

Background Paper

Curriculum Reform, Assessment and National Qualifications Frameworks

February 2019



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.



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**Background Paper on Secondary Education in Africa:
Curriculum Reform, Assessment and National
Qualifications Frameworks**

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Executive summary

While significant progress has been made in reforming primary education in many parts of the world, including on the African continent, relatively less has been achieved at the secondary levels in many countries on the continent and especially in sub-Saharan Africa (SSA). This background paper engages with issues of secondary education reform in SSA since 2007 and uses the MasterCard framework of questions as a template for gathering evidence.

The framework seeks answers in three broad areas of reform: curriculum, assessment/examination systems and national qualifications frameworks (NQFs). It specifically invited responses to the following questions:

Curriculum

- What kinds of curriculum reform have occurred in SSA since 2007?
- How successful has the practical implementation of new curricula been?
- Given the challenges, how can resource-constrained ministries implement curriculum reform?
- To what extent has a/the new curriculum promoted 21st century skills (like creativity, critical thinking, cognitive flexibility and emotional intelligence), as well as employability and entrepreneurial skills?

Assessment

- How successful has assessment reform been?

National Qualifications Framework

- What is the status of implementation of NQFs across SSA?
- Have the approaches to NQF implementation promoted learning and the acquisition of skills necessary for employment?

Approaches to gathering evidence

To ensure greater inclusivity, and to solicit a wide range of perspectives, we have chosen to review as broad a spectrum of publications as possible. This has meant that we have included research papers that, more often than not, would have been excluded from similar types of reviews. These include graduate students' masters and doctoral theses; and research papers published in journals that are not widely recognised. The net effect of widening the pool of sources is that many more researchers from, and working in, institutions on the continent have been referenced or included in the bibliography.

The evidence gathering processes involved six linked activities:

- Setting the search parameters and undertaking an electronic search.

- Reviewing the document titles and abstracts; and sifting and excluding non-relevant documents.
- Once the primary and secondary sources have been identified, using high frequency citations to identify researchers in the field for follow up processes.
- Reviewing the wider scholarship of identified scholars to gather additional ‘grey’ literature.
- Identifying case studies, based on the analysis of these preliminary sources.
- Site visits and case study write-ups

Two system case studies were selected for close analysis: South Africa and Ethiopia. South Africa was selected because of its experience of three separate waves of curriculum reform in the past two decades, the extensive documentation of these curriculum reforms and as one of the first systems in the world to have introduced a national qualifications framework. Ethiopia was selected as it represents a rapidly developing country in which secondary education is likely to play a key role. It was also selected because of its recent review of its secondary education curriculum and examination system.

Findings

Curriculum

What kinds of curriculum reform have occurred in SSA since 2007 and why have some countries moved further with curriculum reform than others?

- Curriculum reforms cluster into two main groups: “big idea” reforms that aim to transform all subjects across all levels with new ways of organising the teaching programme; and subject-specific curriculum reform proposals that are less ambitious in their scope.
- In the past two decades, there have been ambitious curriculum “big idea” reforms efforts that included secondary education in many countries in all parts of sub-Saharan Africa. Of these, the most well documented examples have been South Africa’s effort to introduced outcome-based education in 1998 and, most recently (2016), Kenya’s competency-based curriculum reforms.
- The dominant type of curriculum reform in SSA secondary education systems are “big ideas” reforms, based on principles of Competency-Based Education (CBE). Of the 25 countries we reviewed, 13 adopted CBE reforms.
- Other “big idea” reform frameworks in SSA include Outcomes-Based Education, learner-centred education and the vocationalization of the curriculum.
- The “big idea” reforms across these initiatives attempt to shift education from a “knowledge” focus to a “skills” focus.
- The most recent curriculum reform debates focus on the introduction of 21st Century skills in the context of the Fourth Industrial Revolution.

How successful has the practical implementation of new curricula been? Given the challenges, how can resource-constrained Ministries implement curriculum reform on the ground?

- While there have been few rigorously designed evaluations of system-wide competency-based curriculum reforms, the accumulation of evidence from a variety of sources suggests that most of these initiatives have been less than successful.
- While the likely reasons for the lack of success are many and varied, the research can be categorised into those related to pragmatic (often implementation) challenges and those that argue that the idea of competence-based educational reform is conceptually flawed.

Major Curriculum evaluation effort	Authors/Sponsors	Overall judgment	Major obstacles to success
Review of competency-based reforms in five Francophone Countries	Gauthier, 2013	CBE did not improve student learning outcomes	Conceptual deficiencies amongst implementers
Implementation of CBE reforms	Esongo 2017 Yessoufou 2014 Komba & Mwandaji, 2015 etc.	Largely unsuccessful attempts across many countries	Under resourced educational environments, limited language proficiency among implementers; low teacher morale; large class sizes
Review of transferrable skills programmes in low- and mid-income countries. Impact of vocational systems Multiple vocational pathways	Brown, Rankin, Picon & Cameron. 2015 Pedzisai, Tsvere & Nkhonde, 2014 Kakupa 2017	Limited success in some sectors, especially health related educational sectors	Inadequate material and financial resources Low skill levels among teachers Curriculum overload and congested time tables Lack of information Non-uniform assessment processes

- A new generation of curriculum researchers has recently suggested a theoretical explanation for the failure of new curriculum reforms that focus on skills. Their argument is that the primary purpose of schooling is to provide students with an opportunity to acquire specialist knowledge that they cannot acquire at home, in their communities or even in the workplace. The obvious examples are the specialist knowledge associated with school subjects like Mathematics, Physics, Chemistry, History and Accounting. This is what they refer to as “powerful knowledge”: the kind of specialist knowledge that provides reliable explanations and opens students to new ways of thinking about the world, not just acting in the world. It is precisely to acquire this specialised and high-status knowledge that parents make huge sacrifices to get their children into schools and to keep them there. From the perspective of curriculum reform, the real challenge is to improve the design of the curriculum so that it better reflects the internal logic of school subjects.

Lessons have been learnt about how curriculum reform challenges can be navigated. Leyendecker, Ottevanger & Van den Akker (2008) offer three critical insights to overcome the obstacles to reform:

- The leap necessitated by “big idea” reforms is often too large. It seems credible to advocate for breaking big ideas into small achievable goals in order to reduce, or preferably eliminate, reform exhaustion even before it begins.
- There is a pervasive lack of clarity about the intentions of curriculum reform.
- There is a lack of professional development infrastructure across the education systems in the SSA region. Effective and sustained professional development of teachers and implementers needs to underpin reform. Structures and knowledge systems to support reform processes need to be developed across the SSA region.

While many efforts at curriculum transformation have been system-wide, reform has also happened at subject curriculum levels in many parts of the SSA region. New subject-specific curriculum reforms have been discussed and, in some cases, implemented in the areas of Science, Mathematics, Languages, Geography and commercial subjects. Geography and Life Skills in Lesotho, Entrepreneurship learning in Rwanda and Life Orientation and Mathematics in South Africa are standout examples of subject-specific curriculum reforms discussions in the region.

To what extent has new curriculum content promoted 21st century skills (like creativity, critical thinking, cognitive flexibility and emotional intelligence), as well as employability and entrepreneurial skills - as opposed to memorisation of facts?

- We do not have much evidence across the continent to answer this question. Much of the school subject curriculum appears to be based on traditional assumptions about learning, which emphasise literacy and numeracy and

conventional school subjects. However, as the South African case shows, 21st century skills, like critical thinking, can and have been incorporated both into conventional subjects and formal examinations.

Assessment

How successful has assessment reform been?

Although there seems to be a growing recognition, especially among academics and teacher educators, of the need to transform assessment from its preoccupation with measuring learning and estimating outcomes to utilising it as an authentic form of learning, national examining systems continue to use it for summative, rather than for formative, purposes. Key strategies towards shifting the balance include:

- Increasing the contribution of formative assessment tasks towards the summative grade at the end of an educational cycle.
- In-teacher training, enhancing the status of course work as an integral component of assessment
- Developing pedagogies and teaching strategies which centrally focus on assessment as learning and which highlight self-assessment,

Two critical issues tend to compromise the efficacy of new formative assessment in schools:

- Challenges in making these reliable and valid forms of assessment
- Dominance of external examination systems over curriculum decisions at all levels

Although many post-colonial education systems have localised their education and hence their examination systems, old colonial examination systems continue to exist side by side with the new ones. For example, coexistence of the new and the old can be found in Zimbabwe, where the Cambridge O and A level examinations are still being taken alongside the local ZIMSEC examination systems.

Cross National and International assessments

Only a handful of systems in SSA that participate in international assessments.

- There are substantially different perspectives on the potential benefits of participation in cross-national assessments in the international literature.
- Some researchers (Carnoy, 2015) have challenged both the validity of the rankings and the policy utility of the assessments. There are concerns about the escalation in the amount of testing and the increasing reliance on them for policy development. The three- or four-year cycles of the tests shifts the attention towards short-term quick-fixes. The cross-national tests tend to narrow the scope of attention of policy makers to those subjects that are measured, and tend to neglect non-measured school objectives, such as moral and artistic development (Lijing & Yingnan, 2017).

National Qualifications Frameworks

Have the approaches to NQF implementation promoted learning and the acquisition of skills necessary for employment?

The notion of national qualifications frameworks (NQFs) have a natural appeal and have become a world-wide phenomenon, including in the SSA region. The assumptions that are often made is the NQFs would provide:

- A valid basis for creating and developing common school curricula
- A sound basis for developing curriculum evaluation criteria
- A good foundation for identifying points and nodes for articulation between education subsectors and levels
- A firm basis for creating markets for delivery of skills and competencies.

There is very little evidence that qualifications frameworks have been successfully implemented, let alone that they have achieved the many goals policy makers have associated with them. International literature is mainly critical or very cautious. Moreover, there is very little published research evidence about national or regional qualifications frameworks in Africa. The most research is available on the oldest framework, the South African Qualifications Framework (SAQA). South Africa was one of the early adopters of the NQF policy idea (1995), based on models from England and Australia.

Trade-offs

Although the background paper includes criticism of various approaches to secondary education policy, notwithstanding their intrinsic logics and implementation limitations, they need to be evaluated not simply on their own terms: they need to be assessed against plausible alternatives, comparing actual and hidden costs against the potential benefits for competing policy options.

Trade-off 1: System-wide curriculum transformation v incremental curriculum change

The main question that policy makers in sub-Saharan Africa are currently grappling with is the question of whether to choose whole-system “big idea” reform agendas (such as competency-based curriculum, competence-based pedagogy, outcome-based education, learner centred education, curriculum vocationalization and 21st century skills), or opt for smaller, incremental, less ambitious curriculum and assessment reforms. “Big idea” reforms, often supported by the international agencies and the donor community, have a number of advantages. They can signal to the country, and the education stakeholders in particular, the desire for dramatic, substantive and rapid change. The evidence, however suggests that many of the “big idea” reforms have limited impact on teaching and learning.

Incremental curriculum reform approaches, on the other hand, rarely capture national and international attention. That said, incremental curriculum change is more likely to be successful as it often has the support of the ‘street-level bureaucrats’, who recognise the need and feasibility of incremental small-scale change. While incremental initiatives seldom lead to fundamental change in the core business of teaching and learning, they can improve both the efficiency and effectiveness of secondary education.

Trade-off 2: Academic curriculum v diversification

The expansion of secondary school enrolments across the continent would inevitably place the traditional academic curriculum and examination systems under pressure. Increased participation may lead to lower pass rates. Many countries are opting for various gradations and types of, expansion of subject offerings and new curriculum tracks or streams. Technical, vocational, occupational and trade subjects, combinations or streams are precisely geared to more heterogeneous student populations and speak to the demands of changing worlds of work. To what extent the secondary school technical, vocational, occupational and trade subjects actually align with the needs of newly emerging economic sectors is an open question. Moreover, from the perspective of the education sector, the high unit cost and difficulty securing the scarce human resources to teach these subjects places limits on the capacity of education systems to expand these offerings beyond a small subset of schools.

Trade-off 3: Introducing new subjects v infusing new knowledge into existing subjects

There is growing pressure on education systems to prepare students adequately for the challenges of the 21st century, particularly the demands associated with the Fourth Industrial Revolution and wider environmental challenges, like global warming. Would this be optimally achieved by introducing new specialist subjects, or infusing the skills, knowledge and new orientation into existing subject offerings? The benefit of introducing new stand-alone subjects, particularly if those subjects are examined on the same basis as other compulsory subjects, is that teachers, students and parents will take them seriously and that implementation is guaranteed in schools. The introduction of new subjects, particularly if existing subjects are not phased out concurrently, will lead to curriculum overcrowding and add to the stresses and the workload of secondary school students.

Trade-off 4: Curriculum depth v breadth

Curriculum overcrowding is a challenge at both lower and upper secondary school levels. How many subjects, how many topics within each subject and the level at which the topics are to be taught are part of a perennial debate. The policy pendulum swings between a fewer subjects to allow more time to study knowledge at greater depths; and more subjects to cover the full range of knowledge and skills deemed necessary to become a productive and educated citizen. Many education systems periodically come under pressured to add new subjects to address morals, values, spirituality and patriotism. Without dropping established subjects, these demands exacerbate curriculum overcrowding.

Trade-off 5: Comprehensive schools v specialised schools

“Should nations have secondary schools that serve many purposes or separate secondary schools for each purpose?” is the question Hoslinger and Cowell (2000) posed. Although not strictly a curriculum and assessment question, the choice of school type had significant curriculum implications. Comprehensive schools that offer multiple curriculum streams or tracks are often seen as balancing choice with greatest possible inclusion. Specialised schools, particularly those that restrict entry, may be viewed as exclusionary. Specialised schools, however, may be better at linking students directly to the world of work and the specialised focus can provide schools with a distinctive mission around which to build a strong ethos.

Trade-off 6: Western v indigenous knowledge systems

As part of the debates about decolonising the curriculum, researchers are exploring ways in which indigenous and local knowledge can be meaningfully and powerfully infused into everyday subjects. It is likely that the trade-offs between the ‘Western’ and the ‘African’ knowledge systems will be influenced by the ongoing debates about decolonising the curriculum.

Trade-off 7: International v national assessment

The argument for international testing is that it allows policy makers to measure their system-wide learning outcomes against outcomes in other countries. Participation in these rigorously designed and implemented studies can help build national capacity in all aspects of large-scale assessment of learning. The argument against participation in international tests for countries in sub-Saharan Africa is both the high cost and the likelihood that many of these systems might score well below the minimum benchmark.

National testing systems have the advantage of being directly tailored to the national curriculum expectations and can provide meaningful information about regional learning differences through student characteristics and can be helpful for policy makers in signalling areas within the curriculum that need greater attention. The downside of national testing systems is that they can be misused for political purpose and they provide little insight into the comparative performance of secondary school learning – information that could be used by potential external investors

Trade-off 8: School-based continuous assessment v high stakes public examinations

There is a growing movement in many education systems towards alternative approaches to student assessment. The most widespread is school-based continuous assessment, which, it is argued, more adequately represents students’ learning achievement. Examinations conducted in a few hours can only capture a relatively limited perspective on what students have learnt and can do. Because of the constraints, most high stakes examinations are not able to test a range of tasks that we are increasingly concerned students have mastered, such as the ability to gather information from a range of sources (e.g. interviews or the internet), evaluate, synthesise and make a compelling argument.

The argument against school-based continuous assessment focuses primarily on the problems of reliability and validity. “Reliability”, in this context, refers to the degree to which the assessment judgement is consistent between different assessment instruments. “Validity” refers to the extent to which the assessment actually measures the knowledge and skills acquired. The concern is that it is difficult to ensure that one school uses the same standard and will allocate the same mark for the same student achievement as another school. This is particularly important as students’ assessment is used by employers and tertiary institutions for decisions that have lasting consequences. Research shows that there is a tendency, in school-based continuous assessment, to inflate students’ achievement levels – a trend that undermines the credibility of the assessment system.

Trade-off 9: National Qualifications Frameworks

One of the major challenges in understanding policy and research into qualifications frameworks is that, on paper, they tend to look similar. In practice, they differ in a few key dimensions and researchers have attempted various ways of categorizing and analysing them. One clear distinction is between frameworks that are seen as a generator of learning and skills and those that are seen as a way of framing existing provision. It is clear that in the latter role for frameworks more successes can be seen. Frameworks differ in how comprehensive they are (the whole education and training system, or just specific parts of it; all qualifications, or only those within specific sectors); whether or not there is a qualifications authority that is specifically designated to create and oversee them; and in whether they are created by an act of parliament, or not. Sometimes, when policy makers invoke qualifications frameworks, they are really talking about accreditation and assessment arrangements. In other instances, the term is used as short-hand for the introduction of outcomes- or competence-based qualifications, often as a device for governing and quality assuring education provision. Another difference is how levels of qualifications are created – whether they are based on implicit understandings of qualifications, or based on official descriptors of levels.

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1. Background to this study

All young people and adults must be given the opportunity to gain the knowledge and develop the values, attitudes and skills that will enable them to develop their capacities to work, to participate fully in their society, to take control of their own lives and to continue learning.

Dakar Framework, 2000

GLOBAL EDUCATIONAL REFORM INITIATIVES OVER THE LAST 30 YEARS

Global efforts to reform national education systems have a long history. The 1989 World Conference on Education for All (EFA) in Jomtien was, arguably, one of the first global efforts to take action on education and set targets. Eleven years later, the Dakar World Education Forum's Framework for Action set even more explicit international education goals, which, in turn, fed into the United Nations Millennium Summit in September 2000 and the Millennium Development Goals (MDGs) that emerged from this.

The Dakar Framework for Action, Education for All: Meeting Our Collective Commitments (2000), was adopted by participants from 164 countries and committed governments to achieving quality basic education for all by 2015. It placed specific emphasis on HIV/AIDS education, early childhood education, school health, education of girls and women, adult literacy and education in situations of crisis and emergency. While the focus was primarily on 'basic' education – primary schooling and adult literacy – and on access, Goal 3 signalled the importance of secondary education.

Since Dakar and the Millennium Summit, there has been significant progress towards universal access to basic education. In the past few decades, primary school enrolment rates in most countries in sub-Saharan Africa have increased substantially.

As a result, many countries and the wider donor community are beginning to shift their reform focus to secondary education, particularly the quality and the linkage between schooling and the labour market. Concerns are beginning to be raised about the large number of secondary school graduates who do not secure gainful employment and the many who fail to gain access to higher education. To address this challenge, countries in sub-Saharan Africa have begun to experiment with curriculum reforms, with a view to improving the quality of secondary school teaching and better aligning schools with the needs of the labour market.

This shift was evident in a new development agenda that emerged in 2015. Strongly influenced by the Rio+20, the United Nations Conference on Sustainable Development in June 2012 produced a set of "follow-up" goals to the MDGs – now called Sustainable Development Goals (SDGs).

Secondary education and the quality of education feature prominently in these new goals. SDG 4 talks about 'achieving inclusive and quality education for all': namely that all girls and boys complete free primary and secondary schooling by 2030. It also aims to provide equal access to affordable vocational training; to eliminate gender and wealth disparities; and to achieve universal access to a quality higher education.

Education is also seen as a means towards achieving other goals, like gender equity (SDG 5), healthy lives (SDG 3), addressing climate change (SDG 13) and promoting inclusive economic growth (SDG 8).

The sustainable development goals report acknowledges the progress in UPE, especially in enrolment, but also notes that, while Sub-Saharan Africa made the greatest progress in primary school enrolment among all developing regions, “large disparities still remain. Children from the poorest households are up to four times more likely to be out of school than those of the richest households. Disparities between rural and urban areas also remain high” (UNDP, 2018).

In addition to these global reform efforts, a number of regional initiatives – like the Africa Union’s *Agenda 2063: The Africa We Want*, and the *Continental Education Strategy for Africa* (CESA) 2016-2025 – inform curriculum/educational reform efforts. These also inform current debate about educational reform in SSA.

WHAT HAVE WE LEARNT OVER THE LAST 20 YEARS?

Major studies, like the World Bank’s Secondary Education in Africa Initiative of 2003 to 2008 – as well as more recent documents – like the World Bank’s World Development Report on Education (2018), UNESCO’s Global Education Monitoring Report (2017) and the Report of the Education Commission (2016) – have provided rich insights into changes in secondary school education in sub-Saharan Africa in the last decade. These reports, themselves build on an older literature that goes back to the 1960s.

This paper builds on this knowledge base.

We know that enrolment at a primary level has improved significantly. Challenges remain, however, to improving educational quality (at all levels), improving access at a secondary level and improving the transition between schools and work.

To address the quality and relevance questions, many countries has attempted variations of competency and/or outcomes-based educational reforms – with their assessment focus on explicit demonstrations of skills and, at least on paper, a pedagogy that is learner-centred.

Qualifications frameworks are a logical addendum to these changes, as they attempt to provide a benchmark of competencies against which assessment can be conducted. This, it is believed, will enable a formal recognition of the equivalence of learning wherever it happens. The thought is that this equivalence will provide more opportunity for progression and mobility for all students. Structures like qualifications frameworks – that attempt to recognise life-long learning and legitimise the accumulated knowledge of out-of-school youth – are seen by policy makers as a way of promoting re-entry into formal systems of education, as well as mobility in the labour market. As discussed below, however, the literature also notes that there have been significant challenges in implementing these frameworks successfully.

There has also been a renewed emphasis on the importance of assessment. While improved assessment systems do not necessarily improve the efficiency and

effectiveness of schools in preparing young people for the world beyond school, there is a widely held view that the heavy reliance on “facts-oriented” high stakes examinations needs to be reformed. Whether introducing a better balance in continuous assessment conducted by secondary schools, or the use of national benchmarking assessment or cross-national assessments (like TIMSS and PISA), there is a growing call for new thinking about how we gauge or judge young people – in secondary schools in particular. Research suggests that there is a lack of data on how assessment is being used, especially in low income countries; but is also concerned about a ‘misalignment’ between the objectives of the new competence-based approaches and high stakes examinations.

WHAT WILL THIS PAPER ATTEMPT AND NOT ATTEMPT?

Secondary education in Africa (SEA)’s review is designed to update current knowledge about secondary school educational reform in SSA to identify areas of progress; and make policy recommendations for future expansion and improvement. It is not intended to cover all issues related to the provision of relevant, quality secondary education in sub-Saharan Africa. The Mastercard Foundation intended the process to focus “on an area of both great need and opportunity: adequately preparing youth for the future of work – both in a rapidly changing global economy driven by technology and in the informal and agricultural sectors that account for the vast majority of current employment on the continent.”

Specifically, the purpose of this Curriculum Reform, Learning Assessments and Qualification Frameworks background paper is to update knowledge about these three topics with a focus on answering this question:

What kind of secondary school curriculum and associated qualifications frameworks have the potential to better prepare the majority of learners for employment in the formal and informal labour markets and, for those capable and interested, to further their education at the university level?

This has been done by systematically reviewing published and unpublished research on SSA curriculum reform since the World Bank’s 2007 research, concentrating on research published since 2014. In addition, the paper includes two country case studies, where we go a little deeper to unpack the internal architecture of education reform initiatives. These studies suggest areas of progress and provide warnings.

The paper is organised around the key questions provided by MCF:

Curriculum questions

- What kinds of curriculum reform have occurred in SSA since 2007 and why have some countries moved further with curriculum reform than others?
- How successful has the practical implementation of new curricula been? Given the challenges, how can resource-constrained ministries implement curriculum reform on the ground?
- To what extent has new curriculum content promoted 21st century skills (like creativity, critical thinking, cognitive flexibility and emotional intelligence), as

well as employability and entrepreneurial skills – as opposed to memorisation of facts?

- What strategies have worked in getting the most marginalised groups to benefit from secondary education and employment skills to enable them to compete with their more privileged counterparts?

Assessment and National Qualifications Framework questions

- How successful has assessment reform been?
- From available assessment data, what is the current state of learning at the secondary level?
- Have the approaches to curricula reform and NQF implementation promoted learning and the acquisition of skills necessary for employment?
- What is the status of implementation of NQFs across SSA?

To ensure greater inclusivity, and to solicit a range of perspectives, we have chosen to review as broad a spectrum of publications as possible. This has meant that we have included research papers that would, more often than not, be excluded from similar types of reviews. These include graduate students' masters and doctoral theses and research papers published in journals that are not widely recognised. The net effect of widening the pool of sources is that many more researchers from, and working in, institutions on the continent have been referenced or included in the bibliography.

The paper recognises the diversity within education systems in sub-Saharan Africa. Politically, all the countries in the region are in post-colonial epochs, having been previously colonised by European countries for reasons mainly related to imperialism and the need to extract African resources to accelerate development and industrialisation in Europe. Many of the countries on the continent are still fighting absolute poverty and diseases, such as cholera and TB, which have practically been eliminated from the face of the developed world. Reforms should therefore take into account the need to redress, to transform, to compensate, rebuild and decolonise.

Not only do the education systems differ because of the colonial legacies, but because of substantively different levels of economic development and political circumstances in the post-independent period. Some education systems need to respond to the demands of middle-income or rapidly growing economies (Mauritius, South Africa and Ethiopia); others are responding to the demand for the expansion of secondary schooling with very limited financial resources to support this growth (like Malawi and Mali); and; still others are framed by the policy challenges of post-conflict contexts (such as Somalia and Liberia). Given the diversity of contexts, simple recommendations about appropriate policy options would be misleading.

