

DEVELOPING THE AFRICAN CONTINENTAL
QUALIFICATIONS FRAMEWORK (ACQF)

SCHOOL CURRICULUM MAPPING REPORT

Mapping curriculum frameworks and
practices in Africa: creating baseline evidence
SYNTHESIS REPORT



THE AFRICA-EU PARTNERSHIP
LE PARTENARIAT AFRIQUE-UE





This project is co-funded by the European Union and the Federal Ministry for Economic Cooperation and Development



This synthesis report supplements the main report of the mapping study of curriculum frameworks and practices in Africa, elaborated in 2021 in the context of the project AU-EU Skills for Youth Employability/Skills Initiative for Africa, Technical Cooperation – Developing the African Continental Qualifications Framework (ACQF). The main report of this study is published at: <https://acqf.africa/resources/mapping-study/school-curriculum-mapping-report-mapping-curriculum-frameworks-and-practices-in-africa-creating-baseline-evidence-2022>

Views and opinions expressed in this publication are the responsibility of the authors and should in no way be attributed to the institutions to which they are affiliated or to the AUC or the project partners (EU, BMZ, GIZ, ETF).

We acknowledge all contributors of the ACQF online survey, the institutions and experts who shared views and information during the technical visits to countries and regional economic communities (REC), all national reviewers of the country and REC reports of the ACQF mapping study, and the numerous and active participants of the ACQF Peer learning webinars (2020-2021).

The contribution of Eduarda Castel-Branco (ETF), Gertrude Namubiru (ACA), Mich-Seth Owusu (AUC), and other members of the CESA Curriculum Cluster is acknowledged and appreciated.

April 2022



This report has been prepared by a research team from JET Education Services: James Keevy, Zaahedah Vally, Katherine Morris, Carmen Louw, Andrew Paterson and Nick Taylor. Expert reviewers included Kamal Ben Selama, Caetano Antonio Guedes, Joyce Kinyanjui, Paul Habineza, Lomthie Mavimbela and Felicia Boakye-Yiadom. Eduarda Castel-Branco (ACQF project coordinator, key expert), Gertrude Namubiru ([African Curriculum Association](#)) and Mich-Seth Owusu (AUC ESTI Education) coordinated the implementation, provided detailed comments and inputs to the survey and report, and assured the overall oversight and guidance.

Contents

Acronyms and abbreviations	5
1. Contextualising the curriculum mapping study.....	6
2. Introduction to the curriculum mapping study	6
3. Conceptual framework	7
3.1. Key concepts.....	7
3.2. African identity.....	9
4. Mapping study findings	9
4.1. Curriculum policy and governance	9
4.2. Curriculum and qualifications frameworks	10
4.3. Curriculum approaches	10
4.4. Curriculum monitoring and evaluation	11
4.5. Curriculum and assessment.....	12
4.6. Curriculum reform	13
4.7. Curriculum innovation	13
4.8. Financing curriculum innovation.....	14
4.9. The impact of COVID-19 on curriculum delivery.....	15
4.10. Qualified and competent teachers.....	15
4.11. Curriculum and African Union policy instruments	16
5. Looking to the future.....	16
5.1. Embracing learning outcomes-based approaches	17
5.2. Megatrends: gender equity, global citizenship and digitalisation	17
5.3. Emergence of teacher professional standards	17
5.4. The promise of a continental systemic assessment regime.....	18
5.5. Harmonisation of teacher qualifications.....	18
5.6. Access to digital platforms	18
5.7. Unequal access to technology and the internet	19
5.8. Underutilised African Union policy instruments.....	19
5.9. Underdeveloped TVET	19
5.10. Lack of data.....	20
6. Conclusion	20

Figures and tables

Figure 1: Explicit reference to learning outcomes in the curriculum	8
Figure 2: Reported legal basis of curriculum by type and country	10
Figure 3: Curricula alignment with qualification framework	10
Figure 4: Approaches used during curriculum formulation	11
Figure 5: Extent to which the national curriculum framework provides for articulation between the TVET curriculum and post-school and higher education learning	11
Figure 6: Responsible entity for quality assurance of curriculum delivery	12
Figure 7: Reported participation in regional and international comparative learner assessments, by country ..	12
Figure 8: Plans to review national curricula	13
Figure 9: Drivers of curriculum innovation	13
Figure 10: Global mega-trends in curricula	14
Figure 11: Government role in financing curriculum innovation by number of countries	14
Figure 12: Methods to ensure curriculum delivery during pandemic	15
Figure 13: Extent to which teachers taught to formulate and write learning outcomes	16
Figure 14: National policies intersection with AU instruments	16

Acronyms and abbreviations

4IR	Fourth Industrial Revolution
ACA	African Curriculum Association https://acuass.org/
ACCF	African Continental Curriculum Framework
ACQF	African Continental Qualifications Framework
AG	Advisory Group (of the ACQF)
AFTRA	African Federation of Teacher Regulatory Authorities
AU	African Union au.int
AUC	African Union Commission au.int/en/commission
CBA	Competency Based Assessment/Approach
CESA	Continental Education Strategy for Africa
COVID-19	Coronavirus disease of 2019
CPD	Continuing Professional Development
ETF	European Training Foundation
EU	European Union
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit
ICT	Information Communication Technology
ISCED	International Standard Classification of Education
ICSED-T	ISCED for teacher qualifications and training programmes
JET	JET Education Services
M&E	Monitoring and evaluation
NQF	National Qualifications Framework
OECD	Organisation for Economic Cooperation and Development www.oecd.org
PASEC	Programme for the Analysis of Education Systems
REC	Regional Economic Community
RQF	Regional Qualifications Framework
SACMEQ	Southern African Consortium for Measuring Educational Quality www.sacmeq.org
STC-EST 3	Specialised Technical Committee on Education, Science and Technology
TVET	Technical and Vocational Education and Training
UNESCO	United Nations Education, Scientific and Cultural Organisation www.unesco.org

1. Contextualising the curriculum mapping study

The need for a continent-wide curriculum mapping study stemmed from the third ordinary session of the African Union Specialised Technical Committee on Education, Science and Technology (STC-EST 3). During this meeting, the role that the African Curriculum Association (ACA)¹ (preceded by the African Curriculum Organisation [ACO]) ACA plays in supporting member states to review and develop their national curricula to meet the demands of the 21st century was underscored. ACA plays an important role in coordinating the Curriculum Cluster of the African Union's Continental Education Strategy for Africa (CESA 16-25), is also a member of the African Continental Qualifications Framework (ACQF)² Advisory Group (ACQF AG) and was therefore well-positioned to commission such a mapping exercise. It was further agreed during STC-EST 3 that ACA should aid countries to reform their curricula, improve professional development for teachers, develop appropriate learning resources, improve learning outcomes, and harmonise Africa schools curricula.

