of the HEQC review. Chief among these developments are the publication of the ISPFTEDSA (DBE/DHET, 2011), the promulgation of two versions of the MRTEQ (DHET, 2011; 2015) and a system-wide re-curriculation process in response to the latter. The policy stipulated that the last date of entry for students into qualification types on the former 8-level national qualifications framework (NQF) will

be July 2015, after which all programmes would be required to be accredited in terms of MRTEQ. However, at the time of writing, the deadline for new programmes to be approved had been moved to 2019, and it was not clear that all HEIs would meet this target. The specifications for B Ed and PGCE at high school level (SP and FET phase) are given in Box 1.

Box 2: Specifications for B Ed and PGCE

Specialist requirements for the B Ed (SP and FET teaching)

The minimum entry requirement is an NSC, or an NQF Level 4 National Certificate (Vocational) with endorsement for entry into bachelor studies with appropriate subject combinations and levels of achievement, as prescribed by institutions accredited to offer learning programmes that lead to the attainment and awarding of the qualification. Teachers in possession of a recognised certificate or diploma in education or another relevant field, may also present their qualifications for entry into a B Ed with a possibility of transfer of credits, for cognate previous studies. Assessment of prior learning could also lead to entry or an advanced credit standing.

A combined Senior Phase and Further Education and Training teaching programme is appropriate for teaching in secondary schools. The knowledge mix for this phase combination must support teaching in at least three specialisations: two Senior Phase subjects and one Further Education and Training subject, one Senior Phase subject and two Further Education and Training subjects, or one Senior Phase subject, one Further Education and Training subject and one support role.

At least 50% of the credits [240 credits] must be focused on developing the teaching specialisation phase and/or subject(s), including subject-focused disciplinary, pedagogical and practical learning. At least 40% of the credits [192 credits] must be spread across educationally-focused disciplinary learning (foundations of education), general pedagogical learning, fundamental learning and situational learning.

School-based work integrated learning (WIL) (the practice teaching component), including supervised and assessed teaching practice, constitutes an essential part of the B Ed programme. In a full-time contact programme, students should spend a minimum of 20 weeks and a maximum of 32 weeks in formally supervised and assessed school-based practices over the four-year duration of the degree.

Specialist requirements for the PGCE (SP and FET Teaching)

A combined Senior Phase and Further Education and Training programme is appropriate for teaching in secondary schools. The knowledge mix for this phase combination must support at least two teaching specialisations, namely one Senior Phase subject and one Further Education and Training subject. For example, Further Education and Training mathematical literacy and Senior Phase mathematics; Further Education and Training physical science and Senior Phase natural sciences; or Further Education and Training accounting and Senior Phase economic and management sciences.

The minimum admission requirement for the PGCE is an appropriate diploma or bachelor's degree. An appropriate diploma or degree includes sufficient disciplinary learning in appropriate academic fields to enable the development of teaching specialisation phases or/and subjects as specified for each school phase.

In relation to disciplinary learning, 32 credits must be allocated to the study of education and its foundations. At least 48 credits must be allocated to pedagogical learning: 40 credits to specialised pedagogical learning and 8 credits to general pedagogical learning. A total of 32 credits must be allocated to practical learning. Of these, 24 credits must be allocated to school-based WIL, including supervised and assessed teaching practice. The remainder (8 credits) must be used for other kinds of practical learning activities, including the study of practice.

School-based WIL, including supervised and assessed teaching practice, is an important part of the PGCE programme. In a full-time contact programme, students should spend a minimum of eight weeks and a maximum of 12 weeks in formally supervised and assessed school-based practice during the one-year duration of the programme.

Source: DHET, 2015

Induction, mentoring and certification

An important factor in the institutional landscape of teacher education in South Africa is the South African Council for Educators (SACE). SACE is a professional council established in terms of the SACE act (No. 31 of 2000), aimed at enhancing the status of the teaching profession with a vision of excellence towards education (Republic of South Africa, 2000). SACE serves two principal functions: the registration and discipline of teachers, and the development and management of teacher professional development systems (although the council does not have the resources and capacity to provide training). Although it is approaching the end of its second decade in existence, SACE has played a low-key role to date, focusing on the automatic registration of teachers who met the formal qualification criteria. More recently, it has begun to show signs of taking on an expanded role, starting with formalising the CPD system, developing a set of teacher professional standards (SACE, 2017) and investigating the establishment of an induction year after graduation as part of ITE, followed by assessment and certification.

Ongoing reform to the induction process

The situation regarding induction in South Africa is undergoing a process of change. In 2015, after consultation with teacher unions, government departments and various stakeholders in the teaching profession, SACE announced that new teachers will be required to undergo a year's induction before they receive their professional registration. However, at the time of writing, this idea had only progressed to the initiation of a pilot programme by the DBE. Not only was this decision designed to help new teachers become accustomed to the realities of the schooling environment, but, according to the CEO of SACE, the year would also ensure that newly-qualified teachers are the 'right fit' for the profession.

In response to this decision, the DBE has published "New Teacher Induction: Guidelines for the Orientation Programme" (DBE, 2014). The guidelines note that many parts of South Africa's schooling system provide inadequate and/or uneven systems of support to newly- appointed teachers and principals, and that it is, therefore, critical that we attend to the issue of how we receive our teachers at all public schools. The document recommends that the whole of the first year of a new teacher's employment should be regarded as an induction period, during which time the teacher should receive as much assistance as possible in all aspects of their job. The document also notes that in the first few weeks of employment the new teacher should receive intensive support and assistance to acclimatise to the new working environment. Schools are required to develop their own practices for delivering orientation, and may choose to continue to offer orientation at certain intervals and on invitation.

School management teams (SMTs) and principals in particular are required to support new teachers from the moment they arrive. This includes providing on-site orientation and resource support, managing the school environment (that is, ensuring that it is conducive to teaching and learning), building relationships between the SMT and teachers, providing instructional leadership and facilitating a supportive school context.