2. Approach and Method

For the purpose of this background paper, the information collection processes involved six linked activities:

- Setting the search parameters and undertaking an electronic search.
- Reviewing the document titles and abstracts; and sifting and excluding non-relevant documents.
- Once the primary and secondary sources were identified, using high frequency citations to identify researchers in the field for follow-up interviews.
- Contacting these researchers by email and Skype to interview and to solicit additional 'grey' literature.
- Finalization of case studies, based on the analysis of these preliminary sources.
- Site visits and case study write-ups

Review primary and secondary sources: Given the unevenness of published studies on curriculum, assessment and national qualifications framework reform in the subcontinent, we relied equally on secondary published, grey source, and primary data collection processes. The latter included reviews of national internet sources and face-to-face, email and telephonic interviews with key informants, both for the case studies and for the background paper more generally. To access the secondary sources, we undertook conventional academic searches using three search engines: EPSCO, Scholar and ERIC. We also searched publications of multilateral and bilateral donors and institutions active in the area of education (UN, UNESCO, The World Bank, The Mastercard Foundation, the AU, The Association for the Development of Education in Africa, UNICEF, USAID, DFID, Education Policy and Data Centre).

Survey of Recent Curricula: The research report reviewed recent curriculum changes in secondary education across SSA, identifying those countries that have reformed their curriculum and the key features of those change; and identifying areas of convergence across curriculum reform efforts and key areas of difference.

The primary sources on which this paper draws are academic electronic resources. The process unfolded as follows:

1. Use of Google Scholar, EBSCO and ERIC.
2. In order to focus on the most current information, emphasis was placed on publications that appeared after 2013.
3. First key words search: "Africa", "secondary education", "curriculum reform", "assessment", "examinations", "continuous assessment", "NQF".
4. Repeat key word search with "*country name*" "secondary education" "curriculum reform" "assessment", "examinations" "continuous assessment" "national qualifications authority" and "NQF" (42 Sub-Saharan country searchers, small islands have been excluded).
5. Review only the first four pages of citations that appeared.

Papers selected for full review were based on the relevance of the title and/or the abstract.

Two case studies were selected for close analysis: South Africa and Ethiopia. South Africa was selected because of its experience of three separate waves of curriculum

reform in the past two decades, the extensive documentation of these curriculum reforms and as one of the first countries in the world to have introduced a national qualifications framework. Ethiopia was selected as it represents one of the fast-developing countries in the region in which secondary education is likely to play a key role. It was also selected because of its recent review of its secondary education curriculum and assessment/examinations.

3. Curriculum Reform

What has characterized the overall secondary school reform climate – as it pertains to curriculum, assessment and qualifications frameworks – in SSA since 2007?

We first outline what we found in the literature on curriculum and then we then explore developments in assessment and qualifications frameworks. Finally, we explore the kinds of trade-offs that are/must be made by policymakers as they consider curriculum and assessment reform.

This paper uses the UNESCO definition of curriculum¹ with its conceptual distinctions between the:

- **“Intended” curriculum:** the "written" and/or "official" curriculum: what a society envisages its citizens should learn and teachers should teach in formal schooling. This is expressed through documents, such as curriculum frameworks, subject curricula/syllabuses, learning material,(such as textbooks), teacher guides and assessment guides.
- **"Implemented" or “experienced” curriculum:** the intended curriculum altered through a range of complex teaching and learning interactions in the classroom. This factors in the chosen pedagogy and quality of teaching (among other factors).
- **"Achieved", or “attained”, or “learned” curriculum:** what learners really learn – often captured through what can be assessed and can be demonstrated as learning outcomes/learner competencies.
- **"Hidden" curriculum:** the unexpected impact of a curriculum, or of a learning process – often expressed in terms of the unintended development of personal values and beliefs of learners, teachers and communities.

Curriculum is, thus, more than simply the government document that outlines the subjects that are taught, it includes how the learning experiences within the subjects contribute to the attainment of the wider educational goals.

¹ From <http://www.unesco.org/new/en/education/themes/strengthening-education-systems/quality-framework/technical-notes/different-meaning-of-curriculum/> on the 29th July 2018.

WHO IS WRITING ABOUT SECONDARY SCHOOL REFORM IN SSA?

The published literature on secondary education curriculum reform in sub-Saharan Africa falls into four broad categories:

General curriculum reform: Africa-wide	General curriculum reform: Country-specific
Subject curriculum reform: Africa-wide	Subject curriculum reform: Country-specific

The largest group of publications is from scholars or groups of scholars writing about curriculum reform in a specific subject or cluster of subjects (e.g. Accounting, Business Studies and Economics).

The second biggest group is publications that address the problem from a continental perspective.

Within these two categories of publications, there are common themes. Many of the publications on secondary school subject reform tend to concentrate on issues and themes in single countries. The publications that take a continental perspective tend to focus on cross-subject system-wide curriculum reform, or “big idea” driven curriculum innovations.

Some issues emerged in the initial scan of the literature. The work of a small number of scholars’ work is frequently cited and has come to define the debates in the field. This is not particularly unusual. A significant minority of the papers appeared in what some academic sources refer to as “predatory journals”.²

WHAT IS THE EXTENT AND NATURE OF CURRICULUM REFORM SINCE 2007?

Cross-subject, system-wide curriculum reforms have been undertaken in countries across the continent in Francophone, Anglophone and Lusophone countries. As Table 1 illustrates, these ambitious curriculum reform initiatives have been a feature of secondary education curriculum reform in sub-Saharan Africa for more than two decades.³

Table 1 Curriculum reform policies in SSA countries

Name	Main Reforms	DATES	Sources
Angola	Outcomes-based Approach	2005	Georgescu, Stabback, Jahn, Ag-Muphtah & de Castro, 2009
Benin	Competency-based Approach		

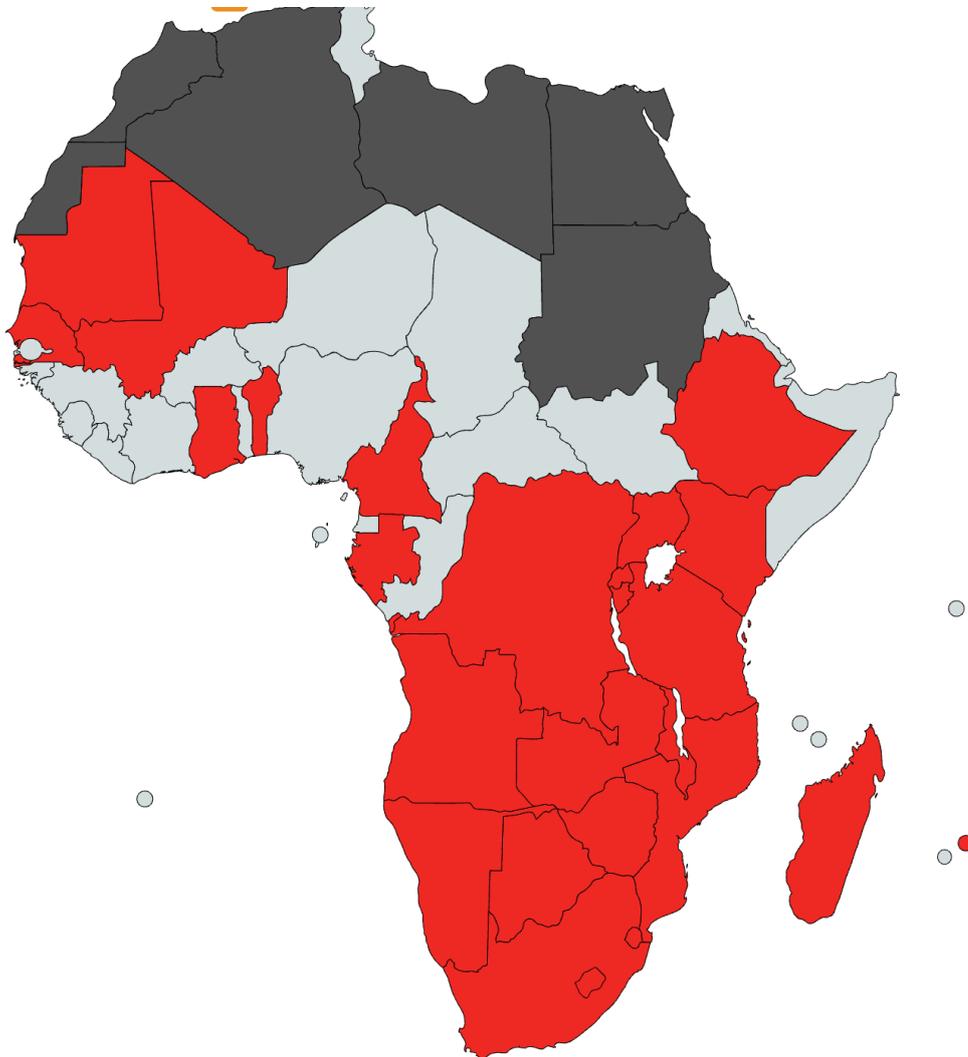
² This is a list of ‘questionable’, scholarly open-access publishers. See <https://beallslist.weebly.com/> for a list of these predatory publishers and journals.

³ The evidence we have gathered cannot really permit any definitive claim about the prevalence. It is also not certain if the frequency of adoption has been picking up recently. More research would be need to determine how curriculum reform in Sub-Saharan Africa compares to other parts of the world and the extent to which “big idea” initiatives have succeeded in systems with great capacity.

Botswana	Revised National Policy in Education	1994	Tabulawa, 2009
Burundi	Objectives-driven Pedagogy	2004	Georgescu, et al., 2009
Cameroon	Competency-based Approach	2012/2013	Esongo, 2017; Gauthier, 2013
DRC	Whole person development	2002	Georgescu, 2009
Ethiopia	Competency-based Approach	2009	
Gabon	Competency-based Approach		Gauthier, 2013
Ghana	Life Skills	2014	Akyeqmpong, 2014
Kenya	Competency-based Approach	2016	
Lesotho	Curriculum and Assessment Policy	2009	Raselimo & Mahao, 2015
Madagascar	Competency-based Approach		
Malawi	New Secondary School Curriculum	2017	
Mali	Competency-based Approach		Gauthier, 2013
Mauritania	Competency-based Approach	2007	
Mauritius	Outcomes-based Approach	2007	Georgescu et al, 2009
Mozambique	Basic Education Curriculum Framework	2003	Georgescu et al, 2009
Namibia	Revised Curriculum for Basic Education	2015	
Nigeria	Trade subjects	2011	Dalberg, 2014
Rwanda	Competence-based, Entrepreneurship education	2015, 2012	Williams, 2018 Honeyman, 2016
Senegal	Competency-based Approach	2005	Georgescu et al, 2009; Gauthier, 2013
South Africa	Outcomes-based education, CAPS	1998, 2011	Jansen, 1998;
Swaziland	Competency-based Approach	2010	Dlamini, B., Bhebhe & Dlamini, P., 2018
Tanzania	Competence-based Curriculum	2005	Komba & Mwandaji, 2005
Uganda	Thematic curriculum, primary school	2006	
Zambia	Vocationalization of Secondary Curriculum	2015	Kakupa, 2017
Zimbabwe	Two Pathway Education Curriculum	2006	Pedzisai, Tsvere & Nkhonde, 2014

Note: It is unlikely that this list is comprehensive for two reasons. First, information on many secondary education curricula is not necessarily publically available for all countries and scholarship about these reforms tended to be selective. Second, in some instances, countries may have more than one reform process in the past two decades.

Figure 1: Education Systems in sub-Saharan Africa that have introduced curriculum reforms in the past two decades



Note: As in Table 1, this map is not comprehensive for two reasons. First, information on many secondary education curricula is not necessarily publicly available for all countries and scholarship on these reforms tended to be selective. Second, in some instances, countries may have had more than one reform process in the past two decades. Thanks for Mastercard Foundation for assistance with this graphic. Countries in red are those with information on recent curriculum reforms.

While there is some diversity of the “big ideas” that characterise these initiatives, there is an overriding philosophical shift occurring: from curriculum focused on “knowing” to curriculum focused on “doing”. The “doing” or “skills” focused curriculum includes a diverse range of innovations. From the 1990s, the focus was on outcomes-based education, competency or competence-based approaches. With a long history – traced by Allais (2014) to the early 20th century – these approaches, which have re-emerged over time, all have the premise that curricula can be designed backwards from statements of what it is that learners should be able to do by the end of an education

process. In the 1990s, outcomes-based education was the dominant approach to reform curricula in Australia and New Zealand, from where it spread to African countries, as will be discussed further below.

Most recently, 21st Century skills approaches have been a new focus of “big idea” curriculum. While there are many different frameworks used to define the approach, the International Bureau of Education (adapted from Lai & Viering 2012) conceptualises it as follows:

An overarching concept for the knowledge, skills and attitudes citizens need to be able to fully participate in and contribute to the knowledge society. This need is mostly attributed to the changes in society, and more particularly, to the rapid development of technology and its impact on the way people live, work and learn. While in the industrial society the main focus of education was to contribute to the development of factual and procedural knowledge, in the information or knowledge society the development of conceptual and metacognitive knowledge is increasingly considered important. Furthermore, the changes in economy and the labour market caused by globalization and internationalization are an important driving force for the need of 21st century skills. Different organizations, including also partnerships and consortia, have defined and endorsed core competences/skills frameworks using different foci, emphases, groupings and terminologies. Most frameworks seem to converge on a common set of 21st century skills or competences, namely: collaboration; communication; Information and Communication Technology (ICT) literacy; and social and/or cultural competencies (including citizenship). Most frameworks also mention creativity, critical thinking, and problem solving. Across the various frameworks it is acknowledged that ICT is at the core of 21st century skills. Specifically, it is regarded as both (a) an argument for the need of 21st century skills, and (b) a tool that can support the acquisition and assessment of these skills. In addition, the rapid development of ICT requires a whole new set of competences related to ICT and technological literacy.

The core of the IBE approach to 21st Century skills is a set of skills, including: collaboration, communication, ICT literacy, social/cultural competency, creativity, critical thinking and problem solving.⁴

Other “big idea” conceptual shifts are curriculum reforms associated with the introduction and/or expansion of vocational and technical education; and the

⁴ Although most advocates of 21st Century skills tend to see them not as new secondary school subjects, but as skills to be incorporated into existing academic subjects, a number of critical problems with their introduction have emerged. There is little real consensus about which of a long list of skills should become core and there is also little consensus around that exactly the individual skills (e.g. critical thinking skills) consists of. From a curriculum planning perspective, considerable research and development is still need to establish what 21st century content skill to be taught at what level, and appropriate sequencing and pacing of topics or themes integrated into existing curriculum subjects. There remain serious questions about how to assess these skills, particularly new ‘soft’ skills like emotional intelligence and working collaboratively. Finally, the challenge of retraining teachers to teach skills that they themselves are often not skilled at. These are just some of the issues that Tedesco (2014) raised in considering 21st Century skills specifically in the context of the European Union.

institutionalisation of national qualifications frameworks. These are addressed later in this paper.

Amadio, Opertti & Tedesco (2015) identified the emergence of the “big idea” approaches to curriculum reform with the fundamental shift that has taken place in the field of curriculum as it has changed from the narrow domain of technical curriculum specialists to an object of wider debate, in which various stakeholders compete to use the curriculum policy space to attempt to achieve a variety of social, economic and political ends. This shift is illustrated in two major national policies that have been widely documented: South Africa’s various post-apartheid secondary school curriculum reforms and Kenya’s current moves towards a new curriculum. Although separated by more than twenty years, South Africa’s foray into outcomes-based education (OBE) in 1995 and Kenya’s 2016 *Basic Education Curriculum Framework – a Competence-Based Curriculum* are both “big idea” curriculum reform initiatives designed to “reset” national educational policy in two of Africa’s largest economies. The political impetus was very different in the two countries. In South Africa, a government in a newly liberated state wanted to remove the vestiges of an apartheid era curriculum that was regarded as authoritarian in both content and pedagogy and that served a small percentage of the population. In Kenya, curriculum reform is driven by an established state in a growing economy wanting to improve the quality and effectiveness of its workforce. The curriculum reform initiatives, however, look very similar.

The Kenya Institute of Curriculum Development indicates the new curriculum will provide every citizen with an education associated with “world class standards in the skills and knowledge . . . which they need in order to thrive in the 21st century” and this would be achieved through “a competency-based curriculum ... that emphasises what learners are expected to do rather than mainly focusing on what they are expected to know” (UNESCO 2017, page x).

Both curriculum reform initiatives speak of the need to move from a teacher-centred, to learner-centred, pedagogy; and to focus learning on acquiring and applying what they learn “to solve situations they encounter in everyday life” (UNESCO 2017, page x).

Required learning in both is spelled out as outcomes or “competencies”, such as “[t]he abilities to communicate and collaborate; demonstrate self-efficacy; think critically and problem solve; be creative and imaginative; be a good citizen; be digitally literate; and demonstrate an ability to learn to learn” (UNESCO 2017, page x).

Policy documents in both countries recognise the centrality of teachers to the success of the curriculum reform effort. Kenyan planners, for example, speak of the need to develop “highly knowledgeable, reflective, professional teachers that have additional enhanced skills and confidence in a range of modern pedagogical tools such as coaching, facilitating, and mentoring” (UNESCO 2017, page x).

The new curriculum is therefore accompanied by a drive to professionalise teachers work, as it would require them to be “flexible in adapting this new curriculum to meet the needs, talents and interests of every child, constantly diagnosing the learner’s needs and collaborating with other stakeholders that influence the child such as parents, other professionals and the local and wider community.” (p. xx)

Alongside a fundamental re-orientation of the intentions of schooling, the Kenya reform initiative also restructures the organization of schooling, a more ambitious task than that undertaken by South Africa. Of salience to secondary school reform is that secondary school would be increased from four to six years in length, with the last three providing three distinct pathways or streams: Arts and Sports; Social Sciences; and Science, Technology, Engineering and Mathematics (STEM). A public examination at the end of the first three years (Grade 9) would form the basis for students selecting their senior secondary pathway.

As was the case in South Africa, Kenya’s competency-based curriculum is strongly influenced by policy experts in Canada, Malaysia and New Zealand (and other Global North countries). It makes no reference to South Africa’s troubled attempt to transform its curriculum through this approach. Chisholm (2007) discusses how South African consultants exported outcomes-based education to other African countries at the very moment it was in crisis in South Africa.

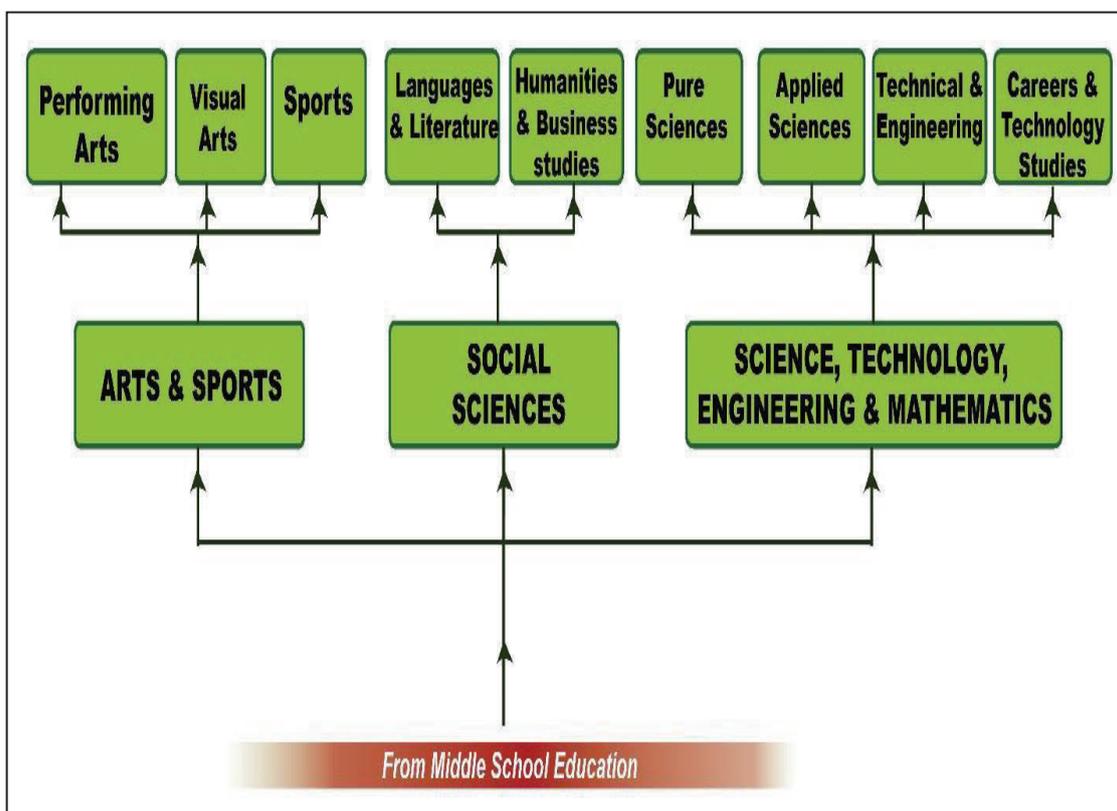


Figure 2 Pathways in Kenya’s Secondary School Curriculum

Source: UNESCO, 2017

Sources of the “big idea”

How can we account for the convergence of approaches despite the heterogeneity within sub-Saharan Africa’s education systems? And why the trend towards big, ambitious curriculum reform initiatives?

While there appear to be some indigenous early adopters, the evidence suggests that the key diffusers of “big idea” in curriculum reform in Africa are international development agencies. Their influence comes through both the consultants they hire to facilitate curriculum planning and through the financial assistance that is provided.

This is particularly well documented in the diffusion of the curriculum competency approach. Anderson-Levitt’s 2017 study shows how competency-based approaches ‘flow’ and get taken up by various countries in sub-Saharan Africa. Allais (2014) demonstrates the role of international organizations in the adoption of learning outcomes, competency-based training and national qualifications frameworks in developing countries, including in Africa. Fichtner (2015) tracks the ‘flow’ in Francophone Africa and suggests it is strongly influenced by International Organization of la Francophonie (OIF), UNICEF and UNESCO. In 1996, competency-based approaches were presented at the Conference of Education Ministers of French-speaking countries (Confemen) as a reform package that would address the Education for All imperative. Following that conference, 23 Francophone countries, many on the African continent, initiated competency-based curriculum reforms.

Other international agencies, both national and international (including the World Bank, see Cuadra & Moreno, 2005), provided intellectual guidance and technical support for the reforms. As mentioned above, Chisholm (2007) traces the role of South African consultants in the spread of outcomes-based education and national qualifications frameworks in sub-Saharan Africa.

The diffusion of “the big idea” was not a neutral process of “travelling reforms” (Steiner-Khamsi & Waldow, 2012), but clearly a process directly from outside, notwithstanding the receptiveness of local policy-makers to these reform ideas. Allais (2014) argues that the receptiveness of policy makers is partly the result of international organizations and funding, but is also linked to the way policies are presented as “magic bullets”, as well as the fact that they appear to be reforms that are easier for the state to implement, because they give the state a primarily regulatory role.

One of the key features of this diffusion was that, more often than not, it was a process of learning from “successful reforms” in advanced education systems, rather than learning from “failed” experiences of reforms in countries on the African continent.

Chisholm and Leyendecker’s 2008 paper on secondary education curriculum reform on the African continent notes that there was, initially, enthusiastic take-up of these ideas and they argue this was due to the fact that, while considerably different, approaches as philosophically diverse as learner-centre pedagogy and outcomes-based education were adopted because the ideas behind the reforms resonated with both local needs and political imperatives. They also note that the reform ideas were often not entirely new.

HOW SUCCESSFUL HAVE THE CURRICULUM REFORM INITIATIVES BEEN?

How have these ambitious curriculum reforms initiatives fared in sub-Saharan Africa? Have any countries registered more success than others? What might the reasons be for success?

While there have been few rigorously designed evaluations of system-wide competency-based curriculum reforms, the accumulation of evidence from a variety of sources suggests that many of these initiatives have been less than successful. While the likely reasons for the lack of success are many and varied, writings can be categorised into those related to pragmatic (often implementation) challenges and those that argue that the idea of competence-based educational reform is conceptually flawed. We will address both.

Gauthier, a leading international expert in education systems in Francophone Africa, completed a 2013 review of competency-based curriculum reforms in five countries. Although tempered in his assessment, Gauthier makes it clear that “competency-based approach” to curriculum reform did not improve student learning outcomes. His findings fit the pattern. Lassnigg (2015), among many, argues that there is little empirical evidence that these types of curriculum reform have improved the effectiveness of education systems anywhere.

Chisholm and Leyendecker (2008) argue that, after the initial optimism faded, many education system managers began to recognize the chasm between the curriculum *ideal* and the implementation *reality*. Since Chisholm and Leyendecker’s paper, a considerable body of research has emerged on the ‘execution’ failure of competency-based curriculum reform in West African countries (Benin, Cameroon, Gabon, Mali and Senegal) and in Central and East Africa (Rwanda and Tanzania) from writers like Gauthier (2013), Yessoufou (2014), Nsengimana, Ozawa & Chikamori (2014), Komba & Mwandaji (2015), and Esongo (2017) and Nkamta (2017).

Many, like Esongo, who studied the implementation of competency-based teaching approaches in Cameroon, suggest that the failure is linked to under-resourcing. Others, like Komba (who researched teachers’ practices in Tanzania), fingered the disconnect between the pedagogy of secondary school teachers and the desired qualities of competency-based lesson plans (in particular, more student involvement in learning). Nsengimana et al.’s 2014 study of the level of implementation of the outcomes-based education in the lower secondary science curriculum in Rwanda adds to our understanding of implementation failure. Studying enactment in a diverse set of Rwandan schools, they found that, with the exception of three lessons out of total of 20 observed, most showed no take-up of the learner-centred outcomes approach. They found that the weak implementation was caused by the lack of appropriate resources, limited English proficiency and low teacher morale. This research showed that teachers retreated into the safety of traditional teaching, despite the requirements of the new curriculum. It does suggest that younger, more recently trained teachers were more open to new curricula and new approaches to teaching.