STC-EST 3 further recognised that there can be misalignment between key components (qualifications frameworks, learning outcomes, curriculum) of the education and training systems and qualifications systems, which results in inconsistencies and inefficiencies that affect both the quality and transparency of learning outcomes and the qualifications achieved. This is while improved transparency of school curriculum and growing interaction with the principles, objectives, and level descriptors of qualification frameworks (national/regional) could lead to improved educational attainment, better credibility of qualifications as well as contribute towards the African integration and human development agenda at the national, regional, continental levels. It was therefore decided to undertake this curriculum mapping study to take stock and update evidence on the state-of-play of curriculum frameworks and practice in the African Union member states.

2. Introduction to the curriculum mapping study

The curriculum mapping survey was administered by JET Education Services (JET) on behalf of the African Union Commission (AUC), and the African Curriculum Association (ACA), the coordinator of the Continental Education Strategy for African (CESA) curriculum cluster. The project "Developing the African Continental Qualifications Framework" is a key partner of this initiative, having closely collaborated from the first ideas with ACA to conceive the approach and plan, organise and support implementation of the study. This report presents the findings of the continent-wide curriculum mapping survey. The survey covered school education and technical and vocational education and training (TVET). Some aspects of early childhood care development and education (ECCDE) were also taken into account.

The following research questions guided the research:

1. Which frameworks (conceptual, policy, technical) inform and/or underpin school curriculum in school education (basic, secondary, TVET-certificate awarding) in African countries?

¹ <https://acuass.org/>

² <https://acqf.africa/>

(Definitions of curriculum; application of learning outcomes; changing teachers' roles and training teachers; learner-centred approaches)

2. To what extent do school curricula in African countries include and develop new knowledge and skills related to mega-trends? (Digital; ecologic transformation; citizenship; employability; response to COVID-19; African cultures and values)
3. How do African school curricula align with qualifications frameworks? (Levels and cycles; principles; descriptors of the NQF; descriptors of qualifications).
4. To what extent do countries ensure that the foundation disciplines (language and literacy, thinking skills, and numeracy) are mastered?

The following are general outcomes anticipated from this initiative:

- Contribute to the discussion and design of the future African continental curriculum framework (ACCF) through the disseminated survey's findings, data and insights. The future ACCF will be developed by CESA Cluster as a general guideline for all curriculum development work in Africa and take account of the principles and strategy of the African Continental qualification Framework (ACQF).
- Contribute to improving the quality of education in Africa at critical levels of education.
- Contribute with insights and recommendations to create a common ground and a degree of alignment between ACCF and ACQF.
- To disseminate good practice and generate mutual trust among education and qualifications institutions and stakeholders in Africa and beyond.
- Ultimately, contribute to transparency of learning outcomes, qualifications, and contribute to enhance portability and mobility of skills and qualifications from one country to another for the 'Africa we want'.

A response rate of 29% was achieved through responses from 16 countries out of a possible 55, including 26 responses overall (15 in English, 9 in French and 2 in Portuguese). The majority of respondents (n=15) completed the survey as representatives of the government sector.

3. Conceptual framework

3.1. Key concepts

It should be noted that this mapping study has been commissioned as part of the broader ACQF process, and as such, the study assumes that there is an important interrelationship between three key concepts, namely curricula, qualifications and learning programmes. As an early part of the survey, respondents were asked to consider definitions for these key concepts related to curricula and curriculum development from official education policy or framework/s.

Curriculum is defined as:

...the inventory of activities implemented to design, organise and plan an education or training action, including the definition of learning objectives, content, methods (including

assessment) and material, as well as arrangements for training teachers and trainers (CEDEFOP in GIZ, ETF & AUC, 2021).

A learning programme is defined as:

...a written document planning learning experiences in a specific learning setting. It is developed on the basis of the curriculum and takes into account the learners' needs (CEDEFOP in GIZ, ETF & AUC, 2021).

The ACQF Mapping Report (2021, p.193) defines a qualification as a:

...planned combination of learning outcomes with a defined purpose or purposes, including defined, applied and demonstrated competence and a basis for further learning”.

A common thread between all three concepts is the notion of learning outcomes. Learning outcomes (statements of what a learner knows, understands and is able to do on completion of a learning process) constitute the common base taxonomy on which the concepts of curriculum, qualification, and learning programme are understood, developed and interrelated. The majority of respondents reported that there was explicit reference to learning outcomes in the curriculum, across the three sectors as can be seen in figure 3 below.