Research on newly-qualified teachers' experiences (Deacon, 2016) suggest that induction is still dependent on the discretion of individual schools. In a study of 30 newly-qualified teachers (NQTs), only half (15) of the participants indicated that they were inducted into their schools. Most (nine) were inducted by the principal, with the remainder being inducted by a Head of Department (HoD) or another senior teacher. The majority of participants (19) said that they were being supported by mentors in the schools, and for just over half (10) of these, their mentors were HoDs. With regard to the kinds of assistance respondents had asked for, the largest single proportion (22) had sought help with administrative tasks and responsibilities. Similar numbers had requested assistance with subject planning, setting assessment tasks, managing children's behaviour and dealing with parents. What these data indicate is that not all schools have formalised and structured mentoring.

Mentorship and internships solutions

Interestingly, there are a number of mentorship and induction opportunities specifically for new principals and school leaders, which further promote the importance of incorporating induction and mentorship into their schools. The recently introduced Advanced Certificate in Education – School Management and Leadership (ACE-SML) for school leaders and managers, supported by the DBE is one such example. The ACE-SML is a practice-based part-time programme aimed at providing management and leadership support through a variety of interactive programmes that improve students' practice, professional growth and ethos of leadership (Mestry & Singh 2007, p. 482). One of the important themes in the programme is the mentoring of the candidates. Similarly, a report by Makhurane (2017) outlines some of the various approaches to mentoring and induction offered across South Africa. For example, some schools receive mentoring from business people. This model involves business people committing to 12 months of engagement with a principal.

Deacon (2016) offers some valuable insights as regards a teacher's initial classroom experiences and how this relates to their own training. NQTs he surveyed made particular reference to the contrast between their teaching practice experiences and subsequent experiences as NQTs. Respondents from most of the universities made specific reference to what they considered to be two clear gaps in their preparation: the inadequacy of their training in, and exposure to, administrative tasks on one hand and to classroom management techniques on the other. These are skills that student teachers should learn during the practicum sessions that occur annually

except in the first of the 4-year BEd programme, and the failure to learn them point to the general inadequacy of the practicum at many institutions.

Teacher internship programmes offered by NGOs, mentioned in the previous section, provide important lessons for any systemic approach to induction (Taylor, forthcoming b). These programmes offer a model of initial teacher education which combines study with placement in a school. The student thus gains workplace experience while studying through a distance education programme, usually through UNISA, but also through North-West University (NWU), while more institutions are beginning to offer distance education.

An evaluation of one of the NGO internship initiatives, TEACH South Africa, noted that virtually all the interns surveyed (19) believed that their training would have been much more effective, and that they would have learned more about teaching per se, in a strongly functional school (Schollar & Roscani, 2014). The evaluation concluded that this sentiment is largely a consequence of the effective 'failure' of the in-school mentor system, and recommended that the TEACH South Africa example can serve as a model for internship only if significant attention is paid to pre-selecting and preparing the schools that will host interns. Many of the interns said that dealing with dysfunction in school and the poor levels of curriculum management offered by school leaders was difficult to deal with. In-school support by another teacher was strongly influenced by the personal willingness, motivation and capacity of the individual teacher concerned. In general, these in-school mentors received a low level of approval from the interns, who typically felt isolated in their schools.

The evaluation of a second NGO programme, led by the Independent Schools Association of South Africa (ISASA) and implemented in public schools, noted that a senior experienced teacher who teaches the same subject as the intern is best as a mentor, but that mentors need to be trained to understand and play their role (QPE, 2013). In addition, a pre-condition for schools to host interns successfully is the support of the school principal and management.

Discussions within SACE concerning the assessment of NQTs for certification purposes are still early-stage. Investigations to understand how this is done in other systems are underway (CDE, 2017).

Continuing Professional Development

The MRTEQ policy states that, as teachers grow in their careers and become more experienced, they are expected to make increasingly greater contributions to the collective expression of the roles in the school, both quantitatively in relation to the range of roles that they contribute to, and qualitatively in relation to the kind of competencies they are able to display in relation to the different roles. Formal, qualification-based CPD learning programmes should, therefore, provide teachers with opportunities to strengthen or supplement existing roles, or develop new

specialisations and interests. CPD should also improve their capacity to engage with, support and assist other educators, as well as support staff, learners and parents – not only at classroom and school level, but also in the community and in a wider context.

Furthermore, CPD qualification programmes should include aspects of professional and practical learning, including WIL at the appropriate level. They provide qualifications through which educators may advance in their careers after completing their initial teacher qualifications, including the ACE and National Professional Diploma in Education (NPDE).

The NPDE is an interim qualification which has as its purpose the upgrading of currently professionally under-qualified educators to the status of Relative Education Qualification Value (REQV) 13. The NPDE programme also provides an alternative route into further professional development through the second part of a B Ed degree, or through an ACE, with the possibility of subsequent admission to a B Ed (Hons) programme. Various ACE courses provide educators the opportunity to take on different specialist roles in terms of both subjects and leadership tasks. Table 4 shows the number of graduates from these programmes in 2016.

Table 4: Enrolment and graduation numbers in qualification-bearing continuing professional development programmes, 2016

Public universities	**NPDE**	**ACE**	**Foreign**
	4 272	3 921	367

Source: DHET, 2018b

The Bachelor of Education (Honours) is the first postgraduate degree in education, and follows on from the BEd. It is intended to prepare students for research-based postgraduate studies in a particular field. It serves to consolidate and deepen a student's knowledge of the field and to develop their research capacity in the methodology and techniques of that field. This qualification demands a high level of theoretical engagement and intellectual independence. Other postgraduate qualifications directed toward developing research skills are the postgraduate diploma in education (PGDE), Masters in Education (M Ed), and Doctor of Education/Professional Doctoral degree (PhD) (Table 5).

Table 5: Postgraduate qualifications awarded in 2016

Public universities	**B Ed Hons**	**PGDE**	**M Ed**	**PhD**	**Non-SA**
	5 128	310	741	261	703

Source: DHET, 2018b

Between 2012 and 2013, the nearly 31% of teachers who upgraded from unqualified to qualified while in employment exceeded the 22% of NQTs who entered employment for the first time in 2013. This suggests that the majority of teachers build up their qualifications on the job, often over many years (CDE, 2015).