Research on competency-based secondary school reform in Benin (Yessoufou, 2014) examined local actors’ responses to this particular curriculum reform idea and showed that, while there was a spectrum of local responses, the initial optimism did not match the disappointing policy outcomes.

The most intensely studied case of curriculum reform implementation failure is the experience of outcomes-based education curriculum reform in South Africa in the late

1990s and early 2000s (Jansen, 1998; Chisholm, 2007; Harley, 2000; Shalem, 2010; Allais, 2010).

With few exceptions, government-based and independent academic researchers are unanimous that this curriculum reform initiative was a failure. Some writers argue that the problem was largely an implementation (pragmatic) failure, while others argue that, while this is true, the root of the failure was conceptual.

The findings on implementation failure are not new to, or exclusively associated with competency-based approaches.

Okoth's 2016 Kenyan study of the implementation of an earlier generation integrated English language curriculum designed to draw together knowledge, skills, attitudes and values from within and across a curriculum to develop more powerful understanding was largely unrealised.

Again, the main barriers to successful implementation were a mix of inadequate resourcing (especially in the provision of educational materials) and teacher competence (in particular a lack of relevant continuous professional development and the high workload junior secondary teachers). Other factors that contributed to the failure of a new curriculum were the large class sizes in the junior secondary schools and the students' low levels of proficiency in English, the language of instruction.

Okoth's study points an additional reason for the failure of curriculum reform: the misalignment between the new curriculum innovation and the demands of an older generation of high stakes public examinations.

This misalignment is especially acute in systems transitioning from a knowledge-centred to competence-centred curriculum. Schweisfurth (2011), in a comprehensive review of an earlier generation of "big idea" education reform, learner-centred education (LCE), found a similar set of reasons: limitations in human and materials resource, mismatch between the culture assumed in the reforms and local school cultures and the problem of power and agency in the change process.

Researchers who focusing in on specific aspects of curriculum reform rather than wide-angle systemic reviews, tend to find similar reasons for the lack of success of curriculum reform initiatives – under-resourcing, teacher skills (and supports); and a misalignment both between curriculum goals and teacher pedagogy - and between pedagogy and assessment systems.

Brown et al (2015) reviewed transferable skills training programmes for youth in low and middle-income countries. They found evidence-based studies of effective transferable skills in the health-related spaces, but no evidence of effective vocational, technical or 21st Century skills courses, curriculum or programmes.

Akyeampong's 2014 study of the introduction of Life Skills as a subject in the secondary education curriculum in Ghana shows that, without increased educational resourcing, teacher development and reforming the examination system, the introduction of Life Skills (or 21st Century skills) curriculum is unlikely to have much impact on students and their transition to the labour market. His paper contributes to an important debate in Africa and elsewhere about whether secondary school curricula should focus on

narrow vocational and technical subjects or a broader notion of Life Skills (now closely associated with '21st Century Skills') in an effort to make the secondary school curriculum more relevant to the world of work and post-school living. He shows that, without transforming preservice and continuous professional development, dramatically transforming the educational resources available in classrooms and transforming the examination system, it is unlikely that any of the new generation of the "big idea" curriculum will be workable in secondary schools.

Oketch (2014) explores the question Akyeampong (2014) raises in a comparative study (Botswana, Ghana, and Kenya) on innovations in technical and vocational curriculum within the secondary school sector. He is sympathetic to the Botswana case, which assumes that 'training' should happen only after schooling and argues that secondary education should focus on pre-vocational cognitive development through conventional school subjects combined with some theoretically oriented work-related subjects (e.g. Commerce, Design and Technology) in the senior secondary. Botswana's policy-makers, he suggests, recognised that training in vocational and technical subjects at schools was seldom taught at the level required by employers. Oketch (2014) contrasts this model with earlier generations of vocational reforms in Kenya and Ghana, which attempted to integrate vocational training into secondary education, assuming that that this curriculum innovation would address the problem of youth unemployment. (Ghana and Kenya planned to integrate vocational skills in the junior secondary school curriculum and build a strong parallel vocational track within the schooling sector). In both cases, the vocational skills taught in the lower secondary and the actual vocational track proved to be unpopular and the vocational skills that were taught were widely regarded as not being relevant to the workplace. This echoes the classic 'vocational fallacy' study of Forster (1965a, 1965b; see also Lauglo 2010), in which he argues that establishing vocational subjects in secondary school curricula is complicated and demanding, and that mainstream schools are not well suited to this task. Lauglo (2010) points out that vocational education is also expensive. Further, Forster pointed out, and this is echoed in a later study by Nherera (2010), that vocational subjects are not attractive to students because they have weak labour market outcomes, and that general education subjects are more popular because of a realistic assessment that students make of labour market practices. Forster also pointed out that curriculum change was not effective in changing students' perceptions and desired labour market outcomes. His argument that schools should strengthen teaching of basic knowledge and skills seems pertinent today.

Pedzisai et al's 2014 survey of a 2006 secondary school curriculum reform in Zimbabwe – which adopted a two-pathway system to offer a skills pathway to include both business/commercial subject combination and a second Subject combination around technical/vocational subjects - provided five reasons for the weak uptake of the technical/vocational curriculum pathway:

- inadequate materials and finance resources
- lack of skilled teachers
- congested timetables (because of the requirements to technical and vocational subjects)

- lack of information
- absence of a uniform system of tracking students

Kakupa (2017) also studied the feasibility of implementing a German style multiple pathways within the Zambian secondary school curriculum and found, again, that it was unlikely to work because of resource constraints. The suggestion of a dual pathway was motivated by a concern that the secondary school system produced students with white-collar aspirations and few young people with the skills need for the actual world of work. A dual pathway would allow large numbers of students early in their school careers to focus on technical and vocational training. Students who were pushed out by examinations would be offered an alternative schooling route that focused on skills for the workplace. But Kakupa (2017) found that the dual pathway was never going to be financially feasible for Zambia, given that the unit costs for these vocational and technical students would likely be substantially higher than for academic students. Substantial new funding was also unlikely to be made available during a period of declining public expenditure on education.

In 2011, Nigeria introduced 34 trade subjects as part of the senior secondary education curriculum. The intention was to make these subjects part of the official curriculum to form a bridge between school and work in the context of high youth unemployment. Within the new curriculum, students can specialise in four subject clusters, i.e. science and mathematics, business studies, humanities and technology. Irrespective of which subject cluster and specific subjects within these subjects is chosen, though, all students are required to take one of the trade subjects

Dalberg's 2014 paper identifies some familiar challenges with this curriculum innovation – challenges that the Botswana example tried to avoid:

- A disconnect between the trade subjects taught and the needs of the labour market. A school's selected trade subjects were based on available teachers and resources, rather than market-driven considerations.
- A lack of curriculum resources. Lesson plans or teachers' guides had not been developed for these subjects.
- A lack of teachers. There is a limited supply of teachers with the skills and knowledge to teach the subjects.
- A lack of resources. Schools had limited infrastructure and resources to teach these applied subjects. Iyabo (2014), Okoye and Udoudo (2015) and Adeyonu and Carim-Sanni (2015) have also written about the failures of this initiative.

Some writers argue that, while governments are intrigued by "big idea" reform – for a range of reasons – they and bureaucrats 'pull back' from fully implementing the changes.

Raselimo and Mahao (2015) analysed Lesotho's Curriculum and Assessment Policy 2009, which intended to transform education in Lesotho from its subject and examination-orientation to a new dispensation organised around practical life challenges. Yet they found that with the way in which teaching was still organised - subjects within specific learning areas – the new dispensation was "likely to perpetuate a fragmented disciplinary approach denying teachers the real opportunity to draw

content from different learning areas and life experiences of learners.” (p 10). Secondary school teachers struggled to develop lessons that did not follow the conventional subject syllabus logic and integrated content from different subjects or academic disciplines in learning tasks that they set for students.

They suggest that the failure to adopt the integrated curriculum was as much a function of the limitation of resources and other contextual issues as the internal contradiction of the reform curriculum itself. In their view, the reforms pulled back from fully fledged efforts at an integrated curriculum.

Tabulawa’s 2009 analysis of the Revised National Policy on Education (RNPE) in Botswana - curriculum reform two decades earlier aimed at producing “the self-programmed learner” – showed a similar ‘pull back’. Botswana’s reform promised to create a post-Fordist integrated curriculum. However, Tabulawa’s research shows that policy makers and senior public sector managers’ actions ensured that only a ‘minimalist’ version of integration was adopted as policy. The basic subject-based curriculum arrangements were left more or less unchanged.

Curriculum Reform in South Africa

The case of South Africa’s “big idea” curriculum reform provides insights, not only into the problem of implementation failure, but some of the conceptual limitations of outcomes and competency-based curriculum approaches. In the late 1990s, the South African Department of Education adopted an outcomes-based curriculum approach across the entire education system. Within the secondary school sector, teachers were given list of learning outcome statements, such as “learners must learn to make and negotiate meaning”. They were given the responsibility to design curricula by selecting appropriate content to realise the learning outcome. Rather than providing specific content-dependent support materials, teachers were encouraged to source their own materials and select from a wide range of publisher products. The curriculum framework assumed the learning outcomes could be achieved in different ways in various sites of learning and learning outcomes could be aggregated together to form qualifications. A key idea in the outcomes-based system was that learning outcomes could be separated from the content or subject matter that was used to achieve them. The other key idea related to the transparency and portability of qualifications composed of outcomes. Allais (2012) observed “The idea here is that national regulatory bodies will be able to measure programmes against outcomes, and employers and educational institutions, whether at home or in other countries, will then have a good sense of what it is that the bearer of a qualification is competent to do” (p. 333). The initial challenges to South Africa’s curriculum reform surfaced around the practical problem of insufficient resources, poor initial orientation to the new approach and overly complicated terminology. Within a few years of implementation deeper problems with the approach began to surface. The outcomes-based approach paid insufficient attention to the sequencing, progression and coherence of subject content. Other critics pointed out that most teachers, even with adequate training on the new reform curriculum, were ill-equipped for their required roles as curriculum developers. Allais (2012) argues that the strong motivation for an outcomes-based approach – that it

would enhance the relationship between schooling and the world of work – proved to be unfounded. It was assumed that an outcomes-based approach would enhance workplace mobility because the outcomes could be identified and linked to qualifications and, in turn, linked to workplace needs. The problem, as Allais identifies, in South Africa is that the learning outcomes (like learning competencies) are open to different interpretations: “Learning outcomes did not facilitate judgements about the nature and quality of an education programme.” (p. 337). A curriculum approach that focused on preparing young people with the skills required in the world beyond school could only work if the skills that had been acquired could be consistently assessed: in other words, the outcomes or the skills that became the core element of the new curriculum were sufficiently transparent to be of value in the workplace. The conundrum is that, if they are to be transparent, they need to be tightly specified, but in doing so they are reduced to narrow technical tasks - something that is antithetical to the wider claims that were to be made for this new kind of learning. Beyond the South African case, sociologists of education are increasingly questioning the assumption that national curricula should be shifting from what students “know” to what students’ “can do”. This is a direct challenge to the logic of outcome-based education, competency-based approaches, integrated curricula, and some types of curriculum reform centred around 20th Century skills.

Building the argument around the notion of “powerful knowledge”, (Young, 2007, 2013, 2014, 2015, Allais, 2014, Shalem & Muller, 2018) have re-articulated the centrality of knowledge in the school curriculum in general, but particularly in the secondary education curriculum. In its simplest form, their argument is that the primary purpose of schooling is to provide students with an opportunity to acquire specialist knowledge - knowledge that they cannot acquire at home, in their communities or even in the workplace. The obvious examples are the specialist knowledge associated with school subjects like Mathematics, Physics, Chemistry, History and Accounting. This is what they refer to as powerful knowledge: it is the kind of specialist knowledge that provides “reliable” explanations and opens students to new ways of thinking about the world, not just acting in the world. In the view of these researchers, it is precisely to acquire this specialised and high-status knowledge that parents make huge sacrifices to get their children into schools and to keep them there. The focus of the curriculum should correctly be on specialist or disciplinary knowledge. From a social justice perspective, the question is how to ensure epistemological access to this high status powerful knowledge, rather than attempting to teach a watered-down secondary education curriculum that prioritises vocational skills, or even higher order 21st Century skills. From the perspective of curriculum reform, the real challenge is to improve the design of the curriculum so that it better reflects the internal logic of the discipline or subject.

What does the literature say about the role of district managers and other government officials in the reform process? Cunningham (2018) research identified a number of reasons why “big ideas” were seldom realised in practice. He argues that competence/outcomes-based reforms (with more focus on learner-centred teaching) requires increased teacher capacities as well as institutional capacities, yet reforms seldom integrate any planning or budgeting towards increasing these capacities. Aside from developing capacity to implement, teachers seldom lead or are even meaningfully

included in curriculum reform endeavours. In addition, he suggests that the lack of real involvement by internal experts – like departments of educational planning – means that the inherent implementation tensions between different internal agencies – curriculum, teacher training, publishers, etc. – cannot be managed adequately, thus undermining a more systemic approach.

Guthrie (2017), while not specifically addressing secondary education curriculum reform, makes the case against “progressivism” and the whole host of allied ideas - including child-centred education and competency-based approaches. Drawing on empirical studies and four decades of field work in resource-constrained systems, he argued that there is no evidence that “progressivism” works and that the standard response, that they have not been tried with sufficient resources or given enough time, is simply inadequate.

Glewwe’s 2009 study on the relationship between textbooks and test scores in Kenya - one of the most frequently cited studies on secondary education reform in Africa – provides an interesting insight into who benefits from curriculum reform. He found that providing key resources, such as textbooks, only improved the scores of the top students and had little effect the majority of secondary school students. Glewwe and colleagues suggest the reason is that textbooks are proxy for the curriculum, and the secondary school curriculum was ultimately pitched towards the strong academic students and not the average or weak students. This study provides a window onto the secondary school curriculum - a policy tool designed for a small elite set of students, but one that had grown dramatically yet continues to provide few real opportunities for academically average learners. Without a parallel pathway for weaker students, the curriculum, pushes out the majority of students with an incomplete academic education. This insight reinforced an observation of 2018 World Bank report on curriculum reform. As Leyendecker et al (2008) noted “[s]hortcomings at one level of education are often extended into the next level, as evidenced by the monitoring of learning in Botswana where achievement in numeracy and second language is low and carried over to the

Curriculum reforms first and foremost should focus on improving the current teaching and learning processes. As a systemic challenge, these changes need to include re-orientation from secondary education as pre-academic tertiary education to a wider range of options, including vocational education and the world of work.

Curriculum reforms in Sub-Saharan Africa (SSA) require comprehensive approaches directed at the complexity of the educational system at large. It requires the acknowledgement of past obstacles and current challenges to reform, as well as the challenges additionally created by the reforms. Human and physical resources, perceptions, experiences with past reforms and current school and classroom practices determine the limits of what educational systems can absorb in terms of development. Many high political ambitions have implications that are beyond current context and conditions. It therefore makes sense to have realistic ambitions and scope of curriculum reform, because these may increase the potential for successful implementation. Sometimes, less could actually be more”. Leyendecker et al (2008) p. xix.

secondary level. It is observed that “spiral buildup of learning matter” in actual fact often means repeating the subject content from lower grades.” (p. xii).

ADDRESSING THE CHALLENGES

Given the challenges encountered with “big idea” reform, what are the alternatives?

Leyendecker et al (2008) and Chisholm and Leyendecker (2008) articulate an alternative approach to secondary education curriculum reform in sub-Saharan Africa. In a widely cited World Bank report, Leyendecker and colleagues address a full range of issues-associated with secondary education curriculum reform, including: the length of secondary school cycle; the relationship with the TVET system and the mainstream system; language of instruction; and subjects and learning areas in both the lower and senior secondary.⁵

They make three key points about curriculum reform:

- First, the “big idea” curriculum reforms often involve too large a leap between the intended and the attained curriculum; and that plans often do not recognise the time, resources and technical expertise required for successful curriculum reform.
- Second, they suggest that there is often a lack of clarity on the intention of curriculum reforms.
- Third, most countries lack the necessary professional development infrastructure for secondary curriculum reform.

Given these constraints, they make the case that “sometimes less could actually be more”.

They suggest that curriculum reform initiatives should be “based on the realities on the ground” rather than be driven by “political ambitions”. In addition, they argue for a renewed focus on the practical dimensions of systems change, like improving the “coordination of development efforts with a focus on curriculum”, increasing efficiency, clearly defining institutional responsibilities, and “building better cooperation and communication within and across existing institutions and departments.”

Similarly, Fredriksen and Fossberg (2014) explore why so many secondary education curriculum reform initiatives fail or under-perform. Political leaders often observe the correlation between high secondary school enrolment and rapid economic growth - and incorrectly causally attribute the latter to the former. Without the requisite financial capacity, though, rapid expansion of secondary schooling leads to insufficient

⁵ They use the important distinction between the ‘operational’ and ‘attained’ curriculum, arguing that the latter seldom resembles the former - as it should do - because of implementation challenges. (The operational curriculum focuses on actual teaching, the second assessment and the extent to which learners learn the official curriculum. On the operational, they deal with instructional practices, physical resources, time for teaching, class size and teacher support materials. Under attained curriculum, they explore assessment practices.

infrastructure, large classes, shortages of educational materials (such as textbooks) and the hiring of un-, and underqualified, teachers. Rapid expansion is often associated with the widening of the gap between the intended (official) curriculum and the attained curriculum (learning outcomes).

To narrow this gap, Fredriksen and Fossberg (2014) recommend a number of policy options with curriculum implications. First, they recommend the merger of primary and junior secondary education to form a new basic education phase. This nine-year school cycle would be oriented towards both preparing students academically for senior secondary education on the one hand, and the needs of the labour market (and informal livelihoods) on the other. In their words:

Making lower secondary education an integral part of basic education with a common curriculum for all will help give all children an equal chance of consolidating foundational skills and thus help avoid present situation where a large share of each youth cohort enters the labour market without such skills. (p. 246).

Building on a stronger common lower secondary, they argue for a diversified senior secondary curriculum that would include general, technical, and vocational options. Within the senior secondary, they recognise the need for fundamental reform because TVET in and out of secondary schools is often inappropriate and more often than not seen as dead-end, second-rate and only for those that cannot access the academic senior secondary stream/track.

They have four suggestions for reforming TVET secondary education curricula:

- Make sure students get a solid basic education, particularly in literacy and mathematics in the basic phase.
- Develop cooperation between employers and trainers/teacher for post-basic programme development.
- Ensure that the programmes are not 'dead-end' options.
- Guarantee that there is sustainable funding for the TVET curriculum programmes.

In addition to the ideas emerging from these two studies, additional themes have surfaced under the broad umbrella of pragmatic approaches to curriculum reform. For example, Altinyelken (2015) case study of curriculum reform in Uganda points to the need to update (and decolonise specific content), rather than across-the-board curriculum reform, and the need to pay close attention to the problem of overloading the curriculum.

Altinyelken (2015) make six useful points about curriculum reform:

- Countries should abandon efforts to adopt universalistic/blue print curriculum reform.
- Curriculum reform must, instead, take contextual factors and demands seriously.
- Teachers need to be involved in curriculum development and implementation.

- Curriculum development is a complex and slow process; there are no quick-fixes.
- Curriculum reform initiatives should take more seriously the idea of policy alignment. It needs to be accompanied by re-alignments in all aspects of instructional infrastructure, i.e. teacher development, educational materials, assessment, etc.
- Finally, it is critical to provide sufficient resources to do the implementation properly.

Glegg, Bregman and Ottevanger's (2012) curriculum 'roadmap' provides a clear rationale for a "less is more" reform approach and outlines the structures and processes that need to be in place for reform to be sustainable. They also call for the development of extensive internal government capacity, including structures for stakeholder consultation for curriculum reform to be successful and sustainable.

The insights about the problem with large-scale or "big idea" curriculum reform in Sub-Saharan Africa that Leyendecker et al (2008) reached in 2008 remain relevant ten years later. They found that the intended changes were often too ambitious to be achieved in the short-term and led to disillusionment with the project of educational reform; and that systems lacked capacity and resources required by ambitious reform initiatives. More often than not, curriculum reforms did not involve sufficient time for, and the right mix of, technical expertise - both in the initial analysis of the curriculum challenges and the design of the new curriculum. Above all, though, the central problem was the lack of clarity of the intention of the curriculum reform, with unrealistic expectations that curriculum reform could substantially contribute to solving non-educational problems, such as high levels of youth unemployment.

SUBJECT CURRICULUM REFORM

While the most frequently cited sources on curriculum reform in Africa focus on system-wide curriculum reform, a significant number of researchers, and networks of researchers, are writing about various aspects of secondary subject-specific reform writing about subject specific curriculum reform. Some of these scholars have become influential voices (such as Richard Tabulawa from the University of Botswana), or part of influential networks (such the Southern African Association for Research in Mathematics, Science and Technology Education SAARMSTE), but many are not well known - either inside or outside the continent.

What does this scholarship tell us about secondary education reform on the continent? There is a small and widely dispersed grouping of researchers, many of whom work with colleagues outside the continent, who are undertaking research with a narrower focus - mainly on reforms within traditional academic subjects like Science, Mathematics, Geography, and History - with a smaller number exploring more applied subjects, such as life-orientation, accounting, agricultural science and entrepreneurship.

These scholars are connected to various debates about subject specific curriculum. Like researchers involved in "big idea" curriculum reform research, many are also exploring questions about curriculum relevance. In general, this group of scholars assume that

existing subjects should remain, but the emphasis may widen - for example incorporating environmental science topics into Geography, or including indigenous knowledge into a range of existing topics, or even shifting subject's epistemological orientation. These scholars both on curriculum and on the quality of teaching of secondary school subjects, highlighting inadequate teacher preparation, lack of continuous professional development or absence of resources for the subject teaching.

Table 2 Publications on country and subject-specific secondary education curriculum

Country	Subjects
Botswana	Geography and Environmental Science
Botswana	Commercial Subjects - Personal Financial Literacy
Ethiopia	Mathematics
Kenya	English
Lesotho	Sexuality Education (Life Skills)
Lesotho	Geography
Nigeria	Science
Rwanda	History
Rwanda	Science
Rwanda	Entrepreneurship
South Africa	Agricultural Science
South Africa	Accounting
South Africa	Geography
South Africa	History
South Africa	Life Orientation
Swaziland	Science
Uganda	Mathematics

Brown's (2016) study of science education in Nigeria argues, for instance, that general science in lower secondary curriculum tends to be little more than a set of topics from biology, with little chemistry of substance and almost no physics. She recommends fundamental rethinking of the science curriculum in the lower secondary.

Chauke's and Kabiti (2017) survey of Limpopo (South African) teachers' perspectives on the agricultural science curriculum reveals that, not only the teacher cohort is older, but

likely to remain in schools for the next few decades; and that these teachers overall preferred the pre-1994 technical syllabus to the newer Curriculum 2005 and CAPS versions. Chauke observed that most of agriculture science teachers were never trained to teach the field and few have any practical experience in the either small scale commercial agriculture, or corporate farming. Moreover, few secondary schools that offer agricultural science have the basic infrastructure to teach it as an applied subject.

The finding in Clausen-May and Baale's (2014) study of the introduction of new approaches to mathematics problems solving associated with the new Ugandan national curriculum showed uneven uptake by both students and teachers. On topics that are new and unfamiliar, teachers were willing to use new approaches, including group work. With conventional topics, such as subtraction, though, students and teachers preferred older techniques, justifying their choice with reference to the demand to cover the curriculum.

Gasanabo, Mutanguha and Mpayimana's (2016) research focuses on the incorporation of the theme of genocide into the Rwandan secondary school curriculum. With the introduction of the competency-based approach, the focus on Rwanda's genocide, and genocide more broadly, became a cross-cutting issue, not just confined to history as a subject. The point from Gasando's research is the extent to which historically specific circumstances come to be infused into secondary education curriculum reform.

Khau's (2016) paper on the changing pattern of the sexuality education in the Lesotho national curriculum illustrates how local challenges come to set the agenda for curriculum reform research in the secondary education sector. In Forms A to C, the Lesotho national curriculum contains aspects of sexuality education, but, as Khau points out, the resistance from dominant forces in Lesotho society, particularly the Catholic Church, has meant that the curriculum reform that integrates sexuality education remains heavily influenced by the moralistic approach associated with the tradition of the missionaries and, more recently, the churches. This is particularly problematic in the context of the HIV/AIDs epidemic. Khau's work points to the need for reforming Lesotho's secondary school life-skills curriculum.

Modise's (2016) study of commercial subjects in the junior secondary schools in South Africa found that teachers tend to concentrate on two out of the three core subjects that make up economics and management sciences (EMS). Because of their knowledge gaps, teachers tend to neglect accounting and concentrate on business studies and economics. While this is clearly primarily a study of teacher knowledge and teacher practice, it does provide insights into what might happen when an integrated curriculum is introduced and the existing teachers are expected to teach new or unfamiliar content. Solomon's (2018) contribution, also focused on business subjects, makes the case for incorporating personal financial literacy into business subjects for all junior secondary school students.