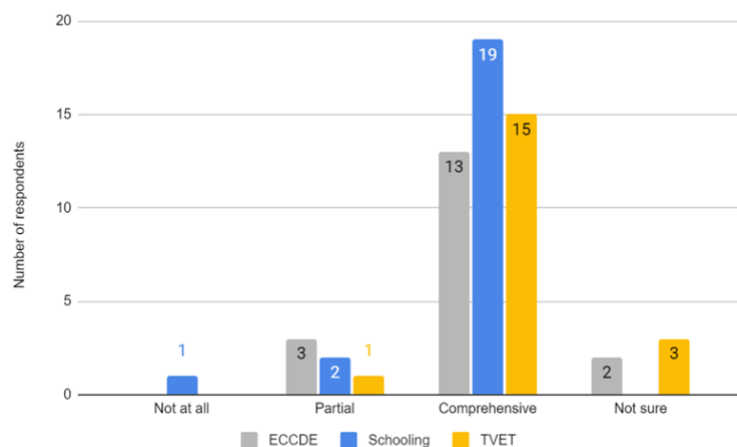


Figure 1: Explicit reference to learning outcomes in the curriculum

The interplay between curricula and qualifications is a longstanding tension that plays out internationally and was also most recently explored in the ACQF Mapping Study (GIZ & ETF 2021). Key to these debates is the fact that curriculum models, approaches and frameworks have a rich history that has evolved over more than 200 years, while the more recent introduction of competency-based approaches (CBA) (specifically in TVET), competency-based education (CBE), and qualifications frameworks since the late 1980s, is arguably less well developed, but certainly poses important considerations for curriculum researchers, developers and policymakers. The dominant model suggests a hierarchical relationship between qualifications, as broader guiding artefacts, and

curriculum, as more detailed and operational in nature. In many instances learning programmes are considered a middle layer between qualifications and curriculum (see Figure 1).

The increased use of learning outcomes, in many cases promoted through the use of outcomes-based education philosophies and various contextual adaptations of the same, across all three levels (qualifications, learning programmes and curricula) promotes logical progression and common approaches, but perhaps as an unintended consequence, also result in some confusion about the differences between each. The more recent shift towards credentials as a fourth layer further complicates this landscape. These interrelationships lie at the heart of the ACQF and ACCF processes and constitute the foundations to achieving the ambitions of the CESA and Vision 2030 in Africa.

3.2. African identity

A discussion on curriculum in Africa would be also incomplete without reflecting on curriculum planning and design in a wider perspective as a mechanism through which people's views if not their understanding of themselves and their cultures can be altered. There is an urgent need to develop curricula that establish an African identity (Van Wyk & Higgs, 2011), and should have the context of Africa as their focus, and as a result be "indigenously grounded and orientated" (p.172). The vision of an African education system that is able to produce generative curricula that is not isolated from global trends is espoused by many leading African educationalists, including Nsamenang and Tchombe (2011).

Historical mapping of the formal schooling in Africa recalls that the period of colonialism enforced racial, ethnic and cultural misrepresentations of African identities in the curriculum which were overturned in the period of independence. Validation and promotion of African identities across the curriculum has brought outstanding achievements. Notable current challenges for curriculum development include: an array of identities that African people within and between countries on the continent bear (Adibe, 2013, 119); penetration of social media at all levels of societies especially among youth, and the presence of online ethnic and racial discrimination.

There is an important role for ACA to play in not only supporting the improvement of curricula across the continent, but also foregrounding the African experience and context within the curriculum to produce independent-thinking learners who are able to promote the vision of a new Africa that retains its unique identity while simultaneously shaping robust economic growth and shared human flourishing.

4. Mapping study findings

4.1. Curriculum policy and governance

Across all three sectors, the predominant legal basis of the curriculum was a national policy; the vast majority of curricula was approved in the last decade; the majority of respondents reported that experts are consistently involved in national curriculum development processes.

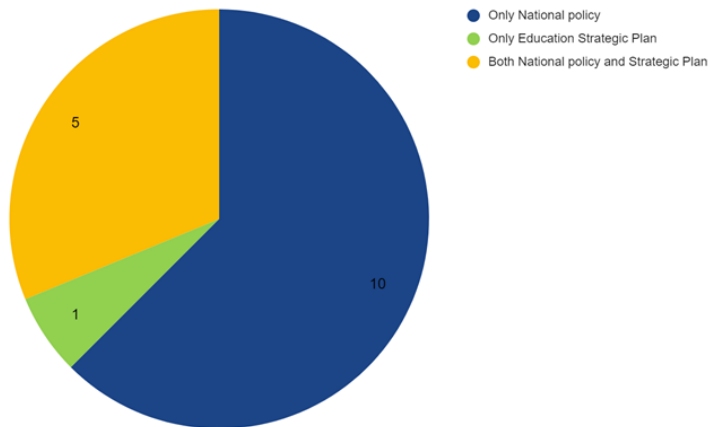


Figure 2: Reported legal basis of curriculum by type and country

4.2. Curriculum and qualifications frameworks

67% of respondents reported that there is regular and close cooperation between curriculum authorities and national qualifications or quality assurance agencies; 17% of respondents indicated that there was awareness, but no substantial relationship, between curriculum authorities and other agencies.

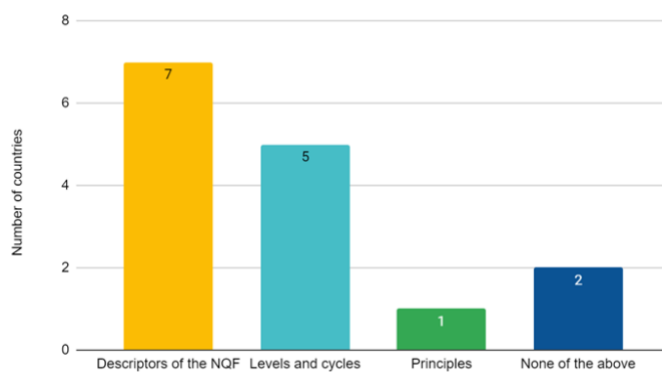


Figure 3: Curricula alignment with qualification framework

On a country level, out of 15 countries, the majority of respondents (47%) reported that curricula align with NQF descriptors, a third (33%) of respondents indicated that curricula align with levels and cycles in the NQF, while 1 country indicated that their curricula align with NQF principles. For one country which does not have a comprehensive NQF in place, conflicting feedback was received from two respondents, one indicating no alignment, and the other indicating alignment against levels and cycles.

4.3. Curriculum approaches

The main approach used by countries for curriculum formulation is a competency-based approach; 75% reported that vertical progression is conceptualised by using taxonomies; the majority of respondents indicated that TVET programmes are structured as pre-vocational programmes with no apprenticeship.