The DBE provides development opportunities for educators at all levels of the system: teachers, school leaders and district, provincial and national level curriculum leaders. Taking their cue from the ISPFTEDSA (DBE/DHET, 2011), these efforts include the establishment of at least one teacher centre in each district, the launch of subject committees and professional learning communities in and around schools to promote discussion and input by subject specialists on curriculum matters, the funding of union-led teacher development institutes, partnerships with international and local corporate sector donors and training programmes for subject advisors and teachers. The collective scale of these activities is indicated by the size of public funds allocated annually to teacher development, as reflected in Table 6. In contrast to the CPD programmes, these activities do not result in qualifications but they do count toward CPD points awarded by SACE.

Table 6: Government training budget and actual spending in 2013/14 (R millions)

Budget	**Spend: Employed**	**Spend: Unemployed***	**Total spend**
1 117,9	323,8	152	475,6

* Unemployed beneficiaries refer to educators, clerical and support staff who benefited from bursaries, internships and learnership programmes

Source: DBE, 2015a

In its conclusion to the 2013/14 Annual Report on Training and Work Skills Plans (DBE, 2015a), the DBE exhorts provincial education departments (PEDs) to utilise the total amount of their skills development budget, to report consistently, accurately and on time on their spending trends and numbers of educators trained and to comply with the provisions of the various laws and regulations in order to improve service delivery. The report recommends that the DBE undertake regular studies to investigate the efficiency of resource utilisation given the wide variance in training expenditure across PEDs. One of the idiosyncracies of the budgeting system is that national government allocates money to the provinces, but provinces are not obliged to spend according these allocations. Finally, the report notes that it is not possible to discern from the data, with any degree of certainty, whether and to what extent PEDs are addressing the challenges of low educator capacity.

The last point signals a telling gap in the CPD terrain: although significant sums are spent annually on CPD, involving thousands of educators and person hours, little is known about the quality of this activity and the extent to which it is meeting its objectives. This brings us to the issue of substance, and particularly to the state of knowledge concerning the impact of training and other intervention programmes on the quality of teaching and learning.

The understanding that standards of teaching and learning are not necessarily raised by simply throwing money at the problem is growing. This realisation is focusing attention on the design of intervention programmes on the part of both government and private sectors. The mood was captured by Minister Naledi Pandor in 2015:

> *I think it's fair to say that we have opened up access to schools and universities, but we have been very much less successful in improving the quality of the education that our young people receive. In particular, we haven't been able to improve the science and maths teaching in our schools and this has created a bottle neck in the expansion of our university system and unemployment for many young people.*

Pandor, 2015: 1

In 2011, the DBE commissioned a School Monitoring Survey (DBE, 2013) to monitor the progress of the goals and indicators set out in the *Action Plan 2014: Towards the Realisation of Schooling 2025* (DBE, 2015b). One of the indicators related to the average hours per year spent by educators on professional development activities. The data reveal that the majority of teachers in both the Western and Eastern Cape indicated spending one to five days on Continuing Professional Teacher Development (CPTD) activities per year. This translates into most of the CPTD being spent on short term courses, once-off seminars or interventions. However, studies have shown that in order for CPTD to be successful and effective, activities should be repeated or spread out over a longer

period of time in order for teachers to internalise new practices and beliefs, or new ways of dealing with new practices (Timperley et al, 2007; van Driel, Beijaard & Verloop, 2001).

In 2007, SACE was given overall responsibility for the implementation, management and quality assurance of a CPTD management system. The aim was to enhance the quality of teaching in public schools through a process of recognising, supporting and tracking teacher professional development. The SACE council approved the CPTD implementation plan in November 2012, and it was subsequently implemented on a phased-in basis, beginning with principals and deputy principals in January 2014.

SACE has instituted a points-system that mirrors global trends in CPTD. To merit accreditation, teachers must complete CPTD activities endorsed by SACE, and which are offered by providers who must be approved by SACE. Teachers have to accumulate 150 points in each three-year cycle. Teachers who receive 150 or more points at the end of their three-year cycle will receive a certificate of achievement from SACE (SACE, 2015).

Donor-funded NGO-driven professional development programmes have also been prominent in South Africa for at least the past three decades. A scan of the sector, as part of the National Teacher Education Audit in 1995, found at least 100 INSET programmes of this type (Taylor, 1995). While the scale of the sector has declined somewhat since the heyday of international donor aid to the country in the 1990s and 2000s, in-service education and training (INSET) activity supported by both international and local corporate agencies remains robust. Following a survey of 99 corporate social investment (CSI) managers and 171 non-profit organisations (NPOs), Trialogue concluded that total CSI expenditure by companies in South Africa was estimated at R8,2 billion in 2014 (Trialogue, 2015). CSI expenditure grew 3% year-on-year between 2001 and 2007, and an impressive 10% year-on-year through the global recession. It is estimated that more than half of these funds go to supporting education initiatives, which means that the CSI contribution to INSET is at least of the same order of magnitude as government spending on this item. Little is known about the impact of these programmes, however, even though there is a growing realisation that programme evaluation lies at the heart of finding more effective, and more cost-effective, teacher development activities.

Teacher performance management

In South Africa, the Integrated Quality Management System (IQMS) (ELRC, 2003) was introduced as a measure to hold schools accountable and manage teacher performance. It is intended to assess the performance of each teacher annually for the purposes of a 1% salary increase and to ascertain areas requiring CPD. This is an elaborate system which involves self-assessment followed by an appraisal by a school HOD assisted by another teacher who is selected by the teacher undergoing appraisal (Whitely, 2016).