The Lesotho Ministry of Education introduced environmental issues into the secondary school curriculum, specifically to address diverse topics such as land degradation, energy, agriculture, biodiversity, pollution, solid waste management, sewerage, and poverty. It was assumed that these topics could be covered within the geography curriculum. According to Raselimo (2014), teachers found it easy to incorporate

environmental and sustainability issues into geography lessons, particularly around lessons on soil, water and vegetation conservations, but they were not able to connect it to other subjects and had difficulties connecting the new lessons to children's daily experiences. He suggests that teachers can incorporate new aspects of environmental science, but are constrained by Geography disciplinary knowledge in their efforts to integrate other disciplinary subjects and everyday knowledge. In another paper, Raselimo (2017) suggests that, for Geography to remain relevant, it needs to incorporate technical skills associated with large-scale water management projects (meteorology) and mining and geochemical mapping. To fully realise the work-related relevance of academic subjects would require continually upgrading the subjects and ensuring adequate learning resources.

In a similar vein to Raselimo's studies on how the academic subject of geography can be made work-relevant, Velepini, Martin, Smucker, Ward Randolph and Henning (2017) extended the exploration of the topic of curriculum integration of environmental sciences by examining the extent to which the subject could be built around local knowledge (Indigenous Knowledge Systems). They found that teachers were able to integrate both environmental knowledge and traditional knowledge, but were constrained by the absence of relevant resources and appropriate continuous professional development. That said, the study does suggest that it is possible to move beyond strongly bounded disciplinary subjects, like geography, and incorporate other disciplines and local knowledge. These efforts can go some of the way towards redressing concerns about the dominance of colonial era subject knowledge.

Smith and Arendse (2016) examined the senior secondary life orientation (LO) curriculum in South Africa. They found that the curriculum reform 'problem' was not in its philosophical orientation, but rather the amount of content specification. They found that the South African life orientation curriculum provided insufficient guidelines, particularly around content and time for teaching about active citizenship in democracy. In their view, despite the inclusion of human rights education into the formal curriculum, the insufficient specification means that it is unlikely to be taught with any level of fidelity.

Honeyman's (2016) research provides a different perspective on the challenges of introducing a new subject into the secondary school curriculum. She studied the introduction of entrepreneurship, as a six-year mandatory and examined subject, in Rwanda's secondary schools. In addition to making a contribution to understanding the role of entrepreneurship to economic development, Honeyman's study provides important insights into the dynamics of implementing new subjects in the secondary school curriculum. The introduction of entrepreneurship as a subject within the secondary school curriculum was an expression of the Rwandan government's efforts to institutionalise the national value of self-reliance. From an educational perspective, the big challenge encountered in implementation was that teachers taught the subject, which was designed to foster creativity and independent thinking, using a conventional 'chalk and talk' pedagogy. The failure to excite students about entrepreneurship also stemmed from the focus of the curriculum on government regulations and the wider legal framework. Honeyman suggests that few students that completed the

entrepreneurship subject curriculum could, or did, set up their own businesses, largely because the real constraint on entrepreneurialism in Rwanda was not education and training, but the difficulties accessing working capital. The paradox that Honeyman points to is that, while the secondary school subject was designed to create an enterprise culture and largely failed at this, some of the interviewees in her studies were forced to use informal enterprise as a way to pay for secondary education. As one of the reviewers (Abbott, 2017) points out, unemployment is incorrectly seen as an 'education' problem to be solved by training young people, rather than a problem caused by a lack of suitable employment opportunities in the labour market.

This review of research undertaken into specific secondary school subjects is certainly not exhaustive, but rather serves to illustrate debates that are taking place outside the prevailing discourse on secondary school curriculum reform in Africa. This school subject research could potentially contribute to secondary education curriculum reform. These studies provide insights into questions related to the selection of discipline topics within integrated subjects; ways in which "applied" subjects, like agricultural science, get reinterpreted based on the expertise of the teacher; and why certain countries have chosen to incorporate specific topics, like genocide studies or underground mineral resource mapping, into subjects like history and geography. These studies can certainly inform "small" curriculum reform in ways that are both relevant to local country contexts and take seriously the actual financial and capacity constraints. This literature also speaks to "big idea" curriculum reform. It reinforces what we know about some common challenges and shows up some of the questions of relevance and vocationalism.

Individual scholars are engaged in a range of meaningful questions internal to the curriculum logic of specific teaching subjects and this research does have the potential to improve, expand, or re-orientate secondary school subjects, but we should not overstate the case. Just as the review of literature signals the need for caution with reference to support of "the big idea" curriculum reform agendas, so "small ideas" have their own limitations. Competing interests, both between secondary school subjects and within subjects themselves, often make curriculum policy choices difficult and open up the potential for curriculum overcrowding.

4. Assessment Systems and Examinations

If the published literature is any guide, little appears to have changed in the past decade since Leyendecker et al (2008) observed that secondary education in sub-Saharan Africa was dominated by final national high-stake examinations.

Despite decades of criticisms and efforts at reform, these examinations play a central role in secondary schooling in both Anglophone and Francophone countries. Viewed in wider perspective, the dominance of examinations is not a uniquely African challenge. Outside North America, high-stakes secondary school national examinations remain the core accountability mechanisms in secondary systems around the world. These examination systems have a powerful "backwash" effect on secondary schools; on teachers and what they teach; and on students and what they learn. What is probably

unique, as Leyendecker and colleagues point out, is the majority of SSA students that write these examinations perform in the lower and lower middle range.

In this section, we explore new insights that have emerged about examinations and assessment systems since 2008.

EXAMINATIONS

National examinations are high-stakes summative assessments that constitute a powerful indicator of educational standards used to judge individuals and institutions, the extent to which learners have learned, as well as select students for successive levels in the education system (Komba & Mwandaji, 2015).

In contrast, school/classroom-based assessment is ongoing and low-stakes, with the goals of providing formative feedback that can be used by instructors to improve their teaching and by students to monitor their learning. It is rarely used for grading and evaluation purposes in high-stakes exams.

Despite the curriculum reforms that emphasize inquiry-based learning – like competence-based curricula – there is still a strong focus on high-stakes secondary school exit examinations. Moreover, while most curriculum reforms emphasize relevant learning outcomes (competencies), like critical thinking, public examinations in Africa tend to be limited in terms of the knowledge and the skills they assess (Barrett & Bainton, 2016); tend not measure skills associated with application, analysis and synthesis; and seldom assess the knowledge and skills that students need in their everyday lives after school.

Although the exit exams are important in determining student competence, they are not sufficient in themselves.

Barrett and Bainton (2016) suggest that formative assessments could meaningfully contribute as reforming high-stakes examination systems. They suggest that there is serious need to consider formative assessment for continuous building and shaping of learners into what we want them to be. A growing body of research suggests that a critical aspect of effective classroom-based (formative) assessment is needed for continuous assessment of learners (Muskin, 2017).

In some countries, like South Africa, school-based continuous assessments are combined with public examinations, in which the data contributes to the grade students are awarded in an exit public exam (Tikly et al. 2018). However, these school-based assessments are not very effective because of the influence and the focus on standardised public examinations, which does not align with the curriculum reform objectives. This issue is address more extensively in the section on continuous assessment.

Two highly competitive international assessment systems in the region include the International Baccalaureate (IB) and the Cambridge International General Certificate of Secondary Education (CIGCSE). Used mainly in former French colonies such as the Congo, Senegal and the Cameroon, the IB has become a formidable competitor and an authentic and trusted pre-university qualification. The IB is increasingly becoming a preferred qualification for university entry by many admissions officers in UK

universities (ISSOS 2018). Its major strengths include a more contemporary rationale, which locates study with social and societal developments; a stronger emphasis on formative assessment, through cumulative course work assessments; a healthy combination of formative and summative assessments, as constituting the work programme and learning; and its clear focus on preparing students for advanced university learning and critical thinking.

The CIGCSE, on the other hand, has a thirty-year-old history and is probably the most widely used international pre-university qualifying examination. Developed around more than 70 teaching subjects, the CIGCSE is most well-known for the diverse ways in which learners can combine subjects for their qualifying examinations. It is also known for the flexibility of the curriculum organisation. The CIGCSE is also recognised for the diverse assessment framework, which includes written, oral, coursework and practical assessment.

CROSS-NATIONAL (INTERNATIONAL) AND NATIONAL ASSESSMENTS

Over the past three decades, there has been a substantial growth of cross-national assessment, which, according to the UNESCO Institute for Statistics, is a measure of student proficiency levels with the “aim of making comparisons across countries, globally or within specific regions (e.g. Africa). Information is typically collected using standardized procedures on nationally-representative samples of students in primary or secondary education, in both mathematics and reading and sometimes in other subject areas.” (UIS, 2018). Some have a regional focus (e.g. SACMEQ in Southern and East Africa), others are specific to a language (e.g. PASEC testing in French for Francophone countries), but most have a global reach and are primarily focused on primary school grades.⁶

Only two cross-national assessments explicitly target learning in secondary education: Trend in Mathematics and Science Study (TIMSS), which focuses on Mathematics and Science in Grade 8; and Programme in International Student Assessment (PISA), which focuses on Mathematics, Sciences and language for 15 year olds (approximately Grade 10). Only Botswana, Ghana and South Africa - of all the sub-Saharan African countries - participated in TIMSS. Within the PISA process, which is clearly oriented to OECD countries, but includes partners in other countries and economies, only Mauritius has

⁶ Please discuss SACMEQ and PASEC regional exam systems. Though SACMEQ and PASEC as regional assessment system designed to provide information on system-wide learning performance, at 6th and 5th grade levels, respectively, they are nevertheless of interest as they will help assess primary school leaving qualifications. As comparative regional assessments they are not and could never be an alternative to high stakes national exams as only a small random selection of students is assessed. The purpose of these random-sample assessment processes is to assess learning program across the entire system. To what extent are they successful in this specific goal? Certainly, the significant national attention that the tests generate and the amount of related research suggest that they are certainly contributing to improving the quality of learning outcomes in participating countries. However, their significance for the secondary education assessment systems is probably limited. What they have shown is that comparative information about student achievement does two things: it brings attention to the problem of poor aggregative levels of learning and it spurs research. Should regional assessments like SACMEQ and PASEC be extended into the secondary level? If the primary school experience is a guide, this would certainly be an initiative that should be support both because it shows up learning outcomes and it help build national assessment capacity. That said, to build assessment systems is expensive and a long-term investment.

participated. Non sub-Saharan African countries, including Morocco and Tunisia, on the African continent have, and do, participate in the secondary education cross-national studies. Thus, while cross-national assessments are becoming an important part of secondary school assessment in countries internationally, sub-Saharan African countries are, by and large, not part of the trend. Such cross-national assessments are playing a limited direct role in policy reform.

Table 3 List of Assessments, National Literacy Assessment and Monitoring Project-(N-LAMP) Phase I & II Finding (Select SSA Only)

Country	Assessment name	Grade/age	Nature of Assessment	Year(s) implemented /Latest year with data available
Botswana	The Primary School Leaving Examination (PSLE)	Grade 7	Primary Exit Exam	2013
Botswana	The Junior Certificate Exam	Grade 10	Lower Secondary Exit Exam	2013
Botswana	The Botswana General Certificate of Secondary Education (BGCSE)	Grade 12	Upper Secondary Exit Exam	2013
Burundi	National Competition for Admission to Secondary Education (Concours national d'admission a l'enseignement secondaire)	Grade 6	Primary Exit Exam	2012
Cameroon	General Certificate of Education Ordinary Level (O-Level) Exam	Grade 10	Lower Secondary Exit Exam	2014
Cameroon	General Certificate of Education Advanced Level (A-Level) Exam	Grade 12	Upper Secondary Exit Exam	2014
Eritrea	National Examination	Grade 8	Lower Secondary Exit Exam	2011
Ethiopia	National Learning Assessment	Grade 8	National Large-Scale Student Assessment	every 3-4 years since 2000
Ethiopia	Ethiopian First National Learning Assessment of Grades 10 and 12 Students	Grade 10	National Large-Scale Student Assessment	2010
Ethiopia	Ethiopian First National Learning Assessment of Grades 10 and 12 Students	Grade 12	National Large-Scale Student Assessment	2010
Gambia	Gambia Basic Education Certificate Examination (GABECE)	Grade 9	Lower Secondary Exit Exam	2014
Gambia	West Africa Senior School Certificate Examination (WASSCE)	Grade 12	Upper Secondary Exit Exam	2013
Ghana	Basic Education Certificate Examination	Grade 9	Lower Secondary Exit Exam	2011
Ghana	Senior Secondary School Certificate Exam	Grade 12	Upper Secondary Exit Exam	2011

Ghana	Ghana National Education Assessment	Grade 6	National Large-Scale Student Assessment	2011
Kenya	Kenya Certificate of Primary Education (KCPE) exam	Grade 8	Primary Exit Exam	2013 latest
Kenya	Kenya Certificate of Secondary Education (KCSE) exam	Grade 12	Upper Secondary Exit Exam	2013 latest
Lesotho	Primary School Leaving Examination (PSLE)	Grade 7	Primary Exit Exam	2013
Lesotho	Junior Certificate Examination (JC)	Grade 10	Lower Secondary Exit Exam	since 1961
Lesotho	Cambridge Overseas School Certificate (COSC, General Certificate of Education O-Level)	Grade 12	Upper Secondary Exit Exam	since 1961
Lesotho	Lesotho General Certificate of Secondary Education	Grade 12	Upper Secondary Exit Exam	late 2014
Liberia	Primary School-leaving Certificate Exam	Grade 6	Primary Exit Exam	2013
Liberia	Junior High School Certificate Exam	Grade 9	Lower Secondary Exit Exam	2013
Liberia	Senior High School Exam	Grade 12	Upper Secondary Exit Exam	2013
Mauritius	Certificate of Primary Education Examination (CPE)	Grade 6	Primary Exit Exam	2013
Mauritius	National Form III Assessment	Grade 9	National Large-Scale Student Assessment	2013
Mauritius	Cambridge Overseas School Certificate (COSC, General Certificate of Education O-Level)	Grade 11	Lower Secondary Exit Exam	2013
Mauritius	Cambridge Higher School Certificate (General Certificate of Education A-Level)	Grade 13	Upper Secondary Exit Exam	2013
Namibia	Junior Secondary Certificate (JSC)	Grade 10	Lower Secondary Exit Exam	2013
Namibia	Namibia Senior Secondary Certificate Ordinary Level (O-Level)	Grade 12	Upper Secondary Exit Exam	2013
Namibia	Namibia Senior Secondary Certificate Higher Level (A-Level)	Grade 12	Upper Secondary Exit Exam	2013
Nigeria	National Common Entrance Exam	Grade 6	Primary Exit Exam	2014
Nigeria	Basic Education Certificate Examination	Grade 9	Lower Secondary Exit Exam	2014
Nigeria	Senior Secondary Certificate Examination	Grade 12	Upper Secondary Exit Exam	2014
Rwanda	National Secondary Education Ordinary Level (O-level exam)	Grade 9	Lower Secondary Exit Exam	2013
Rwanda	National Secondary Education Advanced Level (A-level exam)	Grade 12	Upper Secondary Exit Exam	2013

			Exam	
Senegal	Certificat de Fin d'Etudes Elémentaires (CFEE)	Grade 6	Primary Exit Exam	2012 latest
Senegal	Brevet de Fin d'Etudes Moyennes (BFEM)	Grade 10	Lower Secondary Exit Exam	Since 2004, (latest info in 2012)
Senegal	Epreuves Du Bac (Baccalaureate Exam)	Grade 13	Upper Secondary Exit Exam	2013 (latest known)
Seychelles	International General Certificate of Secondary Education (IGCSE)	Grade 10	National Large-Scale Student Assessment	2012
Seychelles	National Attainment Test	Grade 6	National Large-Scale Student Assessment	2009
Seychelles	Secondary Three Primary Exams	Grade 9	National Large-Scale Student Assessment	2009
Sierra Leone	National Primary School Exam (NPSE)	Grade 6	Primary Exit Exam	2013 (latest)
Sierra Leone	Basic Education Certificate Exam (BECE)	Grade 9	Lower Secondary Exit Exam	2013 (latest)
Sierra Leone	West African Secondary School Certificate Exam (WASCE)	Grade 12	Upper Secondary Exit Exam	2013 (latest)
South Africa	The National Senior Certificate Exam (NSC)/"Matric"	Grade 12	Upper Secondary Exit Exam	2014(latest)
South Africa	Annual National Assessment (ANA)	Grade 9	National Large-Scale Student Assessment	Since 2011
South Africa	Senior Certificate Examination (Old Syllabus)	Grade 12	Upper Secondary Exit Exam	2008-2014
Sudan	Basic Education Certificate Exam	Grade 8	Primary Exit Exam	2004 onwards (?)
Sudan	Sudan School Certificate Exam	Grade 11 (Form 3)	Upper Secondary Exit Exam	2012 (latest year with info available)
Swaziland	Swaziland Primary Certificate Examination	Grade 7	National Large-Scale Student Assessment	2013
Swaziland	Junior Certificate (JC)	Grade 10	National Large-Scale Student Assessment	2013
Swaziland	Swaziland General Certificate of Secondary Education (SGCSE)/International General Certificate of Secondary Education (IGCSE)	Grade 12	Upper Secondary Exit Exam	2013
Tanzania (mainland and Zanzibar)	Certificate of Secondary Education Examinations (CSEE)	Grade 11	Lower Secondary Exit Exam	2013 (latest)
Uganda	Primary Leaving Certificate exam	Grade 7	Primary Exit	2013 (latest)

			Exam	
Uganda	Uganda Certificate of Education exam (UCE)	Grade 11	Lower Secondary Exit Exam	2013 (latest)
Uganda	Uganda Advanced Certificate of Education exam (UACE)	Grade 13	Upper Secondary Exit Exam	2013 (latest)
Uganda	National Assessment of Progress in Education (NAPE)	Grade 9	National Large-Scale Student Assessment	2012
Zambia	Grade 7 Composite Examination	Grade 7	Primary Exit Exam	2012 (latest known)
Zambia	Grade 9 or Junior Secondary School Leaving Examination	Grade 9	Lower Secondary Exit Exam	2012 (latest known)
Zambia	Grade 12 or School Certificate or General Certificate of Education Exam	Grade 12	Upper Secondary Exit Exam	2012 (latest known)
Zambia	National Assessment System (NAS)	Grade 5	National Large-Scale Student Assessment	Since 1999, every 2 to 3 years
Zimbabwe	Grade Seven Exam	Grade 7	Primary Exit Exam	2013
Zimbabwe	Zimbabwe General Certificate of Education, Ordinary-level (O level exam)	Grade 11	Lower Secondary Exit Exam	2013
Zimbabwe	Zimbabwe General Certificate of Education, Advance-level (A level exam)	Grade 13	Upper Secondary Exit Exam	2013

Source: Cheng, X., & Omoeva, C. (2014). EPDC National Learning Assessments Mapping project: Key findings. <https://www.epdc.org/epdc-data-points/epdc-national-learningassessments-mapping-project-key-findings>.

Note: The purpose of the N-LAMP process was to expand the global knowledge about learning metrics and measurements. For the purposes of this figure, information included comes from participating sub-Saharan Africa countries. The columns include information on the countries that participated, the names of the national assessments, the school grades at which the assessment are conducted, the purpose of the assessment and information about when it was introduced.

Given South Africa's consistent participation in TIMSS, it would be useful to explore the impact that that participation has had on secondary education reform in this country. At least two insights are worth noting:

First, the TIMSS results, like similar findings from primary school cross-national assessments, have had the effect of providing a highly visible public benchmark of the relative weaknesses of South African secondary school learning in Mathematics and Science (Howie, 1997; Reddy, 2006; Reddy, Zuze, Visser, Winnaar, Juan, Prinsloo...& Rogers, 2015). Consistently in each round of TIMSS, South Africa has performed close to the bottom of participating countries/systems. While this has been the major impact, i.e. to help benchmark South African students' Mathematics and Science knowledge against international counterparts and raise public awareness of the weaknesses in student learning, the TIMSS and other cross-national studies have had two other positive consequences. The first is related to the building of national capacity to undertake large-sample standardized testing (Prinsloo, 2017; Reddy, 2015). The second is that the

testing, while revealing low levels of achievement, has also shown that South African secondary school students have made substantial academic progress in the past two decades (Reddy, 2015; Alex, 2017).

Beyond these three important contributions, a small but growing body of research is emerging on and around the TIMSS datasets. For example, Bofah (2015), in their study of five African countries (including South Africa and Botswana), found an inverse relationship between attitudes towards Mathematics and achievement in Mathematics. On a similar topic, Juan (2016) found that South African students generally have a positive attitude towards the subjects of Mathematics and Science (despite having one of the lowest aggregate country scores). The TIMSS results have also been used to track student learning across grades and phases (Van der Berg, 2008), identify factors associated with achievement, such as proficiency in English (Howie, 2003) and explore the impact of teachers' pedagogical content knowledge on student scores (Venkat, 2015).

Planning is underway for a third cross-national assessment that might have a greater impact (i.e. PISA-D). The aim of PISA for Development or (PISA-D), an initiative established by the OECD, is to facilitate broader participation in the PISA assessment by low- and middle-income countries. Like SACMEQ, one of the key objectives of PISA-D is to contribute to building national capacity to manage large-scale student assessments and using the data generated by these processes to support policy discussion and improve decision-making. As with the primary school cross-national large-scale assessment, there are considerable direct and indirect costs associated with participation and, for many countries, there are also political risks.

Should countries be encouraged to participate in these cross-national assessments? Schmidt et al (2001) made a strong case. Drawing on the comparative study using TIMSS data, they show that curriculum has a profound effect on student achievement and plays a crucial role in providing opportunities for student learning. Participating in these studies, Schmidt and colleagues suggest, can play a useful role in curriculum reform that promotes improved learning. Lockheed (2013) argues that there are both direct and indirect benefits for participation in cross-national assessment. In terms of direct benefits, she argues that participation leads to strengthening assessment capacity – through training that takes place as part of the assessment processes; and through hands-on experience. Country experts can learn a deal about planning, developing and implementing large-scale assessments. Indirectly, cross-national studies can influence curriculum norms and classroom practices, which, in turn, could lead to curriculum reform; and improved and more focused teacher professional development.

A substantially different perspective on the potential benefits of participation in cross-national assessments is an increasingly common theme in the international literature. Carnoy (2015) provides a methodological critique of cross-national assessments, particularly when used as an indicator for predicting economic growth. Many challenge both the validity of the rankings and the policy utility of the assessments. There are concerns about the escalation in the amount of testing and the increasing reliance on them for policy development. The three- or four-year cycles of the tests shift the attention towards short-term quick-fixes. The cross-national tests tend to narrow the

scope of attention of policy makers to those subjects that are measured and tend to neglect non-measured school objectives, such as moral and artistic development (Lijing, 2017). While limited data is available on international assessment in Africa (Kamens, 2009), there is even less information on the use of national assessments in secondary education in sub-Saharan Africa. The National Literacy Assessment Monitoring Project aims to address this gap (table 3). What table 3 reveals is the limited number of countries that use large-scale national assessment at secondary level (Ethiopia, Ghana, South Africa and Seychelles), but that conventional high stakes examination continues to be a major feature of the secondary school landscape, for the purposes of accessing secondary schooling, transitioning from lower to upper secondary; and at the end of secondary education as a gate keeper to post-secondary university studies. Since the collection of this data, there is an emerging trend away from primary and lower secondary examinations in some countries.

One of the exceptions is South Africa – and specifically the introduction and subsequent suspension of the Annual National Assessments (ANAs). Although it was primarily orientated to assessing learning in the primary school grades, the South African Annual National Assessments did include assessments of the languages (either in Home Language or First Additional Language) and Mathematics at Grade 9 level. The Grade 9 assessment was conducted nationally in 2012, 2013 and 2014.

Notwithstanding the limited number of years during which it was administered, insights about its implementation and subsequent withdrawal are illustrative. The South African national assessments had two streams: a universal test for all students in public schools at the specific grade level, which was marked at school level by teachers; and a smaller verification sample of schools that wrote the same test, but where it was independently marked and externally monitored and moderated.

One of the key indicators that was used to judge the effectiveness of the South African school system was the percentage of students that met the minimum achievement level (50%) on each of the annual national tests.

Table 4 Percentage of learners obtaining at least 50%, Grade 9 Annual National Assessments, 2012-2014

	2012	2013	2014
Mathematics	2	2	3
Home Language	39	37	48
First Additional Language	21	17	18

Source: Department of Basic Education, 2014

As would be expected, these scores led to a great deal of media attention. Within the South African education sector, questions were asked about the appropriateness and the level of the Grade 9 Mathematics test, in particular (see Bansilal 2017). Teacher unions objected to the ANA process and the use that was made of the national average scores. They complained that, rather than as a gauge of the system’s effectiveness, the national

aggregate ANA scores were being used to assess teacher competency, to categorise schools (and districts) on the basis of their average performance and to punish schools that performed poorly. The teacher unions also raised concerns that, because of the high stakes consequences for teachers, schools and provinces, teachers were forced to devote more time to preparing for the tests rather than covering the official curriculum. This insight was confirmed in Maphalala's (2017) study of the unintended consequences of high-stakes tests, which include the narrowing of the curriculum and an excessive emphasis on test preparation. The administrative demands of marking and reporting the marks dominated teachers' work around assessment, with almost no attention given to using the student assessment information to identify curricula and pedagogic challenges at the school and district level to (a finding in the Kanjee, 2014 study). As a consequence of the unions' collective action, the Department of Basic Education suspended the annual testing processes and agreed to a three year, rather than an annual, testing cycle.

While not specifically focused on the secondary education Grade 9 assessment, a significant amount of research has emerged from the Annual National Assessments (Fleisch, 2014; Fleisch, 2016; Taylor, 2016; Kanjee, 2013; Van der Berg, 2015). This research clearly demonstrates that, notwithstanding the potential misuse of the national assessments and the problems with the quality of that data, national assessments can provide some of the data needed to build the knowledge about the levels and challenges of learning across a system. They can provide insights into teachers' pedagogic practices, the impact of chosen language and the standards of teacher marking; and can assist in the evaluation of the impact of interventions.