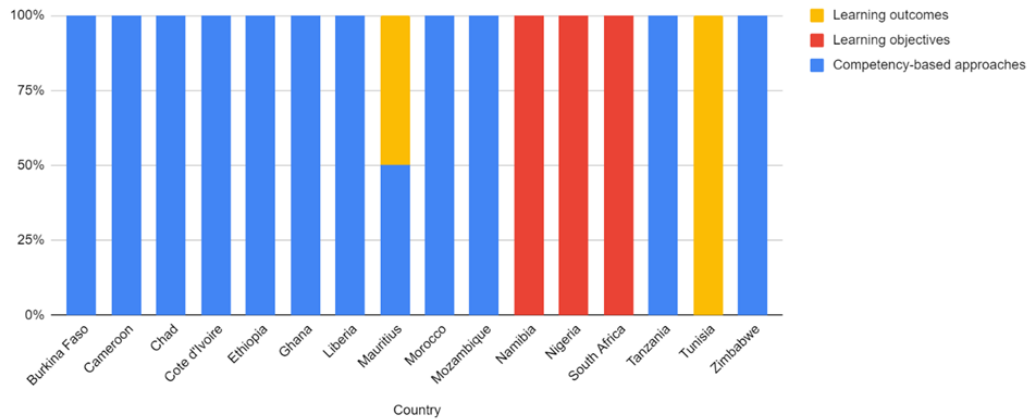


Figure 4: Approaches used during curriculum formulation

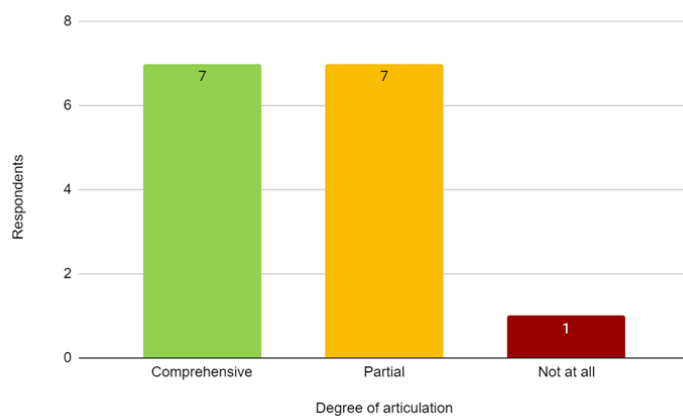


Figure 5: Extent to which the national curriculum framework provides for articulation between the TVET curriculum and post-school and higher education learning

The responses were evenly distributed between comprehensive and partial allowances for articulation, indicating that work is still required in order to improve articulation in at least 50% of respondents' countries.

4.4. Curriculum monitoring and evaluation

In order to support the implementation and monitoring of the curriculum, it is necessary to take stock of the leading institutions and key agencies; the role of social partners and other stakeholders; resources; indicators and mechanisms used to support implementation and monitoring. Quality assurance of curriculum delivery did not appear to be the exclusive domain of any one particular entity, with responses fairly evenly distributed across the organisations, departments and entities listed.

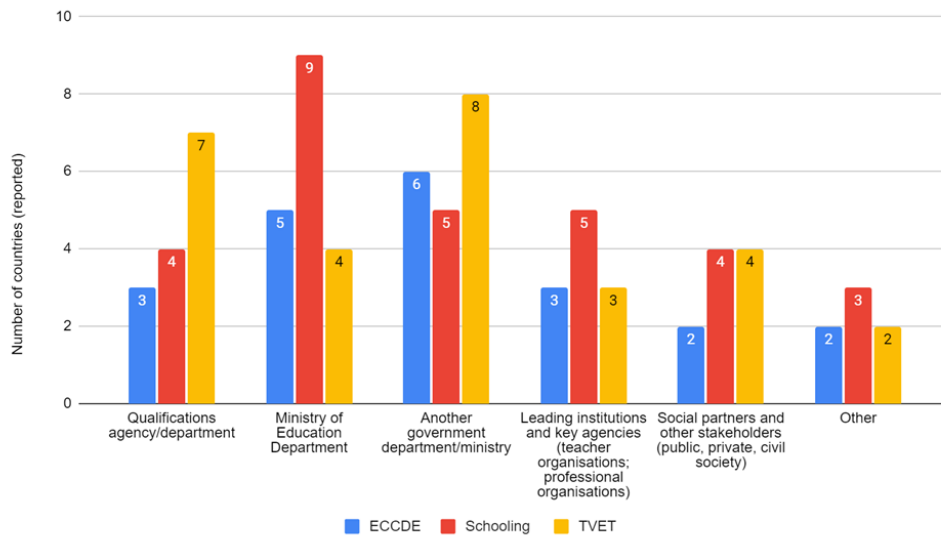


Figure 6: Responsible entity for quality assurance of curriculum delivery

4.5. Curriculum and assessment

Survey respondents were asked to answer a number of assessment-related questions, including whether their country conducts national systematic assessments, whether or not their country participates in regional/international comparative assessments, and how their country performs against regional and international standards. Quarterly assessments were the most commonly reported national systemic assessments across all three education sub-sectors, followed by annual assessments; 37% reported participating in PASEC, 37% in SACMEQ; 56% of countries reported attempted improvements against regional and international standards in the TVET sector.