Negotiations between the government and teacher unions preceded the introduction. Well aware of the problems of the inspectorate system that had been employed during apartheid, the parties introduced the formative, developmental aspect in the IQMS in addition to the summative, accountability evaluation aspect. The introduction of this system was not without challenges, the most significant of which was the integration of disparate appraisal activities and formative and summative evaluation into one instrument (Mosoge & Pilani, 2014). According to SADTU (2011), the linking of the IQMS with pay progression distorted its developmental purpose and value. Thus, performance management did not receive due attention. Moreover, implementation of the IQMS was met with resistance from teachers who considered this accountability system to be a 'tough–on-schools' policy aimed at apportioning blame to teachers for the ills of education (Smith & Ngoma-Maema, 2003). The introduction of the system consequently took the form of a power-play between unions and the government. However, because of public outcry due to the poor academic results of grade 12s (Mogonediwa, 2008), government had to implement the IQMS.

According to Maphutha (2006), professional development is neglected when formative and summative evaluations are applied simultaneously because teachers tend to focus on summative evaluation only if it is linked to salary progression. Indeed, research in South Africa (Maphutha, 2006; Nkambule, 2010) shows that performance management, aimed at developing teachers, is neglected in favour of summative evaluation. Teachers are tempted to focus on satisfying the demands of summative evaluation in order to gain salary progression, grade progression and affirmation of appointments (ELRC, 2003).

The IQMS is widely considered to be ineffective, as indicated by the fact that the majority of teachers score at least 70%, and that few weaknesses are identified during the exercise, despite high rates of teacher absenteeism (DPME/DBE, 2017; NEEDU, 2015). The reason for this failure is attributed to collusion between the teacher being appraised and their chosen peer, because together they outvote the HOD to secure the salary increase.

A Ministerial Committee (Department of Education, 2009) examined the anomaly between poor school performance and high teacher ratings on IQMS and came to three conclusions. First, most teachers, together with members of the development support groups set up within schools to assist in the process, do not know how to conduct an effective analysis of teacher performance nor do they know how to prioritise teacher development needs.

Second, the criteria for evaluating teacher performance do not include measures identified in the research literature as constituting effective teaching such as: the time spent on a task, appropriate use of textbooks and materials, good communication, motivation and the importance of positive feedback.

The third factor responsible for inaccurate teacher ratings derives from combining appraisal for development and appraisal for performance measurement in a single instrument. Teachers are

tempted to manipulate the system to qualify for a pay increase or progression rather than use it to understand their own shortcomings and seek assistance to address them. Thus, the intentions of using IQMS to identify and remediate gaps in teachers' knowledge and skills are not met.

Promotion

Successive reports by the National Education Evaluation and Development Unit (NEEDU) (NEEDU, 2013; 2014), a national school evaluation system reporting to the Minister, have argued that incumbents of curriculum leadership positions in schools (HODs, deputy principals, principals) and districts (subject advisors) are not necessarily the best candidates for their jobs in terms of knowledge and skill. This arises from the fact that, in identifying curriculum leaders, expertise competes with other criteria, including expectations of seniority, and what Pattillo (2012) has called the "quiet corruption" conducted by cabals usually invoking the name of the union or political party, and operating in organised ways to secure promotion and protection for their members.

The appointment of principals and school-level HODs (who manage the curriculum for a subject or grade within the school) are recommended to the provincial department by the SGB. While this appointment is not necessarily dependent on further training, an HOD must have at least three years' teaching experience, a Deputy Principal must have at least five years' teaching experience, and a Principal must have at least seven years' teaching experience. The South African Schools Act (SASA) makes provision for the appointment and promotion of teachers – a responsibility that rests with the SGB, which receives applications, shortlists candidates and, following interviews, submits a recommended list of three names in order of merit to the district office. Similar processes are in place at provincial level for the appointment of district officials (Republic of South Africa, 1996).

The appointment of inappropriate candidates to these and other posts is partly responsible for the weak instructional leadership exerted by HODs and subject advisors. The view that nepotism, bribery, and the 'buying and selling' of posts is rife is widespread among system-level interviewees, supporting the findings of the ministerial task team established to investigate 'jobs for cash' allegations. In the face of this scourge, talk of strengthening promotion procedures is a topic which has been discussed for some time, and was most recently raised by the DBE in a press release following the presentation of the 'Jobs for Cash' Report in Parliament in November 2016 (DBE, 2016c). Following these revelations, the Minister issued a proposal for amending SASA in order to remove the role of the SGB appointments and promotions, allocating this function to the provincial head of department.

As well as potential corruption in hiring and promotion practices, teachers simply do not have much understanding or experience of promotion. In a study conducted by Quan-Baffour and Arko-Achemfuor (2014) the majority of respondents (70%) disagreed with the statement that the career paths and promotion of teachers are clear. This situation makes it imperative for the employer to practically clarify the issues regarding career paths and promotions. With regard to the prospect of being promoted, at least 60% of the respondents agreed with the statement that they do not think they will ever be promoted.

These findings are reflected in the views of the parliamentary monitoring committee (2007:1) which noted that one of the main explanations why good teachers were lost was because of the limited career prospects. Although the Employment of Educators Act (Republic of South Africa, 1988) states the existence of conditions of service in respect of different ranks and grades of teachers, in practice occupational mobility for all teachers is almost non-existent. A teacher may teach and remain on the initial post level (one) to which s/he was appointed for their entire career and this may lead to frustration and disillusionment among teachers who feel that they might not achieve self-fulfilment in a situation where the opportunity for promotion is skewed. Teachers who feel this way may leave or underperform due to a lack of job satisfaction.

Conclusion

When compared with the large majority of sub-Saharan African countries, South Africa looks more like a first world country in many respects, including the per capita expenditure on education (10 times the average across the continent), high levels of access to primary education (100%), secondary education (close to 100% up to grade 9 and around 60% to grade 12) and tertiary education (17% and growing), higher participation rates and performance outputs by girls compared to boys, a plethora of world-class policies and quality assurance bodies and processes and, as this report reflects, a wealth of publicly available data.

Yet, South Africa's performance on international comparative tests is mediocre. For example, on the grade 6 mathematics and language tests administered every four years by SACMEQ, the country ranks around halfway up the league table in test scores, on a par with Ugnada and behind Tanzania, Kenya, Botswana, Swaziland and Zimbabwe (Taylor, 2009; Spaull, 2011; van der Berg et al, 2011; van der Berg & Hofmeyr, 2017; Mlachila & Moeletsi, 2019). 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.