CONTINUOUS ASSESSMENT

Possibly the most active area of assessment system reform was around the introduction of continuous assessment. According to Muskin (2017), continuous assessment is best understood as having four key features: it is a form of assessment primarily linked with the classroom teacher; it covers the full set of subjects; it permits teachers to understand a range of aspects of student learning and change in that learning over time; and it provides an opportunity for feedback to the teaching process at an individual level. Because many continuous assessment policies have been in place for more than a decade, it is possible to get a perspective on its impact.

Browne's (2016) review of research on continuous assessment, including case studies of practices in South Africa, Ghana, Malawi, Nigeria, Zambia and Uganda, provides the most comprehensive picture of these specific aspects of reform in assessment systems. The main overall finding is that teachers are not using continuous assessment in their classrooms, in large part because of the absence of institutional support, few exemplars and the lack of training. Browne's research also points to the lack of understanding of the purpose of continuous assessment and the top-down manner in which it was introduced to schools. Despite sporadic efforts to reform assessment systems, summative high stakes examinations continue to dominate assessment systems, with the net effect that secondary teaching is heavily skewed towards "teaching to the test".

Possibly one of the most focused reform efforts to introduce continuous assessment has been undertaken in South Africa. As such, there are a growing number of studies of continuous assessment and its implementation. Over the past decade-and-a-half, South Africa's secondary school exit qualification incorporated continuous assessment (CASS) as a component of learners' final grades. Shepherd and van der Berg's (2015) study analysed information and feedback from Grade 12 level continuous assessment in the South African education system. Continuous assessment at the time carried a 25% weight in the final Grade 12 mark and it provided feedback that affected examination preparation and effort. The concern is that weak assessment in schools can send wrong signals to students, which may have consequences for the way in which they approach the final public examination. Moreover, similarly wrong signals earlier in the students' school careers may also have affected their subject choice and career planning. Shepherd's study compares CASS data to the externally assessed Grade 12 final examination marks for a number of subjects. He found two signalling dimensions to inaccurate assessments: (i) inflated continuous assessment marks can give students a false sense of security and lead to diminished exam effort; and (ii) a weak correlation between continuous assessment and examination marks could mean poor signalling in another dimension: relatively good students may get relatively low CASS marks. Low correlations indicate poor assessment reliability, as the examination and continuous assessment should both be testing mastery of the same national curriculum. Ramalepe (2015) found that continuous assessment has been unsuccessful due to the lack of monitoring and support, learner discipline, and lack of parent involvement.

Across the continent, most of the studies of continuous assessment focus on the take up of the practice by teachers. For example, Dagnev's (2017) study of continuous assessment in Awi Zone secondary schools in Ethiopia explored the level of teachers' implementation of alternative assessment practices. The researcher found that the implementation of continuous assessment in schools was low. The major barriers to the effective utilisation of alternative assessment included time constraints, large class sizes, student absenteeism, the absence of government guidelines for common record keeping, lack of teacher interest and commitment and perceived heavy workload.

Dessie and Heeralal's (2016) study of science teachers' use of integrated assessment in East Goikam, also in Ethiopia, showed that the take-up of new assessment tools was very low. In Ethiopia, most science teachers administer tests, homework assignments and classroom practicals for the purposes of collecting marks. They seldom use assessment to influence instructional practice in an effort to teach higher order thinking about Science. Awoniyi's (2016) Ghana study focuses on the understanding of mathematics teachers of School-Based Assessment (SBA). Awoniyi found that mathematics senior secondary teachers do not understand the new assessment guidelines and do not use them, so they still practise the old assessment scheme.

In the Kilimanjaro region of Tanzania, Salema's (2017) study of teachers' and students' attitudes towards assessment found a gap between the theory and practice of assessment, with extensive evidence of teachers use of teacher-centred approach to assessment (for the purpose of getting marks), and a general negative attitude towards what Salema calls a learner-centred approach. Similar teacher attitudes were evident in

Alufohai's (2016) study of teachers in Edo Central District in Nigeria. This study found that the majority of teachers had a negative perspective on continuous assessment, despite the fact that they recognise that it is a systematic and comprehensive approach. These teachers lacked an understanding of how to use it as part of a cumulative marking system and how to gain insights to guide instruction. In contrast to many of the other studies, Odili (2014) found that teachers in the Delta State, also in Nigeria, were competent in the use of continuous assessment, instruments, and practice. Kontle's (2017) doctoral study of continuous assessment in vocational and technical subjects at the junior secondary level in Botswana found that teachers in arts, crafts, and design subjects did understand and make use of continuous assessment, even as there was pressure from the school leadership to concentrate on summative assessment.

5. National Qualifications Frameworks

Sub-Saharan Africa has not been immune to the appeal of qualifications frameworks that became dominant in the early 2000s and which have somewhat subsided internationally subsequently. Many countries have indicated interest in developing frameworks, or engaging in initial policy change towards the development and implementation of frameworks and many countries have formally adopted qualifications frameworks. There has also been some policy attention paid to the area of recognition agreements on a regional basis and these are now being developed into regional qualifications frameworks.

However, based on available literature as well as some grey literature, it seems that, other than in Rwanda and South Africa, as well as, to a limited extent, Botswana, Ethiopia, Mauritius, and Namibia, qualifications frameworks have not been the subject of considerable policy energy, either in terms of design or implementation. In many instances, the desire for a qualifications framework seems to have been driven by donors (Chisholm, 2007).

WHAT ARE QUALIFICATIONS FRAMEWORKS?

This section starts by explaining different ways in which qualifications frameworks have been understood internationally. It then considers the track record of qualifications frameworks internationally and in African countries specifically.

The simplest way of conceiving a qualifications framework is a formal description of the nationally recognized qualifications in a country. In this sense, qualifications frameworks are not new, although they were not always represented diagrammatically and they did not always indicate relationships between qualifications, or pathways from one qualification to another. Improving public understanding of the key national qualifications available, and pathways between them, is important. Formally creating a national qualifications framework can also be a way of ensuring that all qualifications are formally related to each other – instead of operating completely separately from each other. This can be particularly important for technical and vocational qualifications. However, creating formal pathways between qualifications is different

from creating curricula and learning programmes that support progression, as well as from ensuring that there are sufficient learning programmes for learners to progress to.

It should also be mentioned that qualifications frameworks are sometimes sectoral (for specific economic sectors) and sometimes only for one part of the education and training system – usually the vocational education system. In some cases, this includes tertiary technical qualifications and, in others, only secondary level vocational qualifications (Botswana is an example of the latter).

In many of the countries, formal legislation and regulations are important tools to create, manage and govern national qualifications frameworks (NQFs). The existence of legislation may also be seen to serve as signal to key stakeholders of the value attached by government and its commitment to the NQF.

A different aspect of qualifications frameworks is where countries have passed legal enactments that attempt to regulate the education and training system. In Mauritius and South Africa, laws were passed to create qualifications authorities, with the idea that these authorities would then create a qualifications framework (Allais, 2011). As is the case internationally, the role of authorities varies substantially in terms of operations, size and capacity and, as new institutions; they have had uneven paths of development. In some cases, they have come into conflict with existing institutions and agencies (Allais, 2011). For example, the ‘qualifications authority’ in Mauritius did not have authority over the whole education and training system. In South Africa, legislation was amended to create legislation for the qualifications framework in its own right, although the qualifications authority remains, albeit with considerably less power over the qualification system. One of the problems with a legislative approach was that, in some countries, regulations and legislation relating to qualifications frameworks has overlapped with, or been inconsistent with, other laws and regulations for education and training, as well as occupational frameworks. This was clearly the case in South Africa, where, for example, the regulation of quality assurance through the qualifications framework was at odds with existing quality assurance regulations, causing considerable problems. Interestingly, one of the most successful qualifications frameworks, that of Scotland, was created through voluntary agreement amongst the key role players (Allais, 2010).

When policy makers refer to qualifications frameworks, they sometimes include more than the collections and diagrams of qualifications – they also include the systems, institutions and relationships between institutions. In many of the countries in the 2010 ILO study, differences between different government departments or agencies, lack of power of qualifications authorities, overlapping responsibilities, conflicts between different laws and regulations and changes in government were observed in the attempted implementation of qualifications frameworks (Allais, 2010).

In some instances, qualifications frameworks are seen primarily as grids on which existing qualifications can be organized and through which existing qualifications can be understood, as well as providing the base for the development of new qualifications. The grids have between 5 and 12 levels. Level descriptors are introduced as a guide for clarifying equivalence and rationalizing qualifications systems. Creating explicit levels, described by level descriptors, is seen by some policy makers and consultants as the

mechanism to ensure that different qualifications are comparable. A key issue here is policy makers' attempts to create recognition for vocational qualifications and raising the status of vocational qualifications by formally locating them on a framework, thereby demonstrating that, officially, they are seen as the same as, or comparable to, general education qualifications.

Qualifications frameworks are also sometimes seen as systems and rules for designing new qualifications, with level descriptors as the starting point.

REGIONAL FRAMEWORKS

Linked to national qualifications frameworks has been the development of regional frameworks. These are not aimed at the development of qualifications or the regulation of national systems, but rather focus on recognition of qualifications across borders. The most well-developed is the European Qualifications Framework for Lifelong Learning, which was adopted by the European Parliament and Council in 2008. This framework was developed with a view to ensuring that different European countries had a benchmark against which post-secondary qualifications could be compared across borders, building on years of discussions and policy agreements between European countries with regard to harmonizing university qualifications through what is referred to as the Bologna process.

Africa has had one continent-wide agreement about the recognition of qualifications – the Arusha convention, which was adopted in Arusha, Tanzania, in 1981. It was primarily focused on higher education qualifications and was widely seen as not having been implemented. However, agreements in various regions could be seen as having their origins in this convention. These are now being developed into regional qualifications frameworks. The most developed is that in the Southern African Development Community (SADC) region, which signed a protocol on education and training in 1997 and, through, this established a technical committee to attempt to relate (“harmonize”) qualifications across national borders in the region. The work of this committee was influenced by the emerging qualifications frameworks in South Africa, Namibia and Mauritius. By March 2005, a SADC concept document for ensuring comparability of qualifications and credits across borders in the SADC region was adopted (Keavy, 2011). A regional qualifications framework was formally adopted in 2011. What it has actually achieved since then is not clear. A recent report of the South African Qualifications Authority states that it was “revived” in 2016 (Jaftha and Samuels, 2017). The framework has ten levels and, currently, the technical committee is working on guiding countries to use it in benchmarking their qualifications.

East Africa has a regional framework for higher education qualifications, which was adopted in 2015, but little information is available about how it is actually being used.

THE TRACK RECORD OF QUALIFICATIONS FRAMEWORKS

Unfortunately, there is very little evidence that qualifications frameworks have been successfully implemented, let alone that they have achieved the many goals policy makers have associated with them. International literature is mainly critical or very cautious (Allais, 2014; Bohlinger, 2007, 2012; Boudier, 2003; Brown, 2011; Ensor, 2003;

Gössling, 2015; Granville, 2003; Hupfer & Spöttl, 2014; Keating, 2003; Lassnigg, 2012; Lester, 2011; Méhaut & Winch, 2012; Phillips, 2003; Pilcher, Fernie, & Smith, 2015; Raffe, 2003, 2011, 2012; Young, 2003, 2005).

There is very little published research evidence about national or regional qualifications frameworks in Africa. The most research is available on the oldest framework, the South African Qualifications Framework. South Africa was one of the early adopters of the NQF policy idea (1995), based on models from England and Australia. It has been described as one of the most extreme versions of this policy mechanism, in the sense that it was intended to replace all qualifications in all sectors of the education and training system, with new qualifications, based on learning outcomes, captured in unit standards (Allais, 2011).

New stakeholder-based structures were created to develop these unit standards and qualifications. Many new qualifications and unit standards were developed and registered on the framework by a new organisation, the South African Qualifications Authority, but old qualifications linked to specific providers were also registered, resulting in a framework of nearly 8000 qualifications. Most of the new qualifications were never used: no providers ever attempted to develop learning and no learners enrolled for courses against them (Allais, 2011).

The South African framework was dramatically changed and simplified after a protracted policy review process (Allais, 2007b; Departments of Education and Labour, 2002, 2003). Mauritius also developed a qualifications framework relatively early – legislation was introduced in 2001 that created the Mauritius Qualifications Authority (Marock, 2011).

Although the framework covered the whole education and training system, there were different rules for the qualifications in each and competence-based qualifications were only introduced for vocational education. The introduction of the qualifications framework also intended to introduce separation of provision and registration. Previously, the Industrial and Vocational Training Board (IVTB), the main provider of technical vocational education and training in Mauritius, was also responsible for the registration of private technical vocational education and training providers – and managed a training levy. The Mauritius Qualifications Authority took over the function of registration of providers and a Human Resources Development Council was created to manage the training levy.

As in South Africa, many qualifications and standards were developed that remained unused. There was also little possibility for movement from vocational to higher education, an idea central to qualification frameworks.

In many other countries, qualifications frameworks have been confined to vocational education. Botswana is an example of this within Africa (Tau & Modesto, 2011). The framework in Botswana was initiated as part of a donor-driven project to reform technical and vocational education and training and the idea of unit standards was introduced. At the time of the study by Tau and Modesto (2011), very few unit standards had been developed and, of these, even fewer had ever been used. Even official government providers were not using them. Of the very few that had been used, there

was no evidence that they improved the relationship between vocational education and work. There is no published research about later developments.

Namibia attempted to introduce a framework along similar lines to the framework in South Africa. Subsequently, many other countries have engaged to some degree with this policy reform. An unpublished academic study (Thorsen, 2014) describes a range of other African countries expressing interest in this policy mechanism, but shows that there is very little work that has actually been done in developing frameworks. Higgs and Keevy (2009) similarly account for a few African countries that have formally adopted qualifications frameworks, but provide little more information about actual implementation or impact. The South African Qualifications Authority (SAQA) has also played an advocacy role for qualifications frameworks in Africa and has provided consultancy services in some countries.

Rwanda adopted a qualifications framework for higher education in 2007 and later a regional qualifications framework. Currently, a single national qualifications framework is currently being developed and implemented. However, there is no published evidence on how this has proceeded to date.

The complexity of implementing qualifications frameworks and the limited impact that they appear to have to date should not be too surprising. Equivalence is a highly contested concept. Qualifications, particularly those relating to university entrance or entrance to regulated occupations and professions, have high stakes and touch on many power relations in society. Further, trust in qualifications cannot be decreed, but has to be built, established and maintained over time.

In short, there is very little evidence to suggest that African countries have prioritised qualifications frameworks in practice, or that they should do so as a major policy focus. As is the case with literature in this area internationally, there is research that argues that these frameworks have worked, but no evidence is provided (for example, Adamu, 2015).

There is evidence, especially in South Africa, that the outcomes-based qualifications framework has introduced an enormous amount of policy complexity and a raft of new institutions in a context in which most institutions were weak. This observation is applicable to all aspects of secondary education policy, not only the NQFs.

Two points remain worth making.

First, the term “national qualifications frameworks” can be invoked for a number of substantially different kinds of policy interventions, as discussed above (Allais, 2011). Even where African countries have not invested substantially in qualifications frameworks, many of the broader ideas which underpin frameworks – such as creating quasi-markets or markets for the delivery of education, as well as the idea of competence as mechanism for curriculum reform – seem to have taken root in many African countries. With regard to the former, the original frameworks (the National Vocational Qualifications in the UK and the competence-based training reform of vocational education in Australia) were both introduced in order to privatise vocational education provision; and their logic was that of a regulatory state, using competence statements/learning outcomes to regulate provision. This logic, applied to a context in

which provision is very weak, has proved disastrous. African governments need to build and support education institutions, if they want education provision to happen. With regard to the latter issue, a key aspect of qualifications frameworks is learning outcomes and this issue has also been the subject of much critique and debate (Allais, 2011a, 2012; 2008; Hupfer & Spöttl, 2014; Méhaut & Winch, 2012;).

Secondly, while there has been a major donor and international agency drive behind qualifications frameworks internationally – and while many countries feel that they need to develop a framework in order to be part of modern education policy – there are nonetheless many real problems that qualifications frameworks are symptomatic of:

- When to stream students and how to do so
- How to support students to move across tracks (if at all, and which tracks should exist)
- Relationships with work

A key issue that qualifications frameworks are symptomatic of is fragmented provision of vocational education, because, historically, vocational education has been rooted in particular sectors of the economy, from which it derived its logic.

Massification of secondary education, particularly in countries with historically weak vocational tracks, has often further weakened vocational education. Finding the right balance between providing meaningful educational options to children who have struggled in school, providing training that employers value and not creating dead-end educational programmes is extremely tricky and there are no simple answers.

Finally, in many instances, qualifications frameworks are brought in to solve problems that are unquantified and may not be extensive. This seems to be the case in relation to credit accumulation and transfer, particularly – there are very few instances in which governments, or even education institutions, have any reasonable sense of how much demand there is for credit transfer, or how many students have had credit accumulation and transfer denied. As such, starting from research, or setting up national mechanisms to gather better data, should precede any expensive policy intervention.

6. Trade-offs

The key trends, innovations and challenges in secondary education curricula, examinations/assessment and NQFs have been outlined. Although the background paper includes criticism of various approaches to secondary school curriculum policy, notwithstanding their intrinsic logics and implementation limitations, they need to be evaluated not simply on their own terms. They need to be assessed against plausible alternatives, comparing actual and hidden costs against the potential benefits for competing policy options.⁷

⁷ The notion of curriculum trade-offs is borrowed from Holsinger and Cowell (2000). The authors separate out trade-offs that deal with organisational issues, trade-offs that deal with content issues and trade-offs that deal with control. The original formulation of trade-offs in curriculum policy was developed in Cowell (1993).

In practice, policy alternatives are seldom either/or, but exist on a spectrum with policy makers having options for stronger or diluted versions of any particular policy. New policies will always co-exist with older versions, layered on top of older approaches, whose residual effects continue long after their official time has passed. That said, policy choices do take education systems down particular pathways – that may be difficult to backtrack once chosen. While there is recognition that final decisions, rather than built on evidence, are often determined by political priorities, pressure groups and national traditions infusing debates about trade-offs, which would enhance the quality of the international and national discourse.

TRADE-OFF 1: SYSTEM-WIDE CURRICULUM TRANSFORMATION V INCREMENTAL CURRICULUM CHANGE

The main question that policy makers in sub-Saharan Africa are currently grappling with is the question of whether to choose whole-system “big idea” reform agendas (such as competency-based curriculum, competence-based pedagogy, outcome-based education, learner centred education, curriculum vocationalization and 21st century skills), or opt for smaller, incremental, less ambitious curriculum and assessment reforms. “Big idea” reforms, often supported by the international agencies and the donor community, have a number of advantages. They can signal to the country and the education stakeholders in particular, the desire for dramatic, substantive and rapid change. To the wider national community, they show that the education system is aligned to what appears to be global best practice. Specifically, “big idea” secondary school curriculum reform tells the business community that the government is prioritizing human capital needs of the labour market. To teachers, it indicates education ministries’ commitment to move away from older education paradigms and practices and adapt progressive pedagogical thinking. Adopting a whole new curriculum approach catches the media’s attention and brings public focus onto schooling. The evidence, however, suggests that many of the “big idea” reforms have limited impact on teaching and learning for a range of reasons, including the common problems of inadequate funding for the change process; insufficient and appropriate learning and learning resources; limitation of the existing teacher subject and pedagogic knowledge; and school constraints like large class sizes. The overwhelming evidence, not only in sub-Saharan Africa but globally, is that curriculum change alone is seldom effective in changing teacher practices or learning outcomes.

Incremental curriculum reform approaches rarely capture national and international attention. While this is not always the case, the introduction of History as a compulsory subject in South Africa is a good counter-example. Little political capital can be made, for example, from introducing an additional technical subject offering or a better-balanced curriculum with equally weighting of Biology, Chemistry and Physics in a lower secondary national science curriculum (a recommendation from Nigeria). That said, incremental curriculum change is more likely to be successful as it often has the support of the ‘street-level bureaucrats’, who recognise the need and feasibility of small-scale change. While incremental initiatives seldom lead to fundamental change in the core business of teaching and learning, they can improve both the efficiency and effectiveness of secondary education.

TRADE-OFF 2: ACADEMIC CURRICULUM V DIVERSIFICATION

Few countries have curriculum frameworks at the far ends of the spectrum: university-orientated traditional academic curriculum focus on the humanities and sciences: to multiple subject and stream offerings, that incorporates both academic and the technical/vocational. However, with the expansion of enrolment in both lower and upper secondary schools in many countries in sub-Saharan Africa, the repositioning of the secondary education subsector on this curriculum spectrum is possibly the single most critical policy choice facing policy makers. The advantage of retaining a narrow academic curriculum and allied examination system, even with modifications that focus on improving efficiency, is its fit with the existing resource constraints and student and parent demands. Moreover, an argument is currently being made that traditional academic school subjects (like Mathematics, Physics, Chemistry, History and Geography) provide students with 'powerful knowledge' that empowers them with a specialist, rather than everyday, knowledge of the external world.

The expansion of secondary school enrolments across the continent would inevitably place the traditional academic curriculum and examination systems under pressure. Increased participation may lead to lower pass rates. Many countries are opting for various degrees and types of expansion of subject offerings and new curriculum tracks or streams. Technical, vocational, occupational and trade subjects, combinations or streams are precisely geared to more heterogeneous student populations and speak to the demands of changing worlds of work. To what extent the secondary school technical, vocational, occupational and trade subjects actually align with the needs of newly emerging economic sectors is an open question. Moreover, from the perspective of the education sector, the high unit cost and difficulty securing the scarce human resources to teach these subjects places limits on the capacity of education systems to expand these offerings beyond a small subset of schools.

There is a related trade-off within the secondary education curriculum field. Should all students at the secondary schools be required to take at least one vocational or trade subject to give them exposure to these aspects of education, or should technical, vocational and trade subjects be restricted to only those pursuing them within a specific curriculum stream? This tension is evident in the curriculum choices recently made in Nigeria and Kenya. In the former, all secondary school students are required to take at least one trade subject; in the latter, senior secondary learners are streamed into well-defined curriculum pathways.

TRADE-OFF 3: INTRODUCING NEW SUBJECTS V INFUSING NEW KNOWLEDGE INTO EXISTING SUBJECTS

There is growing pressure on education systems to prepare students adequately for the challenges of the 21st century, particularly the demands associated with the Fourth Industrial Revolution and wider environmental challenges like global warming. Would this be optimally achieved by introducing new specialist subjects, or infusing the skills, knowledge and new orientation into existing subject offerings? The benefit of introducing new stand-alone subjects, particularly if those subjects are examined on the same basis as other compulsory subjects, is that teachers, students and parents will take

them seriously and that implementation is guaranteed in schools. The introduction of new subjects, particularly if existing subjects are not phased out concurrently, will lead to curriculum overcrowding and add to the stresses and the workload of secondary school students.

Infusing new skills and knowledge into the curriculum by adding to, and changing, topics within existing subjects has the advantage of not disrupting school timetables or requiring new specialist teachers. Infusing new knowledge is not without challenges, though. Secondary school teachers tend to teach content that they are most familiar with. Examples of this trade-off include Rwanda's introduction of Entrepreneurship as a compulsory examinable subject; and the South African plan to replace the subject Life Orientation with History. The former appears to have mixed results. Proposals in Botswana to introduce topics in personal finance into commercial subjects and in Lesotho to introduce environmental science into the Geography curriculum may hold out promise.

TRADE-OFF 4: CURRICULUM DEPTH V BREADTH

Curriculum overcrowding is a challenge at both lower and upper secondary school levels. How many subjects, how many topics within each subject and the level at which the topics are to be taught are part of a perennial debate. The policy pendulum swings between a fewer subjects to allow more time to study knowledge at greater depths and more subjects to cover the full range of knowledge deemed necessary to become a productive and educated citizen. Many education systems periodically come under pressure to add new subjects to address morals, values, spirituality and patriotism. Without dropping established subjects, these demands exacerbate curriculum overcrowding.

The drawback of a small set of compulsory subjects, at the lower secondary school in particular, is that young people, particularly those who will only reach the end of the lower secondary phase, will have a little exposure to the diversity of knowledge and skills required to live in our contemporary world. The weakness of a large number of compulsory subjects at the lower secondary is that time often permits only superficial engagement; and education systems often have difficulty recruiting qualified teachers required to teach the specialist subjects. Solutions, such as creating new subjects that integrate with, or borrow from, traditional subjects (Social Studies as an amalgam of History, Geography and Civic Education) as an approach to the problem of overcrowding, has the potential danger of losing the internal integrity of the disciplines that are to be taught.

TRADE-OFF 5: COMPREHENSIVE SCHOOLS V SPECIALISED SCHOOLS

Another version of the tracking/streaming debate relates to policy options associated with secondary school type, on a continuum from comprehensive secondary school to specialised, or subject-focused, secondary schools. Holsinger and Cowell (2000) pose this as a question: "should nations have secondary schools that serve many purposes or separate secondary schools for each purpose?" Although not strictly a curriculum and assessment question, the choice of school type had significant curriculum

implications. Comprehensive schools that offer multiple curriculum streams, or tracks, are often seen as balancing choice with greatest possible inclusion. Specialised schools, particularly those that restrict entry, may be viewed as exclusionary. Specialised schools, however, may be better at linking students directly to the world of work and the specialised focus can provide schools with a distinctive mission around which to build a strong ethos. In Gauteng, South Africa, the provincial department has developed Schools of Specialisation, located adjacent to special economic zones. These schools concentrate on specific industrial or commercial fields. For example, a few kilometres from the major international airport, the province has repurposed a technical high school to focus on aeronautical engineering. Near the city theatre complex, the National School of the Arts, that specialise in Dance, Dramatic Arts, Visual Arts and Music, provides students with direct contact with the entertainment industry. Schools that concentrate on sports are often important incubators for students contemplating careers as professional athletes. One of the key issues in the trade-off between these school types are the costs and economies of scale.