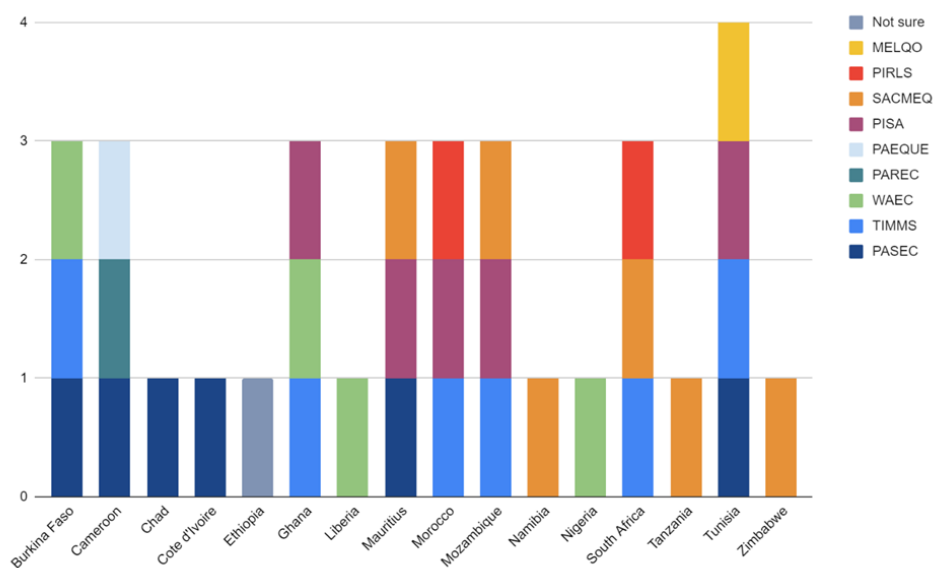


Figure 7: Reported participation in regional and international comparative learner assessments, by country

4.6. Curriculum reform

Survey respondents were asked to comment on the various curriculum reviews and reforms currently taking place in their countries. Respondents from all 16 countries indicated that some kind of curriculum reform is currently taking place in their country. Six countries reported that they are moving towards the adoption of a competency-based approach to the curriculum, while one country reported a shift from an objectives-based curriculum to a standards-based curriculum. Three countries reported promoting 21st century skills as well as digital literacy in their curriculums.

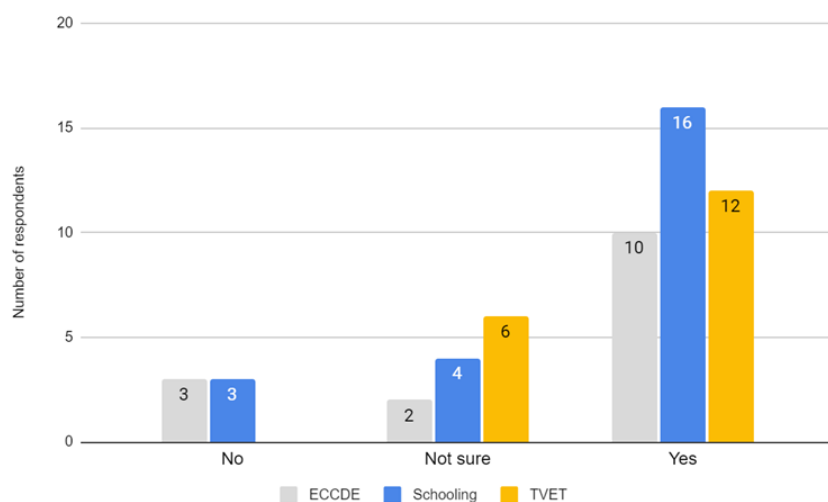


Figure 8: Plans to review national curricula

4.7. Curriculum innovation

A key objective of the survey was to establish the extent to which any curriculum innovation is preceded by a sector scan and accompanied by an M&E component in order to guide implementation and assess impact. Research of this kind is key to making curriculum reform more of science, based on empirical evidence.

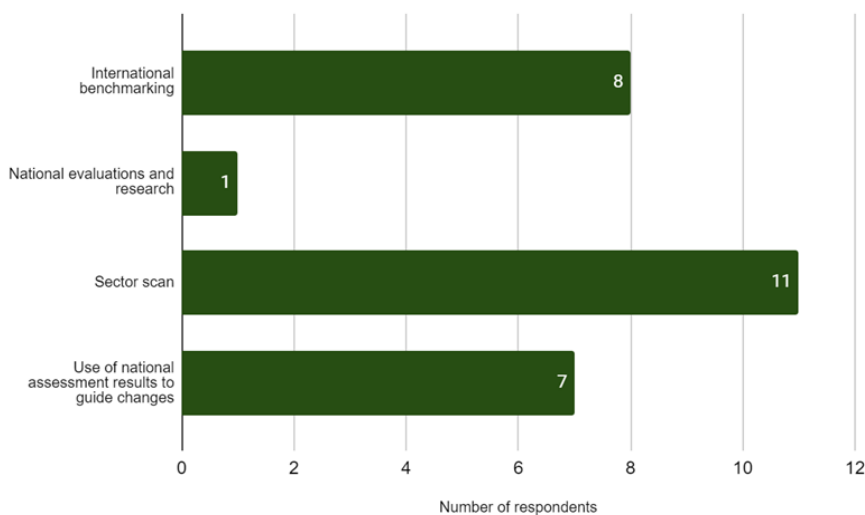


Figure 9: Drivers of curriculum innovation

The top three themes that are considered in the curriculum were norms, values and culture (94%); education for wider universal values supporting mobility (87.5%); and harmonisation (62.5%). These themes could indicate the development of common standards across the continent. The top 21st century skills were creativity (94%), critical thinking (87.5%), and active learning (87.5%), and digital skills (81%).