It is true that learner attainment is improving across a broad front, in both mathematics and language at primary level (DBE, 2017) and at secondary level in mathematics and science (Reddy et al., 2015; Gustafsson, 2016; 2017). Yet there is universal dissatisfaction with performance, particularly in schools serving the poor, from many sources including the most senior members of government (Motshekga, 2017). In this regard, a key question presents itself: are there levers

which, if applied appropriately, will catapult the system into higher quantum levels of performance within a decade or two? An evaluation commissioned jointly by the Department of Planning, Monitoring and Evaluation (DPME) and the DBE (DPME/DBE, 2017) concluded that three such levers do exist: improving time usage in schools, appointing curriculum leaders with the relevant capacity, and significantly improving the education of teachers. It can be argued that last of these is fundamental to building educator knowledge and shaping behaviour. These factors relate, respectively, to the management, promotion and education of teachers.

What can be called 'best-practicology' has enjoyed a great deal of attention in the last decade, manifesting in influential publications such as the two McKinsey Reports (Barber & Mourshead, 2007; Barber, Chijioke and Mourshead, 2010), the work of Marc Tucker (2011) and others, and most recently a new book by Andreas Schleicher (2018). There are many reasons to be wary of such lists of best-practices, not least of which is the difficulty of applying a formula which works in one set of conditions, but which might be more complex in a society with a different political history and cultural diversity. Indeed, the most successful systemic programmes have occurred in small countries (Finland, Singapore, South Korea, Poland), individual states (Ontario, Madhya Pradesh, Minas Gerais), or even single cities (Boston, Shanghai). But, as Tucker points out, the kinds of reform initiatives that have been successful by virtue of the small geography of Singapore, Finland, Canada and Japan could be applied in many US states of a similar size (and, we might add, in South Africa).

Exercises in 'best-practicology' produce lists of key reforms affecting policy and practice. When pressed to prioritise among his list of seven key activities, Tucker (2011) opts for two: developing a quality teaching force, and ensuring coherence in the design of the overall education system. It is self-evident that well-educated teachers are required to educate learners well. Countries which are proud of their teachers and the performance of schooling select the best candidates and educate them thoroughly in subject knowledge, pedagogical knowledge and the practical arts of pedagogy (defined by Tucker as *High mastery of complex content*). All the pundits agree on this, with the first McKinsey report coining what has become a popular rallying cry: *The quality of an education system cannot exceed the quality of its teachers* (Barber & Mourshead, 2007).

Considering best practice and ITE in South Africa

Despite wide-ranging reforms, South Africa continues to stumble in developing a high performing teacher education, or highly capable teachers. Regarding the education of primary school teachers, the evidence is unequivocal: B Ed curricula are, to quote the classic phrase from an early Trends in International Mathematics and Science Study (TIMSS) report, "a mile wide and an inch deep." In particular, the majority of graduates, deemed by SACE to be 'qualified teachers', are inadequately prepared to teach reading in any language (Reed, 2016), or elementary mathematics (Bowie, 2016; Deacon, 2016; Taylor, forthcoming a). In addition, their academic literacy in English,

the predominant language of teaching and learning from grade 4, is inadequately developed (Reed, 2016, Deacon, 2016, Taylor, forthcoming a).

Since the majority of high school teachers are bachelor graduates in their respective disciplines, and have only a one-year PGCE course in education, we may expect them to have stronger content knowledge than most B Ed graduates, but not necessarily a good grasp of the school curriculum, or how to teach it. In any event, the roots of the country's poor performance lie firmly in the primary school, where 78% of grade 4 learners fail to attain the lowest rung of the Progress in International Reading Literacy Study (PIRLS)[2] international benchmarks. Tellingly, the comparative figure for Iran, which enjoys the same per capita income and spending on schooling as South Africa, is 33%. In other words, with the same level of resourcing, Iran's school system produces competent grade 4 readers at three times the rate achieved by South African schools.

Priorities for reform in South African ITE

On Tucker's first priority, South Africa cannot hope to improve the quality of knowledge and skills conveyed to the next generation without dramatically improving the education of its teachers. The primary responsibility for this task lies with university education faculties. It seems that this realisation has not yet reached the critical mass required to move to a more effective system of ITE. 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. 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 are castles in the sky. Selecting students into ITE programmes on the basis of academic skills and motivation are a very important starting point for improving the quality of ITE.

The DBE is forging what looks like a promising programme for early grade reading as regards in-service training (Fleisch et al, 2016), and is 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.

[2] The Progress in International Reading Literacy Study is a grade 4 reading test taken every four years by some 50 countries. South Africa was ranked last on the 2016 test.

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. In South Africa, apart from the promising developments with respect to early grade reading and mathematics, there is evidence to indicate that the considerable resources spent on programmes for educators are not achieving impact in terms of increasing capacity with respect to the question of in-service training, let alone resulting in more effective pedagogy (DBE, 2015b; NEEDU, 2013). The 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.

A second priority for South African schooling is to improve time usage in schools. An evaluation of the implementation of the school curriculum introduced throughout the 12 grades and the early childhood precursor to Grade 1 (Grade R) found that, on average across the 24 schools visited, 18% of teachers were not in class during one or both of the two observation periods on each day of the field visit. In addition, there are frequent disruptions to the timetable for a variety of reasons: training, union meetings, memorial services, and choir competitions. While these figures are derived from a small sample, they confirm the many similar studies across the country (Hoadley, 2012; NEEDU, 2013; 2014). Under these circumstances, no curriculum is implementable. It is clear that school principals, as well as district, provincial, and national officials are aware of, and frequently complain about, this problem (DPME/DBE, 2017). Yet it is their duty to ensure that teachers adhere to the timetable. There is a curious lack of responsibility among leaders at every level.

A third major factor inhibiting high-quality learning happening in many schools, and related to the lack of agency exhibited by school leadership, is the fact that the system does not make the best use of the human resources at its disposal (DPME/DBE, 2017). Thus, instructional leaders (school principals, HODs, and district level subject advisors) are generally appointed according to seniority, nepotism, manipulation or bribery, rather than their expertise with respect to curriculum matters. 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 best knowledge resources and track records of effective teaching into positions of instructional leadership at all levels of the system, commencing with school-level HODs.