TRADE-OFF 6: WESTERN V INDIGENOUS KNOWLEDGE SYSTEMS

This has been a re-occurring debate since the 1930s about whether and the degree to which the curriculum in sub-Saharan Africa education systems should focus on “Western” knowledge or Indigenous Knowledge Systems. Over the last two decades, the debate has pivoted with the emergence of dual hegemonies (Lee, 2017) of “Western” and the “Eastern” ideological systems. The effect of the dual hegemonies is to decentre the previous dominance of “Western” approaches and introduce new considerations to the debate about curriculum driven by external ideas versus curriculum built on indigenous knowledge systems.

As part of the debates about decolonising the curriculum, researchers are exploring ways in which indigenous and local knowledge can be meaningfully and powerfully infused into everyday subjects. This is most evident in the research in Botswana, which explores how indigenous botanical naming and related knowledge of the ecosystem can become an integral part of the subjects like Biology. Within History as a subject, the emphasis shifts to the dynamics and developments within African history.

It is likely that the trade-offs between the “Western” and the “African” knowledge systems will be influenced by the ongoing debates about decolonising the curriculum. That said, this tension is both about national policies and about the ways in which teachers creatively balance the tensions in their professional work.

TRADE-OFF 7: INTERNATIONAL V NATIONAL ASSESSMENT

Large-scale assessment initiatives that measure system-level learning outcomes have increased globally and have become common place in the primary school phase. In the main, sub-Saharan countries have not participated in international assessments (such as PISA and TIMSS), but there have been a number of national level initiatives that have been developed (the two case studies, Ethiopia and South Africa, have used national assessment testing at the secondary level). What are the trade-offs between international and national testing? The argument for international testing is that it

allows policy makers to measure their system-wide learning outcomes against outcomes in other countries. Participation in these rigorously designed and implemented studies can help build national capacity in all aspects of large-scale assessment of learning. These two arguments are currently being made for wide use of PISA-D. The argument against participation in international tests for countries in sub-Saharan Africa is both the high cost and the likelihood that many of these systems might score well below the minimum benchmark. Test outcomes with large floor effects provide little meaningful information about the characteristics of their students' academics strengths and deficits.

National testing systems have the advantage of being directly tailored to the national curriculum expectations and can provide meaningful information about regional learning differences by student characteristics and can be helpful for policy makers in signalling areas within the curriculum that need greater attention. The downside of national testing systems is that they can be misused for political purpose and they provide little insight into the comparative performance of secondary school learning – information that could be used by potential external investors.

TRADE-OFF 8: SCHOOL-BASED CONTINUOUS ASSESSMENT V HIGH STAKES PUBLIC EXAMINATIONS

High stakes public examinations are common capstone events in secondary schooling across the continent. As one of the most enduring components of the former colonial education systems, despite consistent criticism high stakes public examinations continue to play a central role in selection and signalling, but also in the “what” and “how” of secondary school teaching. This notwithstanding, there is a growing movement in many education systems towards alternative approaches to student evaluation. The most widespread is school-based continuous assessment, which, it is argued, more adequately represents students' learning achievements. Examinations conducted in a few hours can only capture a relatively limited perspective on what students have learnt and can do. Schools are often better at crafting assessments that are sensitive to the specific context or setting within which the learning takes place. Because of the constraints, most high stakes examinations are not able to test a range of tasks that we are increasingly concerned students have mastered, such as the ability to gather information from a range of sources (e.g. interviews or the internet), evaluate, synthesise and make a compelling argument. The structure of examinations limits these more complex learning tasks. Finally, schools performing high stakes continuous assessment also enhance the status of teachers as professionals.

The argument against school-based continuous assessment focuses primarily on the problems of reliability and validity. In this context, “reliability” refers to the degree to which the assessment judgement is consistent between different assessment instruments. “Validity” refers to the extent to which the assessment actually measures the knowledge and skills acquired. The concern is that it is difficult to ensure that one school uses the same standard and allocates the same mark for the same student achievement as another school. This is particularly important as students' assessment is used by employers and tertiary institutions for decisions that have lasting consequences. Research shows that there is a tendency in school-based continuous

assessment to inflate students' achievement levels – a trend that undermines the credibility of the assessment system.

As with all of the policy options on a spectrum with extremes at either side, there are a growing number of policy examples in the middle ground. In the context of assessment systems, a number of systems are exploring how the two forms of assessment can be used in complementary ways. This includes allocating a proportion of the final mark to school-based continuous assessment, with a strong emphasis on external moderation and statistical checks to minimise mark inflation.

Within the examination and assessment system, there are a range of additional policy options that can be considered. These include rethinking the minimum marks required to 'pass' subjects and combination of subjects. It also includes the possibility of different types of secondary education certification based on levels of achievement in public high stakes examinations. There is also the emerging issue of multiple examination authorities and the role that high cost 'international' examinations will have on the national examination systems.

TRADE-OFF 9: NATIONAL QUALIFICATIONS FRAMEWORKS

One of the major challenges in understanding policy and research into qualifications frameworks is that, on paper, they tend to look similar. In practice, they differ in a few key dimensions and researchers have attempted various ways of categorizing and analysing them. One clear distinction is between frameworks that are seen as a generator of learning and skills and those that are seen as a way of framing existing provision. It is clear more successes can be seen in the latter role. Frameworks differ in how comprehensive they are (the whole education and training system, or just specific parts of it; all qualifications, or only those within specific sectors); they differ in whether or not there is a qualifications authority that is specifically designated to create and oversee them; and they differ in whether they are created by an act of parliament or not. Sometimes, when policy makers invoke qualifications frameworks, they are really talking about accreditation and assessment arrangements. In other instances, the term is used as short-hand for the introduction of outcomes- or competence-based qualifications, often as a device for governing and quality assuring education provision. Another difference is how levels of qualifications are created – whether they are based on implicit understandings of qualifications, or based on official descriptors of levels.

Two clearly different examples of frameworks can be seen in South Africa and Scotland.

The South African framework can be considered the strongest example of an attempted framework to date – the clearest attempt in policy to design and implement all possible features of a framework. It was introduced through an act of parliament and was intended to replace all qualifications at all levels in all areas of the education system with a new set of outcomes-based qualifications, designed by new, representative structures, under a new institution – a qualifications authority. It brought into being new quality assurance bodies, as well as changing the roles of older ones. These bodies were supposed to accredit educational providers against the new outcomes-based

qualifications, register newly qualified assessors against newly developed standards of assessment and quality assure the outcomes of assessment. In its original design, these bodies needed themselves to be accredited by the qualifications authority. Nearly all of these features have been changed. The framework which was attempted was very complex and had so many features and terminology that were completely new and unfamiliar to the system. It also did not have intrinsic relationships with educational providers and was completely unsustainable. The substantive changes which it was introduced to bring about had to be abandoned. In short: the framework tried to make dramatic change and ended up being abandoned and changed itself.

The Scottish framework, in contrast, is seen as a success precisely because it was not introduced to make very big changes. It was led by educational institutions, in particular universities, was developed slowly over time, through discussion; worked with existing system; and framed existing provision, at the same time as trying to improve relationships between different parts of the system. It has not changed much in the education system, and has been, over time, accepted as part of the landscape.

While the discussion above has simplified the complex policy histories of the two countries described, the trade-off seems clear: a simple framework, which attempts to make clearer the relationships between existing qualifications and which frames the main national educational offerings of a country, can add some value. It will not achieve any dramatic policy goals, but nor is it likely to cause serious problems, or to collapse, be discredited, or waste scarce resources. A complex framework which is seen as a lever for educational change, a way of reforming provision, a mechanism for reorganizing the education and training system, is more likely to have all three of these undesirable effects. Further, a framework should not be seen as a finished or single 'tool', to be developed, plugged in and 'switched on', but as a process of attempting to rationalize qualifications in a country, through dialogue between those providing and issuing the qualifications, and working within the logic of the education and training system in question.

Conclusion

The aim of this background paper is to provide insights into developments in three key areas of secondary education policy for sub-Saharan Africa: curriculum reform; examinations and assessment systems; and National Qualifications Frameworks.

The evidence collected from research published in the past decade suggests that there has been extensive policy reform in the area of curriculum, much of which could be described as “big idea” reform. These ambitious curriculum reforms often associated with international movements, such as outcomes-based or curriculum based or, most recently, 21st Century skills, required substantive and comprehensive redesign of the curriculum – particularly a shift away from the emphasis on the acquisition of knowledge towards the acquisition of skills. A second curriculum movement, although not new, is associated with the vocationalization of the curriculum, i.e. attempts to introduce technical, vocational and/or occupational courses and streams within the secondary school curriculum.

A review of the research suggests that many of the “big idea” curriculum reforms have been less than successful. This literature tends to focus on the reasons for execution failure associated with insufficient planning, funding and resources being given the existing management, physical and human constraints. There is also an emerging critique of the shift towards skills in curriculum reform proposals from scholars that argue that schools are purpose-built to teach what they refer as “powerful knowledge”, i.e. the conventional secondary school subjects.

Within the examinations and assessment area, there is recognition of the ubiquitous role that high stakes examinations continue to play in secondary education in Africa; and there is wide agreement on the need to improve and upgrade the “what” and the “how” of public examinations. Two key policy directions are being discussed: the need to incorporate continuous assessment as the part of the high stakes processes; and the use (and misuse) of international and national standardized sample testing to provide insight into secondary education system performance.

Finally, with reference to the qualifications frameworks, the research shows that, while they may play a role in benchmarking qualifications, in and of themselves they are unlikely to make a major contribution to either improving secondary education or its efficient articulation with the labour market.

Although secondary education curriculum reform, reforms to the examination and assessment systems, or the establishment of qualification frameworks, are unlikely, on their own, to be major catalysts for economic development, or lead to the reduction of youth unemployment, the research does show the urgent need for long-term and sustained investment to continually improve and upgrade both national curricula and examinations/assessment systems. Each education system in countries in the region, given their unique needs and constraints, requires careful analysis of the trade-offs associated with both curriculum and assessment reform options.

References and Bibliography

- Abbott, P (2017) Review of "The Orderly Entrepreneur: Youth, Education and Governance in Rwanda" in *Journal of Development Studies*, 54(7), pp. 1274–1275
- Adamu, A. Y. (2015). The Contribution of Credit Accumulation and Transfer System: Lessons to the Ethiopian National Qualifications Framework. *Bahir Dar Journal of Education*, 15(1).
- ADEA. (2015). *Harmonization of higher Education in Africa or why we need to hang in there together...* Dakar: Association for the Development of Education in Africa.
- Adepoju, T. L. (2017). Planning and policy implementation for renewal and paradigm shift in the curriculum contents in Nigeria. *Bulgarian Journal of Science & Education Policy*, 11(1).
- Adeyonu, A. G., & Carim-Sanni, A. (2015). Assessment of the New Trade/Entrepreneurship Education in Senior Secondary Schools: Evidence from Rural and Urban Areas of Oyo State, Nigeria. *British Journal of Education, Society & Behavioural Science*, 5(1), 50-61.
- Akalu, G. (2014). Higher Education in Ethiopia: Expansion, Quality Assurance and Institutional Autonomy. *Higher Education Quarterly*, 68(4), 394–415
- Akyeampong, K. (2014). Reconceptualised life skills in secondary education in the African context: Lessons learnt from reforms in Ghana. *International Review of Education*, 60(2), 217-234.
- Alderuccio, M. C. (2010). An investigation of global/local dynamics of curriculum transformation in Sub-Saharan Africa with special reference to the Republic of Mozambique. *Compare*, 40(6), 727–739.
- Allais, S. (2018) Skills formation in African countries: Insights from Ethiopia, Ghana and South Africa. Paper for the conference of the International Initiative for Promoting Political Economy, Pula, 12-14 September 2018.
- Allais, S. (2006). Problems with qualification reform in senior secondary education in South Africa. *Knowledge, curriculum and qualifications for South African further education*, 11-45.
- Allais, S. (2012). Claims vs. practicalities: lessons about using learning outcomes. *Journal of Education and Work*, 25(3), 331-354..
- Allais, S. (2014). Something Borrowed, Something Sold. In *Selling Out Education* (pp. 77-111). SensePublishers, Rotterdam
- Allais, S. (2017a). Labour market impact of National Qualification Frameworks in six countries. *International Labour Organization, Geneva*.
- Allais, S. (2017b). What does it mean to conduct research into qualifications frameworks?. *Journal of Education and Work*, 30(7), 768-776.

- Allais, S. (2010). Outcomes-based education: understanding what went wrong. In Y. Shalem & S. Pendlebury (Eds.), *Retrieving Teaching: critical issues in curriculum, pedagogy and learning*. Cape Town: Juta.
- Allais, S. (2011). What is a National Qualifications Framework? Considerations from a Study of National Qualifications Frameworks from 16 Countries/ Kaj je nacionalo ogrodje kvalifikacij? Poudarki iz raziskave o nacionalnih ogrodjih kvalifikacij v 16 drzavah. *Journal of Contemporary Educational Studies/ Sodobna Pedagogika*, 5, 88 – 124.
- Aloovi, O. A. (2016). *Biology teachers' lived experiences of the Namibian Senior Secondary Certificate (NSSC) curriculum* (Doctoral dissertation, Stellenbosch: Stellenbosch University).
- Altbeker, A., & Bernstein, A. (2017). No country for young people: The crisis of youth unemployment and what to do about it. <http://www.cde.org.za/wp-content/uploads/2017/08/CDE-EU-publication-No-country-for-young-people.pdf>
- Altinyelken, H. K. (2015). Evolution of curriculum systems to improve learning outcomes and reduce disparities in school achievement. *Background paper for EFA Global Monitoring Report*.
- Altinyelken, H. K. (2010) Curriculum change in Uganda: Teacher perspectives on the new thematic curriculum. *International Journal of Educational Development*, 30(2), 151–161.
- Alufohai, P. J. (2016). Knowledge and Attitude of Public Secondary School Teachers Towards Continuous Assessment Practices in Edo Central Senatorial District. *African Research Review*, 10(4), 127-143.
- Amadio, M., Opertti, R., & Tedesco, J. C. (2015). The Curriculum in Debates and in Educational Reforms to 2030: For a Curriculum Agenda of the Twenty-First Century. IBE Working Papers on Curriculum Issues No. 15. *UNESCO International Bureau of Education*.
- Amsden, A. H. (2010). Say's law, poverty persistence, and employment neglect. *Journal of human development and capabilities*, 11(1), 57-66.
- Anderson-Levitt, K. (2017). Global Flows of Competence-based Approaches in Primary and Secondary Education. *Cahiers de la recherche sur l'éducation et les savoirs*, (16), 47-72.
- Arrey-Ndip, N. A. (2018). Risks and Uncertainties in Vocational Education in Africa. In *Risk, Education and Culture* (pp. 116-133). Routledge.
- Arthur-Mensah, N., & Alagaraja, M. (2018). Examining training and skills development of youth and young adults in the Ghanaian context: an HRD perspective. *Human Resource Development International*, 1-16.
- Awoniyi, F. C. (2016). The Understanding of senior high school mathematics teachers of school-based assessment and its challenges in Cape Coast metropolis. *British Journal of Education*, 4(10), 22-38.

- Balwanz, D. (2016). The discursive hold of the matric: Is there space for a new vision for secondary education in South Africa. In *The Global Testing Culture: shaping education policy, perceptions, and practice*. Oxford: Symposium Books.
- Bansilal, S. (2017). The difficulty level of a national assessment of Grade 9 mathematics: The case of five schools. *South African Journal of Childhood Education*, 7(1), 1-8.
- Barrett, A. M. (2017). Making secondary education relevant for all: reflections on science education in an expanding sub-sector. *Compare: A Journal of Comparative and International Education*, 47(6), 962-978.
- Barrett, A. M., & Bainton, D. (2016). Re-interpreting relevant learning: an evaluative framework for secondary education in a global language. *Comparative Education*, 52(3), 392-407.
- Biao, I. (2018). Supplying Basic Education and Learning to Sub-Saharan Africa in the Twenty-First Century. *World Journal of Education*, 8(2), 181.
- Blom, R., Parker, B., & Keevy, J. (2007). The recognition of non-formal and informal learning in South Africa: Country Background Report prepared for the OECD Thematic Review on Recognition of Non-Formal and Informal Learning. SAQA.
- Boayue, N. M. (2014). *An exploration of the challenges of access and retention: Reintegrating former refugee and internally displaced girls into secondary school in post-conflict Liberia* (Master's thesis, Oslo and Akershus University College).
- Bofah, E. A. T., & Hannula, M. S. (2015). TIMSS data in an African comparative perspective: Investigating the factors influencing achievement in mathematics and their psychometric properties. *Large-scale Assessments in Education*, 3(1), 4.
- Bohlinger, S. (2007). Competences as the core element of the European Qualifications Framework. *European Journal of Vocational Training*, 2007/3-2008/1(42/43), 96-112.
- Bohlinger, S. (2012). Qualifications frameworks and learning outcomes: challenges for Europe's lifelong learning area. *Journal of Education and Work*, 25(3), 279-297.
- Bouder, A. (2003). Qualifications in France: towards a national framework? *Journal of Education and Work*, 16(3), 347-356.
- Brown, A. (2011). Lessons from Policy Failure: The Demise of a National Qualifications Framework Based Solely on Learning Outcomes in England. *Journal of Contemporary Educational Studies*, 62(5), 36-55.
- Brown, A. N., Rankin, K., Picon, M., & Cameron, D. B. (2015). The state of evidence on the impact of transferable skills programming on youth in low-and middle-income countries. *New York: Columbia University*.
- Brown, G. M. (2016). Perspective of Science Education in Nigeria. *International Journal of Sustainable Development*, 11(2), 01-04.
- Browne, E. (2016). Evidence on Formative Classroom Assessment for Learning. K4D Helpdesk Report. Brighton, UK: Institute of Development Studies
- Burke, J. W. (Ed.). (1989). *Competency based education and training*. Psychology Press.

- Care, E., & Anderson, K. (2016). How education systems approach breadth of skills. *Washington, DC: Center for Universal Education at Brookings.*
- Carnoy, M. (2015). International Test Score Comparisons and Educational Policy: A Review of the Critiques. National Education Policy Center.
- Chauke, P. K., & Kabiti, H. M. (2016). Teachers' Perceptions on Agricultural Science Curriculum Evolvement, Infrastructure Provision and Quality Enhancement in Limpopo Province, South Africa. *International Journal of Educational Sciences, 14(1-2)*, 93-101.
- Cheng, X., & Omoeva, C. (2014). EPDC National Learning Assessments Mapping project: Key findings. <https://www.epdc.org/epdc-data-points/epdc-national-learningassessments-mapping-project-key-findings>
- Chirwa, G. W. (2015). *An illuminative evaluation of the standard 7 and 8 expressive arts curriculum in Malawi* (Doctoral dissertation).
- Chisholm, L. (2007). Diffusion of the National Qualifications Framework and Outcomes-Based Education in Southern and Eastern Africa. *Comparative Education, 43(2)*, 295–309.
- Chisholm, L., & Leyendecker, R. (2008). Curriculum reform in post-1990s Sub-Saharan Africa. *International Journal of Educational Development, 28(2)*, 195-205.
- Chisholm, L., Volmink, J., Ndhlovu, T., Potenza, E., Mahomed, H., Muller, J., ... & Mphahlele, L. (2005). A South African curriculum for the twenty first century. *Report of the review committee on Curriculum.*
- Clausen-May, T., & Baale, R. (2014). Mathematics curriculum reform in Uganda—what works in the classroom? In *British Congress in Mathematics Education (BCME), Nottingham.*
- Clegg, A, Bregman, J, Ottevanger, W (2008) Uganda Secondary Education and Training Curriculum, Assessment and Examination Roadmap for Reform. Washington, DC: The World Bank, Association for the Development of Education in Africa.
- Cowell, R.N. (1993). Secondary education curriculum design and development, Education and Social Policy Department, April. Washington, D.C.: The World Bank.
- Crimson (2018) The IB Scores Needed for the Top Universities in the World (www.crimsoneducation.org/uk/blog/ib-scores accessed 19 January 2019)
- Cuadra, E, Moreno, JM (2005) Expanding Opportunities and Building Competencies for Young People: A New Agenda for Secondary Education. World Bank.
- Cunningham, R (2018). Busy going nowhere: Curriculum reform in Eastern and Southern Africa. UNICEF Think Piece Series: Curriculum Reform. UNICEF Eastern and Southern Africa Regional Office, Nairobi
- Dagneu, A. (2017). The Status of continuous assessment and the major hindering factors in Awi Zone secondary schools, Ethiopia,. *International Journal of Research in Management & Social Science, 53.*
- Daily Nation (Kenya) 27 December 2017.

- Dalberg, (2014) Transforming Secondary Education in Nigeria: supporting vocational/technical curriculum rollout. <https://www.dalberg.com/our-ideas/transforming-secondary-education-nigeria>
- Dessie, A. A., & Heeralal, P. J. H. (2016). Integrating Assessment with Instruction: Science Teachers Practice at East Gojjam Preparatory Schools, Amhara Regional State, Ethiopia. *International Journal for Innovation Education and Research*, 4(10), 53-69.
- Dlamini, B., Bhebhe, S., & Dlamini, P. (2018) The unfolding of Competency-based Education Process in Swaziland 2010-2017. *Journal of Humanities and Social Sciences*. 2(5), 27-41.
- Education for All: Youth and Skills: Putting Education to Work. Paris: UNESCO, 2012. Print. EFA Global Monitoring Report.
- Ensor, P. (2003). The National Qualifications Framework and Higher Education in South Africa: some epistemological issues. *Journal of Education and Work*, 16(3), 325-346.
- Esongo, N. M. (2017). Correlation between the Availability of Resources and Efficiency of the School System within the Framework of the Implementation of Competency-Based Teaching Approaches in Cameroon. *Journal of Education and Practice*, 8(2), 82-92.
- Ethiopia Ministry of Education (2009) Curriculum Framework for Ethiopian Education (KG – Grade 12)
- Ethiopia Ministry of Education (2017) Regional Workshop on National Learning Assessment Systems in sub-Saharan Africa. http://education2030-africa.org/images/talent/atelier061217/PPT_Ethiopia.pdf
- Ethiopia Ministry of Education. (2016). Education Statistics Annual Abstract, 2007 E.C. (2014/15). Retrieved from www.moe.gov.et
- Ethiopia Ministry of Education. (2017). Education Statistics Annual Abstract, 2008 E.C. (2015/16). Retrieved from www.moe.gov.et accessed 2 August 2018
- Ethiopian Ministry of Education (2018) Ethiopian Education Development Roadmap (2018-30)
- Fichtner, S. (2015). What's in the Gap and What's in a Copy? *Revue Tiers Monde*, (3), 165-182.
- Fleisch, B., & Schöer, V. (2014). Large-scale instructional reform in the Global South: insights from the mid-point evaluation of the Gauteng Primary Language and Mathematics Strategy. *South African Journal of Education*, 34(3).
- Fleisch, B., Schöer, V., Roberts, G., & Thornton, A. (2016). System-wide improvement of early-grade mathematics: New evidence from the Gauteng Primary Language and Mathematics Strategy. *International Journal of Educational Development*, 49, 157-174.
- Forster, P. (1965a). *Education and Social Change in Ghana*. London: Routledge.
- Forster, P. (1965b). *The Vocational School Fallacy in Development Planning*. In A. A. Anderson & M. J. Bowman (Eds.), *Education and Economic Development*. Chicago: Aldine.

- Fredriksen, B., & Fossberg, C. H. (2014). The case for investing in secondary education in Sub-Saharan Africa (SSA): challenges and opportunities. *International Review of Education*, 60(2), 235-259.
- Gardner, T (2017) Ethiopia's remarkable education statistics mask a system in crisis. <https://qz.com/africa/1163797/ethiopias-remarkable-education-statistics-mask-a-system-in-crisis>.
- Gasanabo, J. D., Mutanguha, F., & Mpayimana, A. (2016). Teaching about the holocaust and genocide in Rwanda. *Contemporary Review of the Middle East*, 3(3), 329-345.
- Gauteng Department of Education (2016) Schools of Specialisation. http://www.bridge.org.za/wp-content/uploads/2016/03/Schools-of-Specialisation-02_03_16.pdf
- Gauthier, R. F. (2013). The competency-based approach to curriculum reform in five African countries: What can we learn from the 2008–2009 evaluation?. *Prospects*, 43(4), 429-439.
- Gbre-eyesus, M. T. (2017). Achieving Universal General Secondary Education in Ethiopia in line with the middle-income country vision: a reality or a dream? *Africa Education Review*, 14(1), 171–192.
- Georgescu, D., Stabback, P., Jahn, K., Ag-Muphtah, E., & de Castro, P (2009). Preparation for Life and Work. http://www.ibe.unesco.org/fileadmin/user_upload/Publications/Thematic_studies/IBE-GTZ_Preparation_for_life_and_work.pdf
- Clegg, A., Bregman, J., & Ottevanger, W. (2012). Uganda-Secondary Education and Training: Curriculum, Assessment and Examination (CURASSE): Roadmap for Reform. *Washington DC: World Bank*. Retrieved May, 11, 2015.
- Glewwe, P, Kremer, M, Moulin, S (2009) Many children left behind? Textbooks and test scores in Kenya. *American Economic Journal: Applied Economics* 1(1): 112–135.
- Gora, R. B. (2017). (Re-) Integrating African Languages into the Zimbabwean School Curriculum. In *Re-thinking Postcolonial Education in Sub-Saharan Africa in the 21st Century* (pp. 141-158). SensePublishers, Rotterdam.
- Gössling, B. (2015). All new and all outcome-based? The German qualifications framework and the persistence of national governance approaches. *Journal of Education and Work*, 1–22. <https://doi.org/10.1080/13639080.2014.998181>
- Grant, M. J. (2017). De Facto Privatization and Inequalities in Educational Opportunity in the Transition to Secondary School in Rural Malawi. *Social Forces*, 96(1), 65-90.
- Granville, G. (2003). “Stop Making Sense”: chaos and coherence in the formulation of the Irish qualifications framework. *Journal of Education and Work*, 16(3), 259–270.
- Grassick, L., & Wedell, M. (2018). Temporal Dissonance, Contextual Confusion and Risk: Learning from the Experiences of Teachers Living with Curriculum Change. In *International Perspectives on Teachers Living with Curriculum Change* (pp. 247-270). Palgrave Macmillan, London.