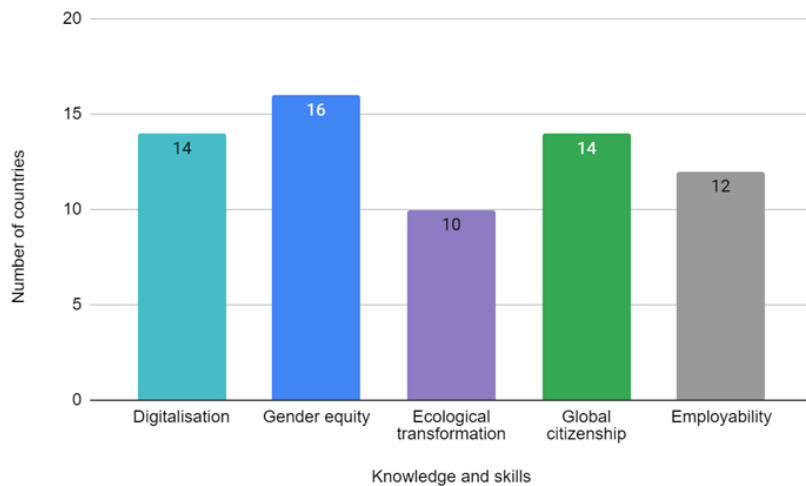


Figure 10: Global mega-trends in curricula

4.8. Financing curriculum innovation

Curriculum innovation in the schooling sector is almost exclusively supported by public funds, except in one country where the financing of school level curriculum innovation is left to the private sector.

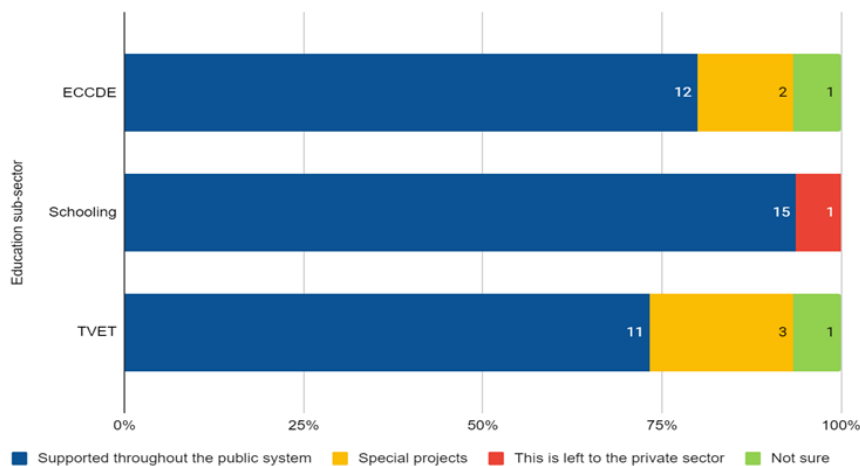


Figure 11: Government role in financing curriculum innovation by number of countries

The private sector plays different roles in funding across sectors in the various countries. In the ECCDE sector, the top two areas where the private sector was noted to be playing an important role were the funding of particular programmes and funding the purchase of equipment for workshops. In the schooling sector, the private sector was reported to play a role in funding the purchase of equipment for workshops, funding individual students and funding particular programmes. In the TVET sector the

top three areas funded by the private sector were the purchase of equipment for workshops, particular programmes and hosting students for work exposure.

4.9. The impact of COVID-19 on curriculum delivery

Given the ongoing and critical impact of the COVID-19 pandemic on the education sector in general, and on curriculum delivery in particular, the survey sought to gauge the impact of the pandemic on the success of curriculum delivery, on the methods implemented by countries to ensure curriculum delivery, and on the use of digital technologies. The greatest impact was a reduction in curriculum coverage, reported by 68.7% of countries; for 50% of countries, the curriculum was re-focused to cover core subjects, including basic numeracy and literacy; 50% of countries reported that Covid-19 has resulted in a review of the curriculum; 87.5% reported that the predominant method for curriculum recovery was using online systems; 75% of countries reported using extra teaching time to catch-up; 68.7% of countries reported a reduction of holiday periods to ensure catch up of the curriculum.

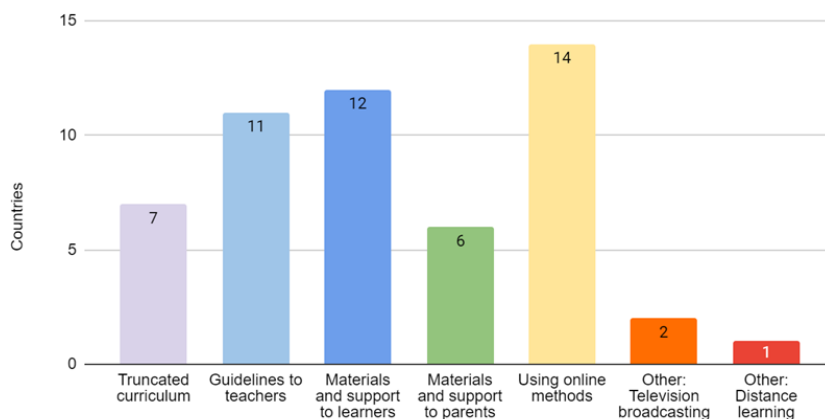


Figure 12: Methods to ensure curriculum delivery during pandemic

4.10. Qualified and competent teachers

The importance of qualified, competent, and confident teachers in curriculum development, delivery and reform, cannot be understated. Curriculum reform can only be carried out successfully in conjunction with appropriate teacher training to ensure that both new and experienced teachers have the necessary subject knowledge and skills required for curriculum implementation. Relevant content knowledge needs to be extensively covered during pre-service training, while continuing professional development (CPD) is an ongoing concern.

The overwhelming majority of respondents were not familiar with ISCED; the majority of respondents for all sectors indicated a 2-year qualification duration; the average duration of teacher practice during teacher training programmes is between 3-6, or 12-16 weeks; 14 schooling sector respondents said that teacher professionalisation is guided by professional standards to a comprehensive extent, while another six said that there was partial existence of professional standards guiding professionalisation.