It is the HODs who are responsible for in-school CPD, the process where learning opportunities are structured for teachers who require assistance with one or other aspect of curriculum, pedagogy, or assessment. Within-school CPD is best carried out through peer learning experiences, where teachers who are experts in the topic under discussion take the lead, providing insights and novel

practices to their colleagues. It is a key element of any thoroughgoing instructional leadership system. As the curriculum leaders closest to the classroom, it is incumbent upon HODs to maintain a systematic CPD programme under the principal's leadership.

Finally, Tucker's second most important element of systemic best practice needs to be kept in mind: clarity and consensus on the goals for education and coherence and alignment of the components of schooling:

> *… the standards are aligned with the curriculum, which is aligned with the instructional materials available to teachers. And the examinations are also aligned with the curriculum, as is the training that prospective teachers get in teacher training institutions (2011).*

Systemic coherence and alignment are not much in terms of evidence in South Africa's schooling sector. The history of curriculum over the last quarter of a century is ample evidence of the wide-ranging policy changes which regularly sweep the field (Hoadley, 2018). Any thorough-going reform initiative needs a long-term view – of at least two decades – in which the different components of teacher preparation and deployment discussed in this report are carefully aligned and rolled out synchronously.

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References

Quan-Baffour, K., and Arko-Achemfuor, A. (2014). The Effects of a Lack of Career Pathing on Job Satisfaction Among South African Teachers. *Africa Education Review, 11(1)*. pp. 1-16.

Armstrong, P. (2015). *Teachers in the South African education system: An economic perspective.* Dissertation presented for the degree Doctor of Philosophy (Economics), Faculty of Economic and Management Science, Stellenbosch University.

Bansilal, S. (2015). A Rasch analysis of a Grade 12 test written by mathematics teachers. *South African Journal of Science. 2015;111(5/6), Art. #2014-0098*. http://dx.doi.org/10.17159/sajs.2015/20140098

Barber, M., and Mourshead, M. (2007). *How the world's best performing school systems come out on top.* https://www.mckinsey.com/industries/social-sector/our-insights/how-the-worlds-best-performing-school-systems-come-out-on-top

Barber, M. C., and Mourshead, M. (2010). *How the world's most improved school systems keep getting better*. https://www.mckinsey.com/industries/social-sector/our-insights/how-the-worlds-most-improved-school-systems-keep-getting-better

Ben-Peretz, M., and Feiman-Nemser, S. (2017). *Political Transformations and Teacher Education Programs*. Landam, MD: Roman and Littlefield.

Bowie, L. (2014). Report on mathematics courses for Intermediate Phase student teachers at five universities. Johannesburg: JET Education Services.

CHE. (2010). Report on the national review of academic and professional programmes in education. *HE Monitor 11, 2010.* Pretoria: Council on Higher Education.

CHE. (2013) *Higher Education Participation 2011*. Pretoria: Council on Higher Education.

Chisholm, L. (2004). Changing class: Education and social change in post-apartheid South Africa. Pretoria: Human Sciences Research Council.

Chisholm, L. (2009). *The Debate About Reopening Teacher Colleges.* https://hsf.org.za/publications/focus/focus-56-february-2010-on-learning-and-teaching/the-debate-about-re-opening-teacher-education-colleges

Christie, Pam. (1999). OBE and Unfolding Policy Trajectories: Lessons to be Learned. In Jonathan Jansen and Pam Christie, eds., *Changing Curriculum: Studies on Outcomes-based Education in South Africa*. Kenwyn: Juta & Co. Ltd.

CDE. (2015). *Teachers in South Africa: Supply and Demand 2013–2025*. Johannesburg: Centre for Development and Enterprise.

DBE. (2013). Report on the national school monitoring survey (DBE013 conducted in 2011). Pretoria: Department of Basic Education.

DBE. (2014). *New Teacher Induction: Guidelines for the Orientation Programme*. https://www.education.gov.za/Portals/0/Documents/Manuals/New%20Teacher%20Orientation%20Booklet.pdf?ver=2016-12-06-130520-543

DBE. (2015a). 2013/14 Annual Report on Training Interventions and 2014/15 Work Skills Plan. Unpublished. Pretoria: Department of Basic Education

DBE. (2015b). Action Plan to 2019: Towards the realisation of Schooling 2030. Taking forward South Africa's National Development Plan 2030. Pretoria: Department of Basic Education.

DBE. (2016). Report of the Ministerial Task Team appointed by Minister Angie Motshekga to investigate allegations into the selling of posts of educators by members of teachers unions and departmental officials in provincial education departments. Pretoria: Department of Basic Education.

DBE. (2017). The SACMEQ IV Project in South Africa: A Study of the Conditions of Schooling and the Quality of Education. Pretoria: Department of Basic Education.

DBE/DHET. (2011). *Integrated Strategic Planning Framework for Teacher Education and Development in South Africa.* Pretoria: Department of Basic Education and Department of Higher Education and Training.

Deacon, R. (2016a). The Initial Teacher Education Research Project: Final report. Johannesburg: JET Education Services.

Deacon, R. (2016b). The Initial Teacher Education Research Project: Newly Qualified Intermediate Phase Teachers in South Africa: Final Report on the ITERP NQT Symposium. Johannesburg: JET Education Services.

DHET. (2011). The Minimum Requirements for Teacher Education Qualifications. Department of Higher Education and Training. *Government Gazette No 34467*, 15 July 2011.

DHET. (2015). Revised Policy on the Minimum Requirements for Teacher Education Qualifications. Department of Higher Education and Training. *Government Gazette No. 38487*, 19 February 2015.

DHET. (2013). Trends in Teacher Education 2012: Teacher Education Enrolment and Graduation Patterns in South Africa. Pretoria: Department of Higher Education and Training.

DHET. (2018a). *Statistics on Post-School Education and Training in South Africa 2016*. Pretoria: Department of Higher Education and Training.