- Guthrie, G. (2017). The failure of progressive paradigm reversal. *Compare: A Journal of Comparative and International Education*, 47(1), 62-76.
- Harber, C. (2017). Curriculum and Assessment. *Schooling in Sub-Saharan Africa: Policy, Practice and Patterns*. Springer.
- Harley, K., Barasa, F., Bertram, C., Mattson, E., & Pillay, S. (2000). "The real and the ideal": teacher roles and competences in South African policy and practice. *International Journal of Educational Development*, 20(4), 287-304.
- Higgs, P., & Keevy, J. (2007). The reliability of evidence contained in the National Qualifications Framework Impact Study: A critical reflection. *Perspectives in Education*, 25(4), 1-12.
- Higgs, P., & Keevy, J. (2009). Qualifications frameworks in Africa: a critical reflection. *South African Journal of Higher Education*, 23(4), 690-702.
- Holsinger, D. B., & Cowell, R. N. (2000). Positioning secondary school education in developing countries. *Series Policies and Strategies for Secondary education, International Institute for Educational Planning, UNESCO, Paris*.
- Honeyman, C. A. (2016). *The orderly entrepreneur: youth, education, and governance in Rwanda*. Stanford University Press.
- Hooker, M. (2017). *A Study on the Implementation of the Strengthening Innovation and Practice in Secondary Education Initiative for the preparation of Science, Technology, English and Mathematics (STEM) Teachers in Kenya to integrate Information and Communication Technology (ICT) in Teaching and Learning* (Doctoral dissertation, Queen's University Belfast).
- Howell, C., & Sayed, Y. (2018). Improving Learning through the CPD of Teachers: Mapping the Issues in Sub-Saharan Africa. *Continuing Professional Teacher Development in Sub-Saharan Africa: Improving Teaching and Learning*, 15.
- Howie, S. (1997). Mathematics and Science Performance in the Middle School Years in South Africa: A Summary Report on the Performance of South African Students in the Third International Mathematics and Science Study (TIMSS).
- Howie, S. J. (2000). TIMSS in South Africa The Value of International Comparative Studies for a Developing Country. In *Learning from others* (pp. 279-301). Springer, Dordrecht.
- Howie, S. J. (2003). Language and other background factors affecting secondary pupils' performance in Mathematics in South Africa. *African Journal of Research in Mathematics, Science and Technology Education*, 7(1), 1-20.
- Hupfer, B., & Spöttl, G. (2014). *Qualifications Frameworks and the Underlying Concepts of Education and Work - Limits and Perspectives*. Bremen: Institut Technik und Bildung.
- International Bureau of Education (2019) 21st Century Skills. <http://www.ibe.unesco.org/en/glossary-curriculum-terminology/t/twenty-first-century-skills> (accessed 8 January 2019).

International Education News <https://internationalednews.com/2015/10/28/learning-from-successful-education-reforms-in-ontario/> on October 28, 2015; extracted on January 15th 2019.

IOL News (1 June 2018) <https://www.iol.co.za/the-star/news/history-to-become-a-compulsory-subject-from-2023-15261637>

Iyabo, S (2014) Learners' Accessibility to Trade Subjects and Resources for Implementation of Senior Secondary School Trade Curriculum in Bosso Local Government Area of Niger State, *Journal of Resourcefulness and Distinction*, 9(1) 1-11.

Jaftha, C., & Samuels, J. (2017). *SADC Qualifications Framework (SADCQF). Building trust for better movement*. Pretoria: South African Qualifications Authority.

Jansen, J. D. (1998). Curriculum reform in South Africa: A critical analysis of outcomes-based education. *Cambridge Journal of Education*, 28(3), 321-331.

Joshi, R., & Verspoor, A. (2012). Secondary education in Ethiopia: Supporting growth and transformation. The World Bank.

Jotia, A. L., & Boikhutso, K. (2016). Two worlds apart in Botswana's education system: Lessons from the 2010 examinations crisis. In *Annual Review of Comparative and International Education 2015* (pp. 251-278). Emerald Group Publishing Limited.

Juan, A., Reddy, V., Zuze, T. L., Wokadala, C., & Hannan, S. (2016). Does it matter whether students enjoy learning science?: exploring student attitudes towards science in South Africa.

Kakupa, P. (2017). The vocationalization policy in Zambia's secondary education sector: A critical analysis. *International Journal of Vocational and Technical Education*, 9(4), 31-39.

Kanjee, A., & Molo, Q. (2014). South African teachers' use of national assessment data. *South African Journal of Childhood Education*, 4(2), 90-113.

Kanjee, A., & Sayed, Y. (2013). Assessment policy in post-apartheid South Africa: Challenges for improving education quality and learning. *Assessment in Education: Principles, Policy & Practice*, 20(4), 442-469.

Karuku, S., & Tennant, G. (2016). Towards a Harmonized Curriculum in East Africa: A Comparative Perspective of the Intended Secondary School Mathematics Curriculum in Kenya, Rwanda, Tanzania and Uganda. In *Mathematics Education in East Africa* (pp. 9-25). Springer, Cham.

Kaviti, L. (2018) The New Curriculum of Education in Kenya: A Linguistic and Education Paradigm Shift. *Journal of Humanities and Social Science* 23(1) 84-9.

Keating, J. (2003). Qualifications frameworks in Australia. *Journal of Education and Work*, 16(3), 271-288.

Keevy, J. (2006). The South African National Qualifications Framework as key driver for the development of qualifications frameworks in the Southern African Development Community. In Umalusi (Ed.), 4th Sub-Regional Conference on Assessment in Education (pp. 1-16). University of Johannesburg: Umalusi.

- Keevy, J. (2011). *The recognition of qualifications across borders: the contribution of regional qualifications frameworks*. Paper prepared as input to the UNESCO World Report on TVET, October 2011.
- Kellaghan, T., & Greaney, V. (2003). Monitoring performance: Assessment and examinations in Africa. *Background paper commissioned by ADEA in the framework of The Challenge of Learning Study*. Paris: ADEA.
- Kenya Institute of Curriculum Development. (2016) Basic Education Curriculum Framework. <http://www.education.go.ke/index.php/downloads/file/315-basic-education-curriculum-framework>
- Khau, M. (2016). Journeying into the past: Lesotho sexuality education curriculum history. *Southern African Review of Education with Education with Production*, 22(1), 98-114.
- Komba, S. C., & Mwandaji, M. (2015). Reflections on the implementation of competence based curriculum in Tanzanian secondary schools. *Journal of Education and Learning*, 4(2), 73.
- Kontle, B. (2017). *An investigation of the assessment of the continuous assessment portfolio component of art, craft and designs in Botswana junior secondary schools* (Doctoral dissertation, University of Cape Town).
- Koosimile, A. T., & Suping, S. M. (2015). An examination of the influence of globalisation on science education in Anglophone Sub-Saharan Africa. *International Journal of Science Education*, 37(14), 2358-2385.
- Kopweh, P. S. (2014). *Curriculum development in Tanzania: an investigation of the formulation, management and implementation of the 2005 curriculum reform in selected disadvantaged districts* (Doctoral dissertation, University of Glasgow).
- Lai, E. R., & Viering, M. (2012). Assessing 21st Century Skills: Integrating Research Findings. *Pearson*.
- Lassnigg, L. (2012). 'Lost in translation': learning outcomes and the governance of education. *Journal of Education and Work*, 25(3), 299–330. <https://doi.org/10.1080/13639080.2012.687573>
- Lassnigg, L (2015) Competence-based education and educational effectiveness: A critical review of the research literature on outcome-oriented policy making in education. Institute for Advanced Studies, Vienna.
- Lauglo, J. (2010). Revisiting the vocational school fallacy: a tribute to Philip Foster. *Comparative Education*, 46(2), 223–235.
- Lee, D. H. L. (2017). *Managing Chineseness: Identity and ethnic management in Singapore*. London: Palgrave Macmillan.
- Lester, S. (2011). The UK Qualifications and Credit Framework: a critique. *Journal of Vocational Education and Training*, 63(2), 205–216.

- Lewin, K., and Françoise C. (2016) Financing Secondary Education in Developing Countries: Strategies for Sustainable Growth. Paris: UNESCO, International Institute for Educational Planning, 2001. UNESCO. Web. 9 Apr. 2016
- Leyendecker, R. W., Ottevanger, W., & van den Akker, J. (2008) *Curricula, examinations, and assessment in secondary education in Sub-Saharan Africa*. The World Bank.
- Lijing, J., & Yingnan, J. (2017). Multi-Interpretation of Program for International Student Assessment (PISA). *US-China Education Review*, 7(2), 98-104.
- Lockheed, M. (2013, May). Causes and consequences of international assessments in developing countries. In *PISA, Power, and Policy the emergence of global educational governance*. Oxford: Symposium Books.
- Mabejane, M. R. (2015). Science teacher training within the education system in Lesotho and the realities on the ground. *Educational Journal of the University of Patras UNESCO Chair*.
- Mamba, D., & Putsoa, B. (2018). Secondary School Science Teachers' Knowledge and Implementation of Effective Teaching Strategies in High-performing Schools in Swaziland. *African Journal of Research in Mathematics, Science and Technology Education*, 22(1), 14-26.
- Maphalala, M. C., & Mncube, D. W. (2017). Standardised testing in South Africa: the annual national assessments under the microscope. *Gender and Behaviour*, 15(4), 10321-10332.
- Marock, C. (2011). "The NQF in Mauritius." *Journal of Education and Work* 24 (3-4): 409-427.
- Matemba, Y. H., & Lilemba, J. M. (2015). Challenging the Status Quo: Reclaiming Indigenous Knowledge through Namibia's Postcolonial Education System. *Diaspora, Indigenous, and Minority Education*, 9(3), 159-174.
- Mbarushimana, N., & Kuboja, J. M. A paradigm shift towards competence based curriculum: The Experience of Rwanda. *Saudi Journal of Business and Management Studies* (1)1, 6-17.
- Méhaut, P., & Winch, C. (2012). The European qualifications framework: skills, competences or knowledge? *European Educational Research Journal*, 11(3), 369-381.
- Meleta, F. E., & Zhang, W. (2017). Comparative Study on the Senior Secondary School Mathematics Curricula Development in Ethiopia and Australia. *Journal of Education and Practice*, 8(5), 30-41.
- Migosi, J. (2017). Secondary education quality improvement project (SEQIP) vulnerable and marginalised groups framework (VMGF)
- Milligan, L. O. (2017). Education quality and the Kenyan 8-4-4 curriculum: Secondary school learners' experiences. *Research in Comparative and International Education*, 12(2), 198-212.

- Mlangeni, A. T. N., Chibaya, S. B., Kaperemera, N., Kamundi, E. A., Malinda, E., & Kapito, N. (2015). Investigating Agriculture Teacher Shortage in Secondary Schools in Malawi. *Journal of Studies in Education*, 5(2), 224-237.
- Modise, A. M. (2016). Pedagogical Content Knowledge Challenges of Accounting Teachers. *International Journal of Educational Sciences*, 13(3), 291-297.
- Mohamed, M., & Karuku, S. (2017). Implementing a Competency-Based Curriculum in Science Education. In *The World of Science Education* (pp. 101-118). SensePublishers, Rotterdam.
- Mulongo, G. (2017). *Cross-national learning assessments: relationship to educational policy curriculum and capacity development in Kenya, Tanzania and South Africa* (Doctoral dissertation).
- Muneja, M. S. (2015). *Secondary school teachers' implementation of the competency-based curriculum in the Arusha Region, Tanzania* (UNISA: Doctoral dissertation).
- Muskin, J. A. (2017). Continuous Assessment for Improved Teaching and Learning: A Critical Review to Inform Policy and Practice. <https://unesdoc.unesco.org/ark:/48223/pf0000255511>
- Mutereko, S. (2018). Marketisation, managerialism and high-stake testing: A tale teachers' views on national assessments in South Africa. *International Journal of Educational Management*, 32(4), 568-579.
- Namuddu, K., Jain, N., & Adamson, B. (2017). Systemic Curricular Change. In *Bridging the Skills Gap* (pp. 55-75). Springer, Cham.
- NECT (2017) NECT Education Policy Dialogue, Curriculum Thematic Area/ June 2017
- Newman, C., Page, J., Rand, J., Shimeles, A., Söderbom, M., & Tarp, F. (Eds.). (2016). *Manufacturing Transformation - Comparative Studies of Industrial Development in Africa, and Emerging Asia*. New York: Oxford University Press
- Nforbi, E. & Siewoue, M (2015). Perspectives for the Competence-based Approach with entry through real life situations in the teaching of Cameroon Francophone secondary schools. *Cameroon Journal of Language Education* <http://mbsiewoue.over-blog.com/2015/07/perspectives-forthe-competence-based-approach-with-entry-through-real-life-situationsin-the-teaching-of-english-in-cameroonfrancopho>
- Nherera, C. M. (2018). Rethinking Technical and Vocational Education and Training in the Context of the New Curriculum Framework for Primary and Secondary Education 2015-2022 in Zimbabwe. *Zimbabwe Journal of Educational Research*, 30(1).
- Nherera, C. M. (2000). Globalisation, Qualifications and Livelihoods: The case of Zimbabwe. *Assessment in Education: Principles, Policy & Practice*, 7(3), 335-362. <https://doi.org/10.1080/09695940050201343>
- Nigeria Education Research and Development Council (NERDC) (2018) New Curriculum Subjects <http://www.nerdc.org.ng/eCurriculum/CurriculumStructure.aspx>

- Nsengimana, T., Ozawa, H., & Chikamori, K. (2014). The implementation of the new lower secondary science curriculum in three schools in Rwanda. *African Journal of Research in Mathematics, Science and Technology Education*, 18(1), 75-86.
- Odili, J. N. (2014). Assessing Secondary School Teachers' Competences in Continuous Assessment Skills in Delta State, Nigeria. *US-China Education Review B*, 4(1), 46-55.
- Oketch, M. (2014). Education policy, vocational training, and the youth in Sub-Saharan Africa. (*WIDER Working Paper No. 2014/069*).
- Okoth, T. A. (2016). Challenges of Implementing a Top-Down Curriculum Innovation in English Language Teaching: Perspectives of Form Iii English Language Teachers in Kenya. *Journal of Education and Practice*, 7(3), 169-177.
- Okoye, K. R., & Udouo, E. S. (2015). Vocationalisation of Secondary Education in Nigeria: Issues, Challenges and Prospects. *Journal of Education and Practice*, 6(30), 71-76.
- Operti, R. (2008). Competency-based curriculum development: some lessons from other regions. *Working Document. ADEA Biennale on Post-Primary Education, Maputo, Mozambique, May. Paris, ADEA*.
- Osadebe, P. U., & Abel, U. O. (2018). Assessment of Teachers' Implementation Of Continuous Assessment In Senior Secondary Schools In Delta Central Senatorial District. *Advances in Social Sciences Research Journal*, 5(7).
- Oyugi, J. L. (2015). Rational and Challenges of Competency-Based Education and Training: The "Wickedness" of the Problem. *Journal of Education and Practice*, 6(14), 74-78.
- Pedzisai, C., Tsvere, M., & Nkhonde, M. (2014). The Zimbabwe two pathway education curriculum: insights into policy implementation challenges and opportunities. *International Journal of Advanced Research in Management and Social Sciences*, 3(5), 162-172.
- Phillips, D. (2003). Lessons from New Zealand's National Qualifications Framework. *Journal of Education and Work*, 16(3), 289-304.
- Pilcher, N., Fernie, S., & Smith, K. (2015). The impact of National Qualifications Frameworks: by which yardstick do we measure dreams? *Journal of Education and Work*, 30(1), 1-12. <https://doi.org/10.1080/13639080.2015.1122178>
- Pillai, S (ed.) (2001) Strategies for introducing new curricula in West Africa. Final report of the seminar/workshop held in Lagos, Nigeria. Nigeria: International Bureau of education Nigerian National Commission for UNESCO Federal Ministry of Education, Nigeria.
- Portnoi, L. M. (2016). Patterns of Educational Reform and Policy Borrowing. In *Policy Borrowing and Reform in Education* (pp. 175-198). Palgrave Macmillan, New York.
- Prinsloo, C. H., Harvey, J. C., Mosimege, M., Beku, U., Juan, A., Hannan, S., & Zulu, N. (2017). TIMSS item diagnostic report: South Africa: Grade 9 Science.

- Pritchett, L, & Beatty, A (2015) Slow down, you're going too fast: Matching curricula to student skill levels. *International Journal for Educational Development* 40: 276–288.
- Pryor, J., Akyeampong, K., Westbrook, J., & Lussier, K. (2012). Rethinking teacher preparation and professional development in Africa: An analysis of the curriculum of teacher education in the teaching of early reading and mathematics. *Curriculum Journal*, 23(4), 409-502.
- Raffe, D. (2003). Pathways linking education and work: A review of concepts, research, and policy debates. *Journal of Youth Studies*, 6(1).
- Raffe, D. (2011). Are 'communications frameworks' more successful? Policy learning from the Scottish Credit and Qualifications Framework. *Journal of Education and Work*, 24(3–4), 283–302. <https://doi.org/10.1080/13639080.2011.584687>
- Raffe, D. (2012). What is the evidence for the impact of National Qualifications Frameworks? *Comparative Education*, 49(2), 143–162. <https://doi.org/10.1080/03050068.2012.686260>
- Ramakhanya, T. E., Runhare, T., & Mulaudzi, P. (2014). Teachers' reflections on their conceptualisation and utilisation of continuous assessment within an outcomes-based education (OBE) context: The South African experience. *Journal of Educational Studies*, 13(1), 186-215.
- Ramalepe, M. L. (2015). A Model for a Successful Implementation of Continuous Assessment in Limpopo Secondary Schools. *Mediterranean Journal of Social Sciences*, 6(1), 578.
- Ramdass, R., Rahman, A., & Nellikunnel, S. (2015). Modelling critical success factors for a national qualifications framework: a case study on Mauritius. *International Journal of Modelling in Operations Management*, 5(3-4), 209-235.
- Rankin, K et al. (2015). Youth and transferable skills. 3ie report.
- Raselimo, M. (2014). Integration of environmental education into geography lessons: is there change in school geography following the LEESP intervention? *South African Geographical Journal*, 96(2), 119-133.
- Raselimo, M. (2017). Situating the Lesotho secondary school geography in curriculum relevance debate. *International Research in Geographical and Environmental Education*, 26(2), 121-134.
- Raselimo, M., & Mahao, M. (2015). The Lesotho curriculum and assessment policy: Opportunities and threats. *South African Journal of Education*, 35(1), 01-12
- Reddy, V. (2006). *Mathematics and science achievement at South African schools in TIMSS 2003*. HSRC Press.
- Reddy, V., Visser, M., Winnaar, L., Arends, F., Juan, A. L., Prinsloo, C., & Isdale, K. (2016). TIMSS 2015: Highlights of mathematics and science achievement of grade 9 South African learners.
- Reddy, V., Zuze, T. L., Visser, M., Winnaar, L., Juan, A., Prinsloo, C. H., ... & Rogers, S. (2015). Beyond benchmarks: What twenty years of TIMSS data tell us about South African education. HSRC Press.

Rutayuga, A. B. (2014). *The emerging Tanzanian concept of competence: conditions for successful implementation and future development* (Doctoral dissertation, Institute of Education, University of London).

Rwanda Ministry of Education (2015) Summary of Curriculum Framework Pre-primary to Upper Secondary.

http://reb.rw/fileadmin/competence_based_curriculum/syllabi/CURRICULUM_FRAMEWORK_FINAL_PRINTED.compressed.pdf

SADC Secretariat. 2006. Revised implementation plan for the Protocol on Education and Training: 15 year framework. Gaborone: SADC Secretariat.

SADC Secretariat. 2011. Record of the meeting of Ministers responsible foreducation and training, 22-23 September 2011, Windhoek.

SADC Technical Committee on Certification and Accreditation. 2007. Benchmarking quality assurance systems in SADC. Unpublished report.

SADC Technical Committee on Certification and Accreditation. 2011. Recommendation for the SADC Regional Qualifications Framework. Presented to SADC Ministers of Education, September 2011

Salema, V. (2017). Assessment practices in secondary schools in Kilimanjaro region, Tanzania: A gap between theory and practice. *European Journal of Education Studies*.

Sawadogo, W. J. E. (2017). Professionalization of VET teachers and Curriculum Development in VET System: Results of Survey, Practice and Challenges in Burkina Faso, Senegal and Germany. *Vocational Education and Training in Sub-Saharan Africa*, 316.

Schmidt, W. H., McKnight, C. C., Houang, R. T., Wang, H., Wiley, D. E., Cogan, L. S., & Wolfe, R. G. (2001). *Why Schools Matter: A Cross-National Comparison of Curriculum and Learning*. The Jossey-Bass Education Series. Jossey-Bass, 989 Market Street, San Francisco, CA 94103-1741.

Schweisfurth, M. (2011). Learner-centred education in developing country contexts: From solution to problem? *International Journal of Educational Development*, 31(5), 425-432.

Seid, Y., Taffesse, A. S., & Ali, S. N. (2015). *Ethiopia: An agrarian economy in transition* (No. 2015/154). WIDER working paper.

Semali, L. M., Hristova, A., & Owiny, S. A. (2015). Integrating Ubunifu, informal science, and community innovations in science classrooms in East Africa. *Cultural Studies of Science Education*, 10(4), 865-889.

Shaffer S (2014) <https://gemreportunesco.wordpress.com/2014/09/29/looking-forward-and-backward-from-jomtien-through-dakar-and-the-mdgs-to-the-post-2015-agenda/> on 13th August 2018.

Shalem Y and Allais S (2018) When is vocational education educationally valuable? In Stephanie Allais and Yael Shalem (Eds) (2018) *Knowledge, Curriculum, and Preparation for Work* (Brill Sense).

- Shalem Y (2010) How does the form of curriculum affect systematic learning? in Y Shalem and S Pendlebury (Eds) *Retrieving Teaching: Critical Issues in Curriculum, Pedagogy and Learning*. Cape Town: Juta
- Shepherd, D., & van der Berg, S. (2015). Continuous assessment and matriculation examination marks-an empirical examination. *South African Journal of Childhood Education*, 5(2), 78-94.
- Shukia, R. & Komba, A. (2018). Is the System Tuned to Deliver? Evidence from the Competence Based Curriculum Reforms for Basic Education in Tanzania. RISE Conference, Cambridge
- Sigauke, A. T. (2016). Ubuntu/Hunhui in post-colonial education policies in Southern Africa. A response to Connell's southern theory and the role of indigenous African knowledge in the Social Sciences. *Postcolonial Directions in Education*, 27.
- Singh, M. and Duvekot, R. (2013) Linking Recognition Practices and National Qualifications Frameworks: International Benchmarking of Experiences and Strategies on the Recognition, Validation and Accreditation (RVA) of Non-Formal and Informal Learning. UNESCO Institute for Lifelong Learning
- Slater, L (2013) Building High-Performing and Improving Education Systems: Curriculum and Assessment. Review. *CfBT Education Trust ERIC*.
- Smith, J., & Arendse, A. (2016). South African Curriculum Reform: Education for Active Citizenship. *Bulgarian Comparative Education Society*.
- Solomon, G. E., Nhete, T., & Sithole, B. M. (2018). The Case for the Need for Personal Financial Literacy Education in Botswana Secondary Schools. *SAGE Open*, 8(1), 2158244017753867.
- Solomon, G. H. (2016). *Towards competence-based technical-vocational education and training in Ethiopia* (Doctoral dissertation, Wageningen University).
- Sossion, W (2017) A critical examination of the Competency-Based Curriculum Reform. South Africa Department of Basic Education (2018) Circular S1 of 2018: The Incremental introduction of technical occupational subjects as part of the three stream model.
<https://www.education.gov.za/Portals/0/Documents/Publications/Circular%20S1%20of%202018.pdf?ver=2018-05-30-140318-717>
- South Africa Department of Basic Education (2018) Progress and plans for the three stream model, fourth industrial revolution, entrepreneurship in the basic education sector. Presentation to the Portfolio Committee on Basic Education.
<https://pmg.org.za/committee-meeting/26296/?via=cte-menu>
- South African Department of Education (2017) Executive Summary of the Report of the Ministerial Task Team on History.
<https://www.education.gov.za/Portals/0/Documents/Reports/Executive%20Summary%20of%20The%20History%20Ministerial%20Task%20Team%20Final.pdf?ver=2018-05-31-100232-200>

- Statistics South Africa. (2018). Quarterly Labour Force Survey 2018 Quarter 2 - Statistical Report. Retrieved from <http://www.statssa.gov.za/publications/P0211/P02112ndQuarter2018.pdf>
- Steiner-Khamsi, G., & Waldow, F. (Eds.). (2012). *World yearbook of education 2012: Policy borrowing and lending in education*. Routledge.
- Stifel, D., & Woldehanna, T. (2016). Poverty in Ethiopia, 2000-2011: Welfare Improvements in a Changing Economic Landscape. In C. Arndt, A. McKay, & F. Tarp (Eds.), *Growth and Poverty in Sub Saharan Africa* (pp. 43–68). Oxford and New York: Oxford University Press
- Stoltman, J. P. (2017). Geography Education: Primary and Secondary. *The International Encyclopedia of Geography*.
- Tabulawa, R. T. (2009). Education Reform in Botswana: Reflections on Policy Contradictions and Paradoxes. *Comparative Education*, 45.1 87-107.
- Tambuwe, M. (2017) Challenges facing implementation of Competency-based Education and Trainign (CBET) system in Tanzanian Technical Institutions. *Education Research Journal*, 7(1), 277-283.
- Tau, D & Modesto, S T (2011) Qualifications frameworks: implementation and impact in Botswana, *Journal of Education and Work*, 24:3-4.
- Taylor, S., & von Fintel, M. (2016). Estimating the impact of language of instruction in South African primary schools: A fixed effects approach. *Economics of Education Review*, 50, 75-89.
- Tedesco, J. C., Opertti, R., & Amadio, M. (2014). The curriculum debate: Why it is important today. *Prospects*, 44(4), 527-546.
- Thorsen, S. M. (2014). *The Spread of National Qualifications Frameworks Tracing and Examining its Prospects in the East African Region* (Master's thesis).
- Tibbitts, F. L., & Weldon, G. (2017). History curriculum and teacher training: shaping a democratic future in post-apartheid South Africa?. *Comparative Education*, 53(3), 442-461.
- Tikly, L., Joubert, M., Barrett, A. M., Bainton, D., Cameron, L., & Doyle, H. (2018). Supporting Secondary School STEM Education for Sustainable Development in Africa.
- Tuck, R., Hart, J., & Keevy, J. (2004). The Relevance of the National Qualifications Framework Impact Study to qualification framework development in the Southern African Development Community. *SAQA Bulletin*, 6(2), 5–29.
- UIS (2018) Survey of Participation in Cross-national Assessments. <http://uis.unesco.org/en/news/how-do-countries-finance-learning-assessments>
- UNDP (2018) <http://www.undp.org/content/undp/en/home/sustainable-development-goals/goal-4-quality-education.html> on the 13th August 2018.
- UNESCO (2015) EFA Global Monitoring Report: Education for All 2000-2015: Achievements and Challenges. <https://en.unesco.org/gem-report/report/2015/education-all-2000-2015-achievements-and-challenges>.