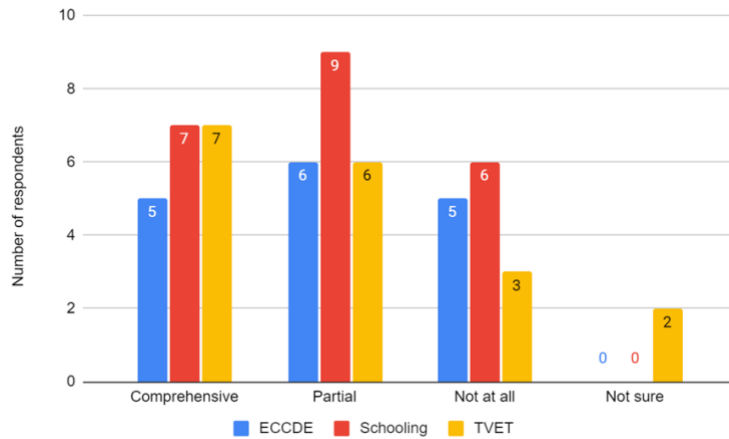


Figure 13: Extent to which teachers taught to formulate and write learning outcomes

4.11. Curriculum and African Union policy instruments

Respondents were asked to indicate the extent to which the national policies on teacher qualifications, professionalism and continuing professional development (CPD) in their countries take a series of African Union instruments into account, including the AU Teacher Qualification Framework, African Framework of Standards and Competences for the Teaching Profession, and the proposed African Continental Qualifications Framework (ACQF). The highest number of respondents were not aware of any of the three AU policies or instruments, while the fewest number of respondents indicated that the policies were comprehensively taken into account in related national policy.

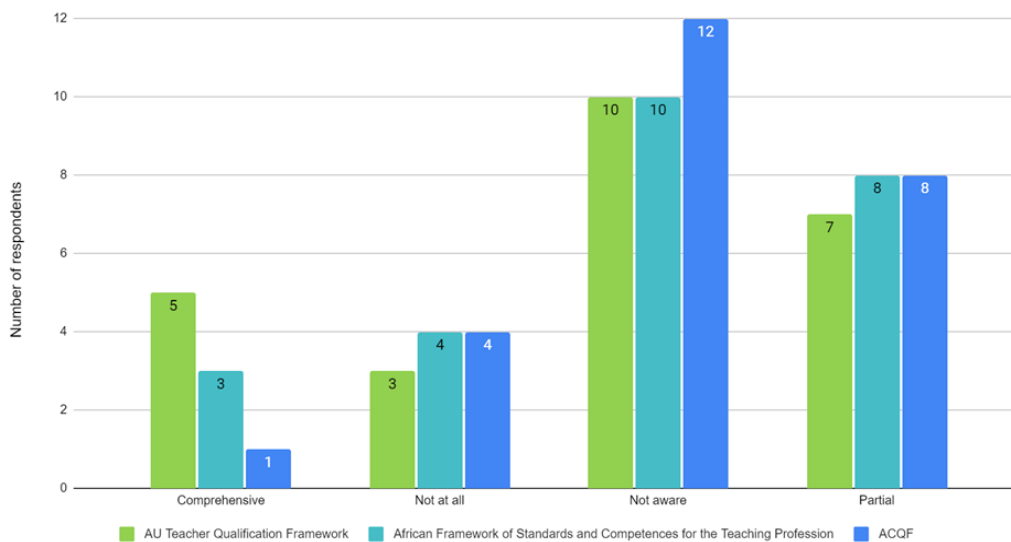


Figure 14: National policies intersection with AU instruments

5. Looking to the future

A high-level overview of the trends, challenges and new developments were drawn from the responses in the survey. The overview does not claim to be representative of curriculum related

developments across the continent, but it does provide some useful insights for policy makers and practitioners, more as countries start to plan for the post-COVID-19 era.

5.1. Embracing learning outcomes-based approaches

Following curriculum reform initiatives, it is apparent that learning outcomes-based approaches, including competence based education, to education and assessment are increasing across all three sectors. Understood to be inherently learner-centred, and suitable for solving complex problems, the prevalence learner-centeredness as a philosophy in African curriculum is part of a broad global movement to equip learners and students with the appropriate skills, knowledge, attitudes, and increasingly values, in-demand in the labour market. This type of approach complements other aspects of changing curriculum, including the need to develop 21st century skills, increase employability, and green skills.

There is strong evidence to support the notion that the shift towards learning outcomes is closely associated with the introduction of NQFs, but also increasingly RQFs. The development of the ACQF as a continental learning outcomes-based model will in all likelihood further accelerate this trend.

5.2. Megatrends: gender equity, global citizenship and digitalisation

A number of megatrends have very specific relevance for African nations. The OECD's Trends Shaping Education 2019 provides an outline of the key social, demographic, and economic 'megatrends' shaping education in the 21st century. These include familiar trends related to shifting global economic power, human migration, economic, national environmental, and digital security, the rise of AI, and the importance of gender, and ethics at home and in the workplace. But, for African and other developing nations, global megatrends need to be appropriately contextualised to complement the foundations of basic numeracy and literacy, solid primary and secondary education (Nsamenang and Tchombe 2011)".

The inclusion of themes such as gender equity, global citizenship, digitalisation, and employability in curricula are also reflective of curriculum responses to global megatrends. Encouragingly, the inclusion of major themes such as norms, values, and culture, education for wider universal values supporting mobility, and harmonisation indicate a broad shift away from 19th and 20th century models of education towards more inclusive approaches emphasising cooperation, interdependence, and shared values. This is also encouraging for the work being carried out by the ACA in the ACQF project.

5.3. Emergence of teacher professional standards

A number of countries have indicated that COVID-19 has been the catalyst for curriculum review. As discussed in the introduction to this report, in order to be successful, any revision of curriculum will have to be accompanied by adequate pre-service, in-service, and continuous professional development training for teachers to ensure that curriculum is implemented effectively.

In terms of CESA 16-25 strategic objectives, this point links directly to strategic objective 1: Revitalize the teaching profession to ensure quality and relevance at all levels of education. The African Federation of Teacher Regulatory Authorities (AFTRA) is well positioned to champion the professionalisation of the teaching profession in Africa, including the wider and more harmonised use of teacher professional standards. The development of the African Union's Continental Teacher Qualification Framework, Continental Framework of Competences and Standards for the Teaching Profession, and Continental Guidelines for the Teaching Profession are all developments that can provide a strong foundation for the work ahead.