DHET. (2018b). *Trends in Teacher Education 2016: Teacher Education Enrolment and Graduation Patterns in South Africa in 2016*. Pretoria: Department of Higher Education and Training.

DoE. (1996). *Curriculum framework for general and further education and training*. Pretoria: Department of Education.

DoE. (1997). *Outcomes-based education: Curriculum 2005 draft curriculum framework*. Pretoria: Government Printer.

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

ELRC. (2003). *Integrated Quality Management System* (Agreement no 8, 27 August). Pretoria: Education Labour Relations Council.

Fleisch, B., Schöer, V., Roberts, G., and Thornton, A. (2016). System-wide improvement of early-grade mathematics: New evidence from the Gauteng Primary Language and Mathematics. *International Journal of Educational Development, 49: 157–174*

Gustafsson, M. (2016). SACMEQ teacher test results: 2007 compared to 2013. Unpublished draft report for DBE.

Gustafsson, M. (2017). An update on evidence pointing to encouraging trends in the quality of schooling. Unpublished PowerPoint presentation for DBE.

Hoadley, U. (2012). What do we know about teaching and learning in South African schools? Education as Change, 16(2): 187-202.

Hoadley, U. (2018). Pedagogy in Poverty: Lessons from Twenty Years of Curriculum Reform in South Africa. London and New York: Routledge.

Jansen, J. (2001). Rethinking Education Policy Making in South Africa: Symbols of Change, Signals of Conflict. In Andre Kraak and Michael Young, eds., *Education in Retrospect: Policy Implementation since 1990*. Pretoria: Human Sciences Research Council in association with the Institute of Education, University of London.

Jansen, J., and Taylor, N. (2003). Educational change in South Africa 1994-2003: Case studies in large-scale education reform. Country Studies. *Education Reform and Management Publications, Vol II*. World Bank.

Kruss, G. (2008). Teacher Education and Institutional Change in South Africa. Pretoria: HSRC Press.

Mestry, R., and Singh, P. (2007). Continuing Professional Development for Principals: A South African Perspective. *South African Journal of Education, 27*. pp. 477-490.

Makhurane, L. (2017). A review of coaching and mentoring in South African schools & districts, and suggestions for the way forward. Unpublished Report. Cape Town: SEED Educational Trust.

Maphutha, M. F. (2006). *Integrated Quality Management System in Sasolburg primary schools. MTech dissertation.* Pretoria: Tshwane University of Technology. Available at http://libserv5.tut.ac.za:7780/pls/eres/wpg_docload.download_file?p_filename=F14374 97912/Maphutha.pdf

Mlachila, M. & Moeletsi, T. (2019). Struggling to Make the Grade: A Review of the Causes and Consequences of the Weak Outcomes of SA's Education System. IMF Working Paper 19/47. Downloaded on 27 March 2019 from https://www.imf.org/en/Publications/WP/Issues/2019/03/01/Struggling-to-Make-the-Grade-A-Review-of-the-Causes-and-Consequences-of-the-Weak-Outcomes-of-46644

Mogonediwa, M.V. (2008). Strategies for the management of low performing secondary schools in the North-West Province. MEd dissertation. Potchefstroom: North-West University.

Mosoge, M., and Pilane, M. (2014). Performance management: the neglected imperative of accountability systems in education. *South African Journal of Education*

Motshekga, A. (2016). Speech by the Minister of Basic Education, Mrs. Angie Motshekga, MP, delivered on the occasion of the Quantitative Applications in Education Research Conference, Stellenbosch University, Western Cape, 20 September 2016. Mimeo.

NEEDU. (2013). *NEEDU National Report 2012: The State of Literacy Teaching and Learning in the Foundation Phase*. Pretoria: National Education Evaluation and Development Unit.

NEEDU. (2014). *NEEDU National Report 2013: Teaching and learning in rural primary schools.* Pretoria: National Education Evaluation and Development Unit.

Nkambule, S.G. (2010). *How school management teams view and experience implementation of the Integrated Quality Management System*. MEd dissertation. Pretoria: University of Pretoria. Available at http://upetd.up.ac.za/thesis/available/etd-06072011-163630/unrestricted/dissertation.pdf

OECD (2018), *World Class: How to Build a 21st-Century School System*, Strong Performers and Successful Reformers in Education, OECD Publishing, Paris, https://doi.org/10.1787/9789264300002-en

Pandor, N. (2015). Speech by Naledi Pandor MP, Minister of Science and Technology, at the launch of the Centre for International Teacher Education, Granger Bay Hotel School, Cape Town, 12 February 2015: 09:00. Press statement issued by Issued by Department of Science and Technology, 13 February 2015. http://www.dst.gov.za/index.php/media-room/media-room-speeches/minister/1259-speech-by-naledi-pandor-mp-minister-of-science-and-technology-at-the-launch-of-the-centre-for-international-teacher-education-granger-bay-hotel-school-cape-town-12-february-2015-900

Parliamentary Monitoring Committee. (2007). National Policy Framework for Teacher Education Development: Report-back by Department. 27 February.

Pattillo, K. (2012). *Quiet Corruption: Teachers Unions and Leadership in South African Township Schools.* Thesis submitted in partial fulfillment of the requirements for the Degree of Bachelor of Arts with Departmental Honors from the College of Social Studies, Wesleyan University, Newtown, Connecticut.

Prince, R. (2018). *The National Benchmark Test (NBT) Project: Latest NBT data, Trends and Implications.* Presentation to the PrimTEd project, JET Education Services, 17 April 2018.

QPE. (2013). *ISASA M&E Programme: Summative Evaluation Report*. Hillcrest: Quality Projects in Education. Unpublished.

Reed, Y. (2014). Report on English courses for Intermediate Phase student teachers at five universities. Johannesburg: JET Education Services.

Reddy, V., Zuze, T., Visser, M., Winnaar, L., Juan, A., Prinsloo, H., Arends, F., and Rogers, S. (2015). *Beyond Benchmarks: What 20 years of TIMSS data tell us about South African education.* Pretoria: Human Sciences Research Council.