- UNESCO (2017) The Why, What and How of Competency-Based Curriculum Reforms: The Kenyan Experience.
<http://unesdoc.unesco.org/images/0025/002504/250431e.pdf>
- UNESCO (2015). Education for All 2015 National Review Report: Ethiopia. Paris: Unesco.
- UNIDO. (2014) Growth through entrepreneurship.
https://www.unido.org/sites/default/files/2014-11/Rwanda2_0.pdf
- Van der Berg, S. (2008). How effective are poor schools? Poverty and educational outcomes in South Africa. *Studies in Educational Evaluation*, 34(3), 145-154.
- Velepini, K., Martin, B., Smucker, T., Ward Randolph, A., & Henning, J. E. (2017). Environmental education in southern Africa: a case study of a secondary school in the Okavango Delta of Botswana. *Environmental Education Research*, 1-17.
- Venkat, H., & Spaul, 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*, 41, 121-130.
- Walters, S., & Isaacs, S. (2015). National qualifications frameworks: Insights from South Africa1. *Adult education in an interconnected world*, 147.
- Wandela, E. L. (2014). *Tanzania post-colonial educational system and perspectives on secondary science education, pedagogy, and curriculum: A qualitative study*. DePaul University.
- Williams, T. P. (2018). The Things They Learned: Aspiration, Uncertainty, and Schooling in Rwanda's Developmental State. *The Journal of Development Studies*, 1-16.
- Yessoufou, A. (2014). From Global Advocacy to Local Resistance: Benin's Experience of Competency-based School Curriculum. *ZEP: Zeitschrift für internationale Bildungsforschung und Entwicklungspädagogik*, 37(2), 14.
- Young, M. (2003). National Qualifications Frameworks as a Global Phenomenon. In G. Donn & T. Davies (Eds.), *Promises and Problems for Commonwealth Qualifications Frameworks*. London and Wellington: Commonwealth Secretariat and NZQA.
- Young, M. (2005). *National qualifications frameworks: Their feasibility for effective implementation in developing countries*. Geneva: International Labour Organization.
- Young, M. (2007). What are schools for?. *Educação & Sociedade*, 28(101), 1287-1302.
- Young, M. (2013). Overcoming the crisis in curriculum theory: A knowledge-based approach. *Journal of curriculum studies*, 45(2), 101-118.
- Young, M. (2014). Knowledge, curriculum and the future school. *Knowledge and the future school: Curriculum and social justice*, 8-40.
- Young, M., & Allais, S. M. (Eds.). (2016). *Implementing national qualifications frameworks across five continents*. Routledge.
- Young, M., & Muller, J. (2015). *Curriculum and the specialization of knowledge: Studies in the sociology of education*. Routledge.

Young, M., & Muller, J. (2016). *Curriculum and the specialization of knowledge* London: Routledge.

Young, M., Lambert, D., Roberts, C., & Roberts, M. (2014). *Knowledge and the future school: Curriculum and social justice*. Bloomsbury Publishing.

Appendix 1: Ethiopian Case Study

Case Studies

The lines of young women in beautiful local dresses streamed into the newly built apparel factory. Only a three-hour flight from Dubai, the sprawling valley is filled with new, and half-constructed, factories mirroring the rapid growth of a similar garment, fabric and apparel sectors in countries like Bangladesh. We asked the factory manager about what human resources needs going forward. His response, “We need young women with a minimum of ten years of quality education”. He also discussed sourcing higher level technical skills from people with tertiary diplomas.

What does a rapidly industrialising country need in terms of secondary education curriculum reforms, assessment systems and qualifications frameworks? This question animates the Ethiopian case study, which in turn feeds into deeper insights about secondary education reform strategies for the continent as a whole.

Ethiopia is an east African ‘least developed country’, with the second largest population in Africa after Nigeria, estimated at over 100 million. A self-styled developmental state, it has achieved some of the highest growth rates and development outcomes in the world over the last twelve years: double digit growth for ten years between 2004 and 2014 without increasing its inequality levels, which are relatively low by African standards (Stifel & Woldehanna, 2016).

While still heavily dependent on agriculture, the economy shows not just growth (off a very low base), but real and substantial structural transformation (Seid, Taffesse, & Ali, 2015; Stifel & Woldehanna, 2016). The services sector has been the highest performing, with a share of GDP that increased from 39.7 per cent in 2003 to 46 per cent in 2009. In common with many developing countries, there has been a shift both in terms of employment and contribution to GDP from agriculture to services. The dramatic story, though, is a growing industrial sector. Rising investment in manufacturing, as well as a strategy that focuses on adding value to the agricultural sector, seem to be laying the basis for a durable shift (Seid et al., 2015; Stifel & Woldehanna, 2016). Government has supported growth and industrialisation with extensive infrastructural development to improve access to markets and expansion of electric supply via the construction of hydroelectric dams and the instillation of communications infrastructure (Stifel & Woldehanna, 2016).

Ethiopia was a monarchy until late in the 20th century. The modern state took shape under the emperor Haile Selassie, who ruled the country from 1930 to 1974. He built a tiny education system and engaged in limited industrialisation from the 1950s. Some state-led import substitution policy was introduced under a formally socialist state, which deposed Selassie in 1974. The country was devastated by a series of famines in the 1970s and 1980s. The Derg regime was toppled in 1991 by the Ethiopian People's Revolutionary Democratic Front (EPRDF), a coalition of four ethno-military groups united against the government led by Mengistu.

In 1998 the Ethiopian government launched a strategy aimed at promoting labour-intensive manufactured exports (Newman et al., 2016). The current trajectory could suggest the basis for a long-term virtuous cycle of rising state welfare interventions, supported by rising productivity and a growing industrial sector, which should, in the long term, be supported by, and in turn support, growing educational enrolment and quality.

Like other countries in sub-Saharan Africa, Ethiopia experienced a dramatic expansion of school access in the last two decades: the school enrolment grew from 10 million in 2010 to 25 million in 2015 (Ethiopia Ministry of Education, 2016). Higher education enrolment increased dramatically from 10 000 in 1990 to 180 117 in 2005, to over half million in 2012. The number of higher education institutions expanded from just 11 in 1990 to 34 in 2013. To manage this dramatic expansion, Ethiopia spend 18.4% of government expenditure on the sector (Gardner, 2017). Notwithstanding the rapid growth and high levels of expenditure, Professor Belay noted in our interview that learning outcomes are weak, corroborating what the literature suggests (Akalu, 2014; Gbre-eyesus, 2017; UNESCO, 2015).

The current education system is structured in three cycles. Most children attend local or 'village' primary schools from Grades 1 to 4, but are often required to go to another school, often considerably further away, for Grades 5-8, as local schools often do not offer the higher primary classes. At the end of Grade 8, students are required to write the national Primary School Certificate examination – a nationally set multiple choice exam. 54% of any entry level cohort makes it through to the end of primary education.

The second cycle begins in Grade 9, the first year of secondary education and ends with the second public examination in Grade 10 (Ethiopian General Secondary Education Certificate Examination). Net enrolment in junior secondary education was 23.6% in 2015/16. The lower or junior secondary school curriculum includes the same subjects taken in primary school: English and a national language, Mathematics, Natural Sciences (Physics, Chemistry and Biology), Social Sciences (Civic Education, Geography and History) and Physical Education. Students are required to pass at least five subjects to proceed to the senior secondary level. For students that do not make it into senior secondary schools, the two other options are TVET institutions, or teacher training colleges.

Senior secondary education is explicitly focused on preparation for university. The school curriculum covers more topics at a higher level than curricula in most other countries. The net enrolment rate in the senior secondary cycle is around 7.4% (Ethiopia Ministry of Education, 2017). Senior secondary education culminates in the Ethiopian Higher Education Entrance Examination. Students that perform well on the school leaving examination gain access to university.

Ethiopian education, and specifically its secondary education subsector, is at a crossroads. The rapid enrolment growth has taken place in an education system designed for a small elite orientated towards academic education.

Curriculum and Assessment System Reforms

Joshi & Verspoor (2012), in a seminal study on secondary education in Ethiopia, argued that, in order for the country to transition, Ethiopia would need to make substantial changes to secondary education. This perspective was strongly echoed by all interviewees in Ethiopia. They suggest that the current university dominated secondary school subsector, which is geared towards a small elite, would not only need to expand access, but reform the curriculum to meet the needs of a more diverse, and possibly universal, intake. What is particularly significant about Joshi and Verspoor's analysis is the specificity of their analysis of the challenges in the current Ethiopian curriculum. The first and most important insight relates to the benchmarking of Ethiopia's secondary school curriculum and that finding that the subject content in both the Grades 9 and 10 and Grades 11 and 12 is a whole cycle above comparable international systems. Specifically, in Physics, Chemistry, Biology and Mathematics, Ethiopian Grade 10 students were examined on content that students in Botswana would be examined on in S6 O Level and South Africa in Grade 12. "The general secondary curriculum (grades 9-10) became, in effect, equivalent to the curriculum typical of grades 11-12 in many countries worldwide" (p. 60). While the secondary curriculum offerings include a relatively small number of subjects, the detailed analysis of the subject syllabi themselves suggests that many are overloaded with obsolete topics, or topics placed at the incorrect level. There are too few new topics introduced, even though the national curriculum was designed to be revised on a five-year cycle. As is the common trend, the topics focus on recall rather than developing higher order analytic skills.

In terms of redefining the purposes of the Ethiopian secondary education curriculum, Joshi and Verspoor (2012) recommend reducing the difficulty of the Grade 9-12 curriculum and related public examinations, ensuring it is benchmarked against other countries at the same level. They recommended introducing flexibility and differentiation into the curriculum on the Singapore, England or IGCE models. Specifically for the Grades 11-12, curriculum offerings need to be introduced that are geared towards students not going on to university. A current reform process underway, the National Education Road Map, 2030, indeed seems to be moving the system in this direction, although the final decisions have still to be taken. There is an indication that a final policy will be decided before the end of the year.

Changes recommended in the secondary school curriculum would obviously have direct implications for the public examinations. In addition to new content, assessed at different levels of difficulty, Joshi and Verspoor (2012) recommend a shift away from an emphasis on examinations for selection and a move towards examinations as verification of the knowledge and skills that have been acquired. Notwithstanding the change in the level of content to be mastered, they recommend that examinations focus on testing higher-order skills.

One area that Ethiopia has begun to reform is national assessments design to measure system-level learning achievement. While Ethiopia does not participate in cross-national assessments, every four years since 2000 the Ethiopian Ministry of Education administers national representative sample learning assessments (standardised tests) in Grades 4, 8, 11 and 12. The purpose of this national assessment process is to provide information about learning achievement levels, identify factors that influence

achievement, analyze variants by region, gender and language, and monitor change over time. In Grades 10 and 12, the focus is on English, Mathematics, Biology, Chemistry, and Physics. Achievement levels are reported as percentage and by three benchmark standards: below basic, basic, proficient, advanced (Ethiopia Ministry of Education, 2017).

The National Consultation of Educational Development Roadmap provides the direction for secondary school curriculum reform, as well as a reorganisation of the school system as a whole; and the education ministries which oversee the education and training system.

In Ethiopia, the important stakeholders – secondary and preparatory school teachers and students – were asked questions related to relevance and quality of the curriculum. Their responses have affirmed the Desk Review results: that the curriculum lacks quality and relevance. It is too theoretical and it fails to prepare students for the world of work. According to student responses, the curriculum is too difficult, not horizontally and vertically sequenced. The content is also too bulky, not leaving enough space to reflect and allow deep learning. The curriculum inspires neither the teachers nor the students. The curriculum does not help students understand “what to do”; “how to do”; and the “need to do”. Educational experts also noted that the curricular structure, according to the 1994 education and training policy, was 8+4 with 8 years of primary education and 4 years of secondary education. It is not clear how secondary education was reduced to 2 years; and why a first year university curriculum was brought to secondary education in the form of preparatory education. They expressed the need for allocating more time in the curriculum of secondary education, a minimum of 4 years - but also that extends to 5 or 6 years if possible. As proposed in the Desk Review, there is a need for restructuring the curriculum of education by shifting preparatory education to college level and by allocating more time to secondary education.

Appendix 2: South African Case Study

In May 2018, the Director General of the Department of Basic Education presented a comprehensive overview of the curriculum plans, which, if implemented as intended, will have a dramatic impact on secondary education curriculum and assessment systems in South Africa. After a decade in which the South African education system recovered for the turmoil of two waves of comprehensive curriculum reform, Mr Mveli's presentation signalled that South African education is again about to enter a new era of far-reaching secondary education change. He outlined plans for three streams of secondary education, the introduction of teaching entrepreneurship into the secondary school curriculum and the intention to make history a compulsory examined subject in senior secondary schools.

To better understand the significance of curriculum and assessment system reform in South Africa, it is necessary to locate these proposed changes in the macro economic, political and educational context. Although South Africa remains one of the largest economies on the continent, economic growth has been slow for the past decade. A number of factors have contributed to the failure of the economy to rebound from the global economic down-turn in 2008, including an aging mining industry, further contraction of the manufacturing sector (which dramatically shrunk after South Africa eliminated an earlier generation of trade policy that protected local industries) and the restructuring of agriculture. State capture, which is synonymous with corruption, has also contributed an environment of distrust. Alongside weak growth, there has been a growing civil society discontent with state services – manifest in growing service delivery protests and student protests at the universities. With slow growth, the state has had less capacity to generate new revenue to cover the growing demand on the fiscus.

From the perspective of secondary school reform, two indicators are particularly pertinent. The first is the structural pattern of high level of unemployment – and particularly youth unemployment. In the first quarter of 2018, the narrowly defined unemployment rate was 26,7%. For young people aged 15-34, however, the unemployment rate was 38.2% (Statistics South Africa, 2018). Many of these young people have become discouraged with looking for work and they are also not acquiring skills through education and training. The second indicator is the pattern of secondary school participation. Relative to other countries in sub-Saharan Africa, almost all children in South Africa complete primary schools and more than 60% go up to Grade 12. Notwithstanding, there is considerable concern that, not only does a significant percentage not successfully complete the senior certificate examinations, but that, for those that do, but do not access university, secondary education provides few pathways into employment.

The latest round of curriculum reform proposals thus appears to speak to the high levels of youth unemployment, the political and social challenges associated with rising

demands from civil society and limited economic utility of secondary education that does not lead to university studies.

While not widely publicised, the potentially most far-reaching proposal relates to the argument for the introduction of three streams within the secondary education subsector. The basic assumption in the three-stream model was that all students would receive a general basic education, but, in secondary schools, students could choose to pursue their education in three distinct streams or tracks: the conventional academic pathway; a pathway that would be technical and vocationally orientated; and a third skills pathway orientated towards vocational occupations.

Historically, secondary education in South Africa has focused primarily on the academic pathway. In this pathway, the reform plan is to rationalise subject offerings and improve subject selection and combinations.

The real secondary reform initiatives focus on the expansion of the technical vocational and the technical occupational pathways.⁸ Specifically, the Department plans to dramatically increase the number of institutions (to around 1000 schools) and students in these schools can choose to take technical subjects in Civil, Electrical and Mechanical Technology; and select Engineering Graphic Design; Technical Mathematics and Sciences. To strengthen the technical vocational pathway, the Department has changed the rules so that students that take technical vocational subjects would not be disadvantaged in the application for university. This suggests a push to enhance the relatively low status of technical and technically-orientated subjects and make them paths of high status university entrance subjects. New examination guidelines have been issued for the technical subjects that upgrade the cognitive demands. The Department has also issued exemplar examination questions to go along with the more academically demanding technical subjects. The Department will provide training for teachers of Technical Mathematics and Technical Sciences and has distributed new textbooks for these subjects.

To push for higher status for the technical subjects, the education sector strengthened ties with industry. Partners include the sector education and training authorities and manufacturers like Toyota, Nissan, VW and Audi. The other specific innovation has been the introduction of new National Certificate Vocational (NCV) as an alternative certification within the secondary school sector in Engineering and Related Design, Civil Engineering and Building Construction and Tourism.

While the technical vocational pathways reforms are more in the order of strengthening, expanding and extending, the proposal for the technical occupations stream is far-reaching. In the presentation to the Portfolio committee, the Director General of Basic Education made it clear that young people with disabilities and those with moderate to serious learning barriers need to be provided with appropriate learning opportunities

⁸ In the South African context, a distinction is made between the technical vocational and the technical occupational. The technical vocational is associated with technical education at secondary education level that would prepare learners for further technical education and training at the post-secondary levels. In contrast, technical occupational is training received at the secondary level that is explicitly oriented towards preparing students for related work in the labour market.

that could help them to find work and live independently. In 2018, around 100 schools (many of the existing Schools of Skills, Special Schools and Technical Schools and some ordinary schools) participated in a pilot study to ascertain the feasibility of creating a larger subsector of technical occupational schools. Grade 8 and 9 students that attend these schools would be required to take some general subjects, such as languages and Functional Mathematics, and up to two of the vocational/skills subjects – leading to either a school qualification at Level 1 on the National Qualification Framework, or as a gateway to studies in at Grade 10, 11 and 12.

Agriculture	Arts and Crafts
Office Administration	Early Childhood Development
Motor Mechanics	Body Works
Welding	Sheet metal work
Maintenance	Electrical
Woodwork and Timber	Plumbing
Bricklaying and Plastering	Hairdressing
Beauty and Nail Technology	Ancillary Health Care
Upholstery	Food Production
Sewing	Hospitality
Wholesale and Retail Studies	

The implications for extending and formalising the three streams involve adjustments to the national assessments framework and systems. This is currently underway.

While not pursuing the Rwandan policy of introducing Entrepreneurship as a separate compulsory examinable subject in secondary education, South Africa is making plans to introduce knowledge and skills associated with entrepreneurship in the formal secondary school curricula subjects and in extra-curricular activities. Students will be exposed to entrepreneurship in extra-curricular activities, such as entrepreneurial days and encouraging business school partnerships. The primary vehicle, however, will be infusing entrepreneurial knowledge and skills into topics in the existing subjects. Starting in 2018, the Department distributed entrepreneurial lesson plans to be used in the subjects of Economic and Management Studies, Life Orientation and languages in Grades 8 to 9. In addition, plans are underway to introduce entrepreneurial topics into further education and training technical subjects, such as Engineering and Graphic Design; Civil, Mechanical and Electrical Technology; and Computer Application Technology. Not only is entrepreneurship to be infused into traditional technical subjects, but the plan is to have this element become part of arts subjects such as Dance Studies, Dramatic Arts, Music and Visual Arts.

The proposals to expand the number of students taking technical subjects in Grades 10 to 12, the introduction of the Technical Occupational Curriculum for Grades 8 and 9 and the plans to infused entrepreneurial knowledge into the secondary school curriculum received very little attention in the media. In contrast, the Task Team that researched and recommended that History be made a compulsory senior secondary subject for all received extensive press coverage. Their proposal is to replace the subject of Life

Orientation with History as a required subject like languages and Mathematics in Grades 10, 11 and 12. In the words of the Minister of Basic Education

The History curriculum must include the last bid attempt to decolonisation of the African mind. We must, without apology, remove the vestiges of apartheid's sanitised version of the history. We must do so without airbrushing the actual story of the apartheid past, nor must we glorify the liberation movements presenting themselves as an equivalent of moral virtue. (IOL News, 2018).

There have been two basic lines of criticism of the proposal to make History a compulsory subject. Some critics argue that History is a difficult subject to teach and it requires teachers with a strong university knowledge of the subject content and strong training in how to teach it effectively (pedagogic content knowledge) (NECT, 2017). History teachers are required to teach both the substantive knowledge and the procedural knowledge, such as how to evaluate evidence, use different perspectives, establish cause and effect relationships and understand change and continuity. Notwithstanding the long lead time and proposed training before the introduction of the compulsory subject, the concern is that non-History teachers will not have the knowledge and skills to teach the subject adequately. The related concern is that the pipeline for History teachers currently in training suggests that there is likely to be a major shortage of properly trained teachers. The main criticism, however, relates to the idea that the teaching of History would promote citizenship and national pride. The concern is that the subject would be used for narrow political purposes, rather than to promote the acquisition of powerful knowledge and critical thinking.

QUESTION 4: CASE STUDY – CHINA

The implementation of Mao Zedong's policies, the Great Leap Forward and the Cultural Revolution, was a dismal failure.

Do you agree with this statement? Use relevant evidence from 1958 to 1969 to support your line of argument [50 marks]

QUESTION 5: INDEPENDENT AFRICA: COMPARATIVE CASE STUDY – THE CONGO AND TANZANIA

Critically discuss how Mobuto Sese Seko (the Congo) and Julius Nyerere (Tanzania) promoted economic, social and cultural developments in their respective countries after the attainment of independence in the 1960s.

Support your line of argument with relevant evidence. [50 marks]

Figure 2: From the Department of Basic Education (2017) History National Senior Certificate Grade 12 -- Paper 1.

While much of the focus on secondary education curriculum and assessment systems reform was at the national level, important innovations are also taking place in the provinces. Specifically, the development of what have come to be referred to as Schools of Specialisation represent an important model for secondary education curriculum reform. Although South Africa has a history of established specialised secondary schools, such as secondary schools that focus on the Performing Arts, and restricted entry to those that have demonstrated specific potential to benefit from a narrowly focused secondary education, Gauteng's Schools of Specialisations have extended the idea beyond the Performing Arts. Responding to the demand to transform, modernise and reindustrialise, address specific skills shortages, nurture talent (particularly in young people from disadvantaged communities), link young people to the world of work and to build excellent schools, the Gauteng Department of Education has built 25 such schools. These Schools of Specialisation focus on one of the sciences and ICT, engineering, commerce, performing arts and sports. These schools have distinctive operating models and function under their own regulatory framework. This provides them with great autonomy on the curriculum, more control over student selection, additional funding from the provinces and the ability to develop strong private partnerships. The former Rhodesfield Technical High School was converted to become the first Engineering School of Specialisation in Aviation. Adjacent to the largest airport in Africa, the school has programmes and initiatives directly linked to the aviation industry.

Conclusion

The evidence is clear that the sureness pathway to employment in South Africa is not education per se, but access to post-school and, particularly, university education. Although South Africa has almost doubled the number of graduates over the past two decades, the chances of getting a job is much higher for a university graduate than for someone with a secondary education. That remains the single most significant factor that will drive secondary school curriculum reform and assessment systems. While there is clearly a significant move to diversify secondary school offerings by expanding and improving the quality of the technical subjects offered at the senior secondary level, introducing new kinds of specialised schools and improving occupation-specific training and related qualifications for young people with learning challenges, given the importance of university education, the conventional academic secondary education curriculum and the related learning pathways will retain huge appeal to young people and their parents.

Once this is understood, the South African curriculum reforms (the three-stream model and infusing entrepreneurial skills and relate changes in assessment systems) represent incremental improvement in secondary education, but not the 'answer' to youth unemployment. Altbeker & Bernstein's (2017) youth unemployment agenda for action makes this clear, as changes to the secondary school system are not even mentioned as part of options to reduce youth unemployment.