5.4. The promise of a continental systemic assessment regime

The trend that more than a third of countries are involved in a regional and/or international assessment is encouraging, but still very low. The opportunity certainly presents itself for a more harmonised continental assessment to be developed and implemented in the next five to ten years. Such an assessment could draw on the regional experiences of PASEC and SACMEQ and develop this further into a wider and more comprehensive assessment for all African member states. Such an assessment could tie in well with the CESA indicator framework being developed by the AUC.

5.5. Harmonisation of teacher qualifications

The mapping study has shown persistent huge differences between minimum teacher qualifications across sectors and across countries – this while few would argue against the strong link between teacher quality, teacher training and qualifications and the quality of education overall.

The recent approval by the UNESCO General Commission/Conference of ISCED-T bodes well for a renewed impetus for the collection of standardised data related to teacher qualification and teacher training programmes. A new feature of ISCED-T will also be a specific dimension for the collection of data related to teaching practice. AUC Member States are well positioned to benefit from this rollout planned for 2022, negating the need to develop new instruments that may be costly and time consuming.

5.6. Access to digital platforms

The international trend towards digital platforms with high levels of interoperability across national data systems is important to take note of. There are also several risks, notably the risk of privatisation of public resources and the green fields reliance that proprietary solutions could impose on less countries. This trend is however growing by the day, imbued by the move towards digitisation that the COVID-19 pandemic has caused. The ACQF itself may move in this direction, although it may be soon to pronounce on this. At the very least, there is an opportunity to provide greater access to open and shared resources for learners of all ages, and all sectors.

5.7. Unequal access to technology and the internet

A key challenge is technology. CESA strategic objective 3 calls on stakeholders to Harness the capacity of ICT to improve access, quality and management of education and training systems. Of immediate importance is the effect of the COVID-19 pandemic, and specifically the need for infrastructure to enable digital and distance learning. Across the board, respondents indicated that their ability to effectively use digital technology was hamstrung by poor and unreliable infrastructure, by excessive cost, or as a consequence of socio-economic status for learners who do not have the means to access digital technology-enabled learning in any form. While COVID-19 acted as the catalyst for the adoption of digital and technology-enabled learning in countries worldwide, there is an urgent, pressing, and well-documented need to ensure equitable access to the infrastructure and technologies necessary for both teachers and learners to use this modality effectively. This will require the inputs of stakeholders at all levels of government, and in the private and non-profit sectors, coupled with the appropriate policy instruments, and underpinned by comprehensive funding mechanisms, and sufficient political will.

Another technology-related challenge is the incorporation of technology and technology skills in the curriculum. Reflecting the same constraints experienced by countries in implementing digital teaching and learning, the majority of countries surveyed indicated that while technology, as a concept (philosophy) and a skill, is included in the curriculum, the ability of educators to incorporate technologies in day-to-day teaching activities is limited.

5.8. Underutilised African Union policy instruments

Given the uncertainty from respondents about whether or not their national policies take AU policy instruments, such as the Teacher Qualification Framework, African Framework of Standards and Competences for the Teaching Profession, and the proposed African Continental Qualifications Framework (ACQF), it is likely that more engagement between the African Union Commission and AU member states is necessary to promote the uptake of policy at national level. The overall silence regarding the African Continental Teacher Mobility Protocol (CTMP) (see Keevy et al 2019) is another example. It is evident that more emphasis will need to be placed on awareness raising and advocacy should these instruments be given a fighting chance to be implemented.

5.9. Underdeveloped TVET

Although a lack of recent data about the true size of the TVET sector on the African continent obscures the picture, the general consensus is that TVET enrolments are lower and the sector less developed than mainstream academic pathways. With routes into higher education more costly, and with the mandate of technical and vocational education intended to produce skilled and work-ready graduates for the labour market, the demand for strong, well-resourced TVET systems will only increase. However, with the majority of the reported TVET programmes on offer classed as 'pre-vocational', coupled with only partial access to practical training and limited formal internship opportunities, scores of TVET graduates will be ill-equipped to enter the labour market, reducing their employability and exacerbating a youth unemployment and skills shortage crisis. Articulation pathways between

TVET and post-school and higher education sectors are lacking, and this could be addressed through comprehensive National Qualifications Frameworks (NQFs) so that sectors can be aligned, allowing for greater student and learner mobility, while enabling and supporting the principle of lifelong learning.

5.10. Lack of data

The availability of quality, reliable, and accurate data is an ongoing consideration. For many of the objectives under discussion in this report, and more broadly, for curriculum mapping and alignment activities at national, regional, and continent-level, greater volumes, and better quality data and means of collecting, analysing, and storing that data is a necessity. CESA strategic objective 11 aims to: Improve management of the education system as well as build and enhance capacity for data collection, management, analysis, communication, and use. In terms of the broader African Curriculum Mapping activities, there is a need to increase the available data for purposes of benchmarking and comparison. This is vital for monitoring the progress of ACF activities and achieving the goals of a number of AU and international policies. We suggest that the survey issued as part of this mapping study be reissued in future (perhaps every two years) in order to collect additional data and to monitor progress at regional and country level.

6. Conclusion

This curriculum mapping survey conducted in 2021 has provided a first-of-its-kind overview of the state of play of curriculum developments in schooling and TVET, and to some extent also ECCDE, across the African continent. Policies and practices have been identified, as well as some trends, similarities and divergences. The interaction between curriculum and qualifications frameworks has also been made clear. This study is however only a starting point for more sophisticated studies that should follow as part of the implementation of CESA and Agenda 2063. The COVID-19 pandemic has starkly illustrated both the continent's vulnerability and its resilience. While at the same time, it is estimated that by 2100, Africa will account for 80% of the projected 4 billion increase in the global population (IMF 2014). Africa is well positioned to harness its youthful population in this future. Relevant and modern curricula will be the cornerstone of the continent's recovery in the coming decades, but also its future. Such generative curricula need to be as much embedded in global trends, as they are uniquely attuned to the rights of and cultural identity of African learners (Nsamenang and Tchombe, 2011).