Republic of South Africa. (1996). The South African Schools Act, Act 84 of 1996. *Government Gazette, Vol 377, No 17579.* Cape Town: Government Printers.

Republic of South Africa. (1998). Employment of Educators' Act, Act 76 of 1998. Pretoria: Government Printers.

Republic of South Africa. (2000). The South African Council of Educators Act, Act 31 of 2000. *Government Gazette, Vol 422, No 21431, 2 August 2000.* Cape Town: Government Printers.

SACE. (2017). Professional Teaching Standards: Draft for consultation with teachers and subject and phase experts. Centurion: South African Council for Educators.

SACE. (2018). New teachers to undergo a year of induction from 2017. Radio 702 news website, 22 September 2015. http://www.702.co.za/articles/5335/new-teachers-to-udergo-a-year-of-induction-from-2017

Schleicher, A. (2018). Valuing our teachers and raising their status. How communities can help. Paris: OECD Publishing.

Schollar, E., and Roscani, L. (2014). *The evaluation of the Teach SA programme in Gauteng: Final Report*. Johannesburg: Zenex Foundation, Unpublished.

Smith W. J., and Ngoma-Maema W. Y. (2003). Education for all in South Africa: developing a national system for quality assurance. *Comparative Education, 39(3):345-365.* doi: 10.1080/0305006032000134418

Spaull, N. (2011). *A Preliminary Analysis of SACMEQ III South Africa.* Stellenbosch Economic Working Papers: 11/11.

Taylor, N. C. (1995). Inset, NGOs and evaluation: A review, in Vinjevold, P. *The National Teacher Education Audit: the NGO sector*. Johannesburg: Joint Education Trust.

Taylor, N. (2009). The state of South African schools Part 1: Time and the regulation of consciousness. *Journal of Education, 46*.

Taylor, N. (2011). Priorities for Addressing South Africa's Education and Training Crisis. A Review commissioned by the National Planning Commission. Johannesburg: JET Education Services. http://www.jet.org.za/publications/research/Taylor%20NPC%20Synthesis%report%20Nov%202011.pdf/view.

Taylor, N. (forthcoming a). Teacher knowledge in South Africa, in Spaull, N., and Jansen, J. (Eds.) *South African Schooling: The Enigma of Inequality*. Springer. Publication date: November 2018.

Taylor, N. (forthcoming b). *Teacher Internships: A Learning Brief*. Johannesburg: Zenex Foundation.

Taylor, N., and Vinjevold, P. (1999). Teaching and learning in South African schools. In N. Taylor and P. Vinjevold (Eds.). *Getting learning right: report of the President's education initiative research project*. pp. 131-162. Braamfontein: Joint Education Trust.

Taylor, N. and Taylor, S. (2013). Teacher knowledge and professional habitus, in Taylor, N., van der Berg, S., and Mabogoane, T. (Eds). *Creating Effective Schools: Report of South Africa's National School Effectiveness Study.* Cape Town: Pearson.

Timperley, H., Wilson, A., Barrar, H., and Fung, I. (2007). *Teacher learning and development.* Wellington: Ministry of Education.

Trialogue. (2015). CSI growth slows in 2014. http://trialogue.co.za/csi-growth-slows-in-2014/

Taylor, N. (2014). An examination of aspects of the B Ed curricula for Intermediate Phase teachers at five higher education institutions: Summary Report. Johannesburg: JET Educational Services.

Tucker, M. (Ed). (2011). *Surpassing Shanghai: An agenda for American education built on the world's leading systems*. Cambridge: Harvard Education Press.

van Broekhuizen, H. (2015). Teacher Supply in South Africa: A Focus on Initial Teacher Education Graduate Production, *Stellenbosch Economic Working Papers: WP07/15, 2015.* Stellenbosch: University of Stellenbosch.

Van der Berg, S., C. Burger, R. Burger, M. de Vos, G. du Rand, M. Gustafsson, E. Moses, D.L. Shepherd, N. Spaull, S. Taylor, and H. van Broekhuizen. (2011). Low Quality Education as a Poverty Trap. *Stellenbosch Economic Working Papers 25/11*. Stellenbosch: University of Stellenbosch.

Van der Berg, S. and H. Hofmeyr. (2017). *An incomplete transition: overcoming the legacy of exclusion in South Africa*. Washington DC: World Bank. Downloaded on 27 March 2019 from http://documents.worldbank.org/curated/en/339291529320964248/Education-in-South-Africa-background-note-for-the-South-Africa-systematic-country-diagnostic

van Driel, J. H., Beijaard, D., and Verloop, N. (2001). Professional development and reform in science education: The role of teachers' practical knowledge. *Journal of Research in Science Teaching, 38(2), 137-158.*

Venkat, H., and Spaull, N. (2015).What do we know about primary teachers' mathematical content knowledge in South Africa? An analysis of SACMEQ 2007. *International Journal of Educational Development. Vol. 41 Mar*. pp. 121-130.

Whitley, M. (2016). An exploration into whether the developmental appraisal system is achieving its desired outcome of promoting teacher development. Masters in Education, University of Stellenbosch.

Wilmot, P.D. (2005) Teachers as recontextualisers: A case study analysis of outcomes-based assessment policy implementation in two South African schools. Unpublished PhD thesis, Rhodes University, Grahamstown, South Africa.

Wilmot, D. (2017). Transformative teacher education in a time of crisis. Inaugural lecture given by Professor Di Wilmot. Education Faculty, Rhodes University, Grahamstown, South Africa, 7 September 2017.

Appendix 1: Research products

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

1. **Literature Review**

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

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 SUB-SAHARAN AFRICA: Teacher Preparation and Support. CASE STUDY: SOUTH AFRICA.

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

4. **Overview Report**

Taylor, N., Deacon, R. and Robinson, N. (2019). SECONDARY EDUCATION IN SUB-SAHARAN 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: Key actors interviewed

Name	Position	Contact details
Dr Whitfield Green	Chief Director: Teaching and Learning Development, Department of Higher Education and Training	Green.W@dhet.gov.za 071 676 7669
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